



BY JOHNSON CONTROLS

**OPTISPEED™
VARIABLE SPEED DRIVE**

REPLACEMENT PARTS

NEW RELEASE

Form 160.84-RP3 (214)

**MODELS
HYP0490
HYP0774**



LD14681

**490 AMPS – 50/60 HZ, 380-460 VAC (P/N 371-06569-XXX)
774 AMPS – 50/60 HZ, 380-460 VAC (P/N 371-05992-XXX)**

Issue Date:
February 21, 2014



IMPORTANT!

READ BEFORE PROCEEDING!

GENERAL SAFETY GUIDELINES

This equipment is a relatively complicated apparatus. During installation, operation maintenance or service, individuals may be exposed to certain components or conditions including, but not limited to: refrigerants, materials under pressure, rotating components, and both high and low voltage. Each of these items has the potential, if misused or handled improperly, to cause bodily injury or death. It is the obligation and responsibility of operating/service personnel to identify and recognize these inherent hazards, protect themselves, and proceed safely in completing their tasks. Failure to comply with any of these requirements could result in serious damage to the equipment and the property in

which it is situated, as well as severe personal injury or death to themselves and people at the site.

This document is intended for use by owner-authorized operating/service personnel. It is expected that these individual possess independent training that will enable them to perform their assigned tasks properly and safely. It is essential that, prior to performing any task on this equipment, this individual shall have read and understood this document and any referenced materials. This individual shall also be familiar with and comply with all applicable governmental standards and regulations pertaining to the task in question.

SAFETY SYMBOLS

The following symbols are used in this document to alert the reader to specific situations:



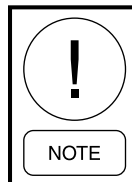
Indicates a possible hazardous situation which will result in death or serious injury if proper care is not taken.



Identifies a hazard which could lead to damage to the machine, damage to other equipment and/or environmental pollution if proper care is not taken or instructions are not followed.



Indicates a potentially hazardous situation which will result in possible injuries or damage to equipment if proper care is not taken.



Highlights additional information useful to the technician in completing the work being performed properly.



External wiring, unless specified as an optional connection in the manufacturer's product line, is not to be connected inside the control cabinet. Devices such as relays, switches, transducers and controls and any external wiring must not be installed inside the micro panel. All wiring must be in accordance with Johnson Controls' published specifications and must be performed only by a qualified electrician. Johnson Controls will NOT be responsible for damage/problems resulting from improper connections to the controls or application of improper control signals. Failure to follow this warning will void the manufacturer's warranty and cause serious damage to property or personal injury.

CHANGEABILITY OF THIS DOCUMENT

In complying with Johnson Controls' policy for continuous product improvement, the information contained in this document is subject to change without notice. Johnson Controls makes no commitment to update or provide current information automatically to the manual owner. Updated manuals, if applicable, can be obtained by contacting the nearest Johnson Controls Service office or accessing the Johnson Controls QuickLIT website at <http://cgproducts.johnsoncontrols.com>.

Operating/service personnel maintain responsibility for the applicability of these documents to the equipment. If there is any question regarding the applicability of these documents, the technician should verify whether the equipment has been modified and if current literature is available from the owner of the equipment prior to performing any work on the chiller.

CHANGE BARS

Revisions made to this document are indicated with a line along the left or right hand column in the area the revision was made. These revisions are to technical information and any other changes in spelling, grammar or formatting are not included.

NOTES

Throughout this parts guide there are special notes calling attention to various parts and ordering instructions for those parts. Please read these notes carefully and follow the instructions to ensure you receive all the replacement parts necessary to complete the service.

HOW TO USE RENEWAL PARTS MANUALS

Johnson Controls offers an assortment of replacements parts for Johnson Controls, YORK and UPG units. Each replacement part is manufactured and fitted for a specific model. This Replacement Parts Manual is for standard Johnson Controls units. Chiller units built with special options, modifications, or conversions are not covered in this manual.

This Replacement Parts Manual provides Johnson Controls chiller replacement parts by part numbers, descriptions, quantities and drawing figures. To determine the correct replacement part, locate the item on drawing figure and refer to the parts list for the part number, description and quantity.

NOTE: Provide a unit model number, unit serial number and part number when requesting a quotation or placing an order. Failure to include this information may delay processing of your request.

Model and Serial Number Locations:

- **Unit** - Namplate on side of Control Panel
- **Compressor** - Namplate on Compressor Housing
- **VSD** - Namplate on VSD Panel

Contact the following sources to order parts.

NORTH AMERICA

Baltimore Parts Center

Contrators within USA

Telephone: (800)-932-1701

Equipment Owners within USA who maintain their own equipment

Telephone: (800)-482-2778

Email: cg-baltimore-parts-customer@jci.com

For parts availability and ordering YORK HVAC Parts within the USA please use the following link:

http://www.johnsoncontrols.com/content/us/en/products/building_efficiency/products-and-systems/integrated_hvac_systems/parts_center/baltimorepartscenter.html

EUROPE

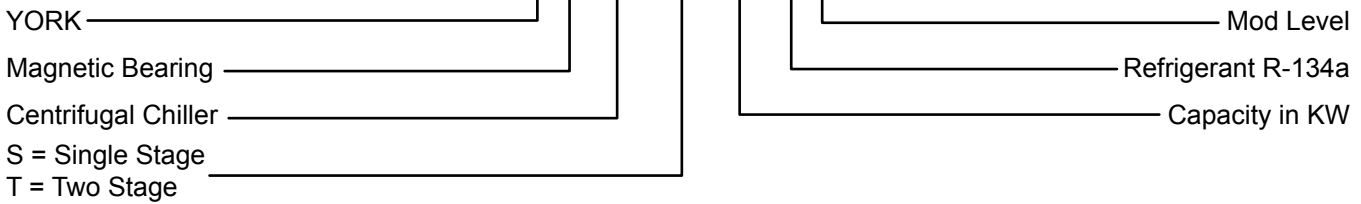
HVAC Parts Centre (Europe)

Telephone: +44 (0) 1268 246 400

Email: ALLParts@jci.com

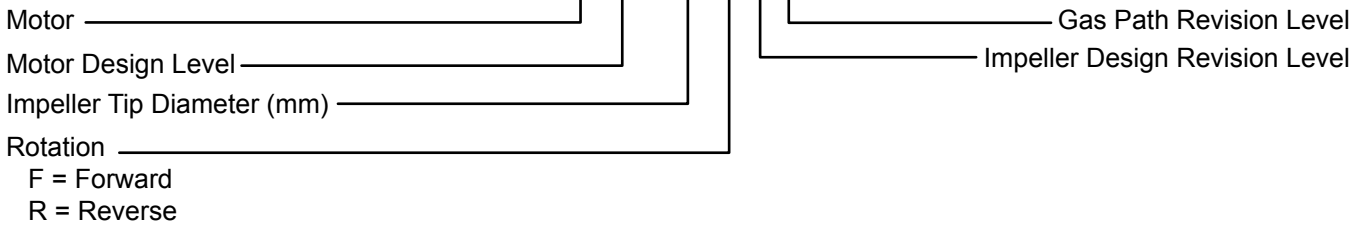
SYSTEM NOMENCLATURE

Y M C 2 - S 1301 A B



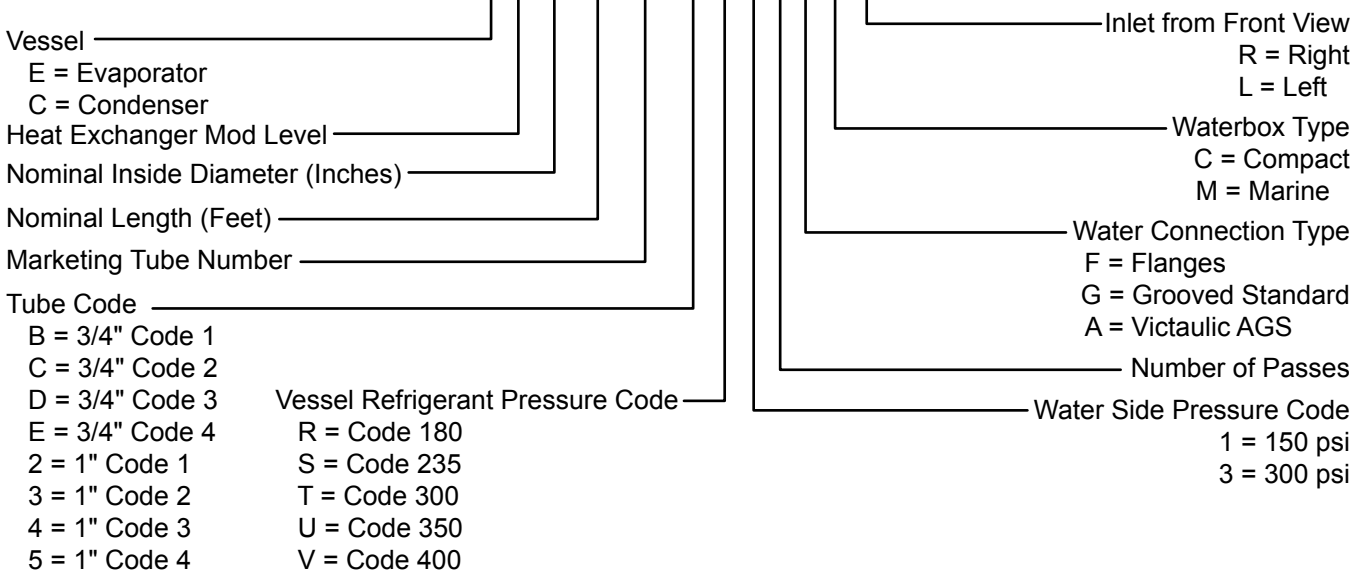
COMPRESSOR NOMENCLATURE

M2 B - 205 F A A



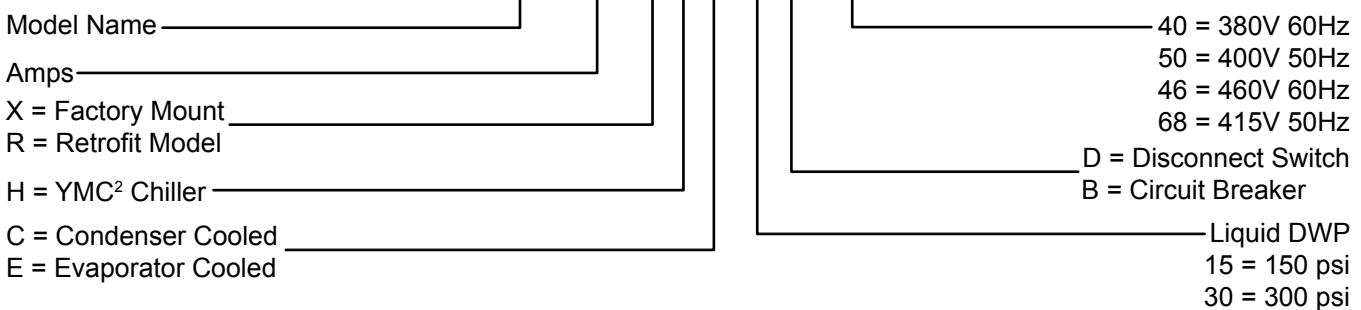
VESSEL NOMENCLATURE

E A 25 10 321 C S 1 2 G C R



VARIABLE SPEED DRIVE NOMENCLATURE

HYP 0774 X H C 15 D - 46



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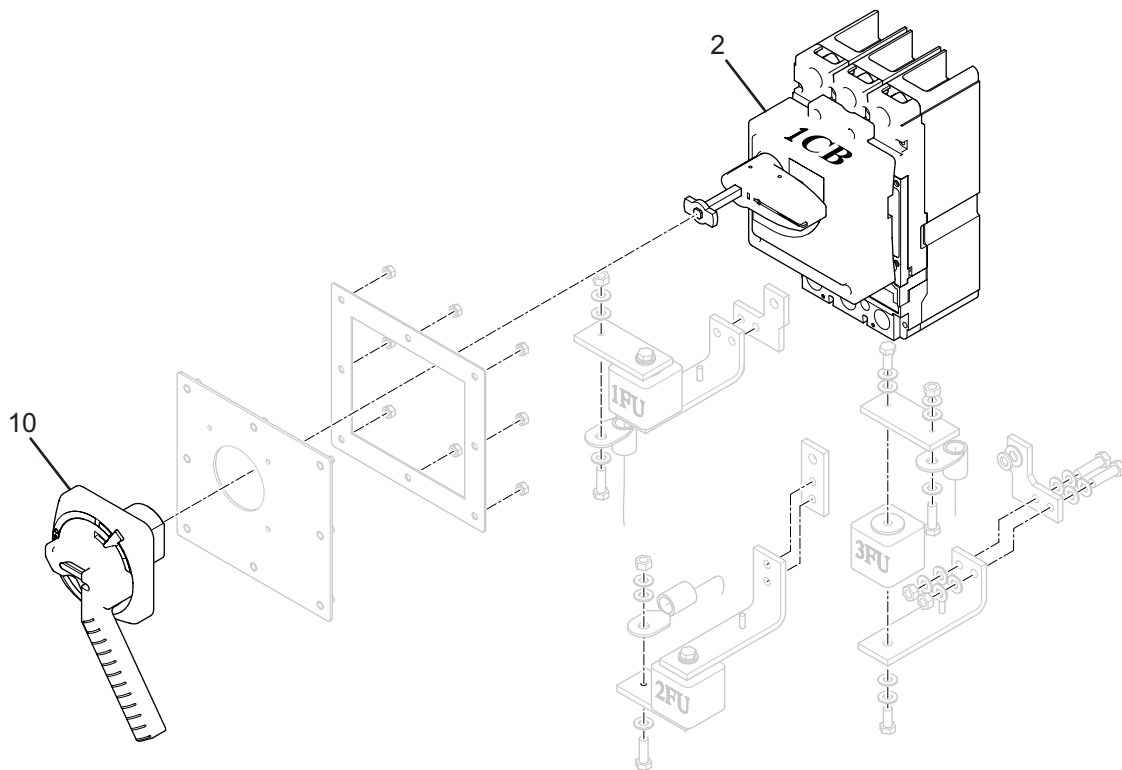
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0490AMP VARIABLE SPEED DRIVE

TABLE 1 - INPUT COMPONENTS (0490 AMPS)

ITEM NUMBER	DESCRIPTION	YORK PART NUMBER	SAP PART NUMBER	QUANTITY	FIGURE
2	Circuit Breaker	224-37879-000	839940	1	1
10	Circuit Breaker Handle	024-35429-000	736285		
29	Damping Resistor Kit (includes 2 resistors & bracket)	025-45521-000	873884	3	7
2	Disconnect Switch	024-37442-000	839733	1	2
21	Disconnect Switch Handle	024-36614-000	736390		
17	Disconnect Switch Lug Kit	025-42181-000	680131		
41	Ground Lug	025-35173-000	117722	1	5
22	Input Current Transducer (DCCT)	025-42748-000	740133	3	3
9	Input Filter Assembly	371-05614-341	839967	1	4
1	Input Filter Capacitor for Assembly	025-44490-000	839745	6	4
1	Input Filter Capacitor with Resistor	025-43928-000	740379	1	5
7	Input Filter Resistor for Assembly	025-42616-000	740130	4	4/5
8	Input Inductor (1L & 2L)	025-44458-000	835714	1	6
13	Input Power Wiring (wiring connected to 1L/2L, not to the rectifier)	571-06569-231	1059326	1	6
40	Input Voltage Isolator Board	031-02022-000	65064	1	5
15	Voltage Transient Board (Fuses are not included)	031-02453-000	743895	1	5

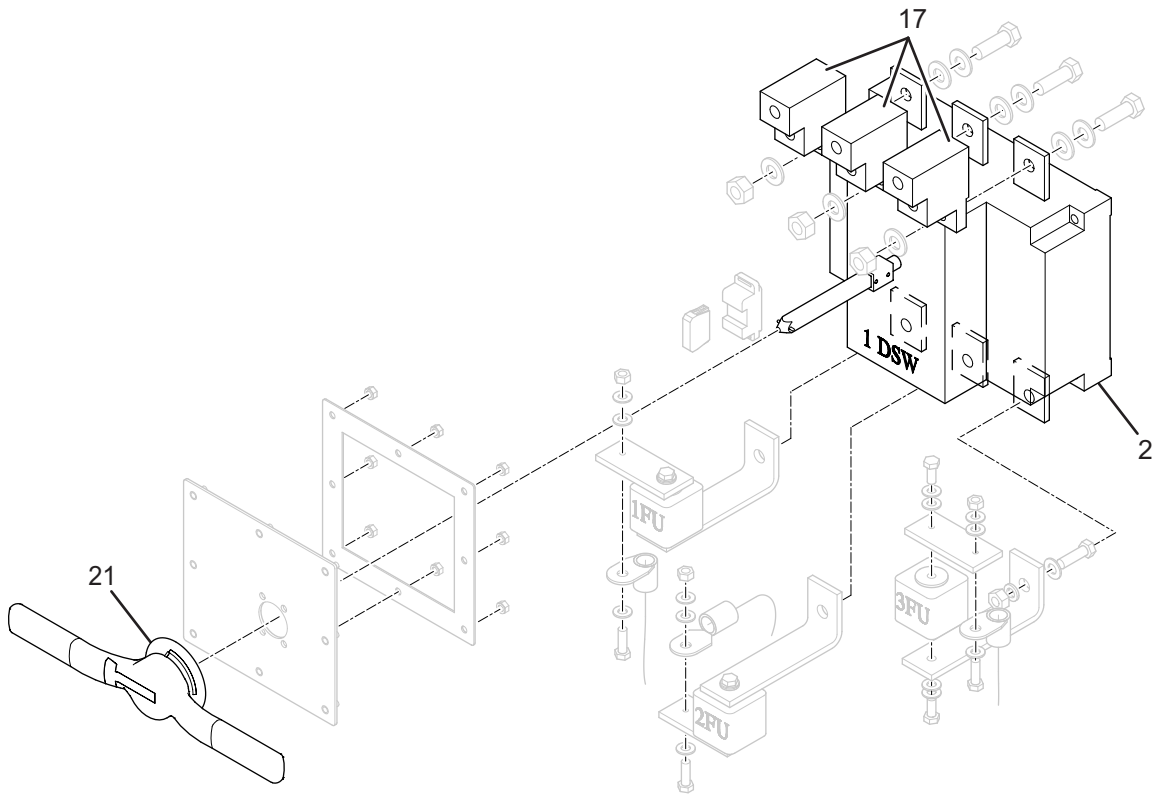
NOTE: Items with an * are NOT represented.



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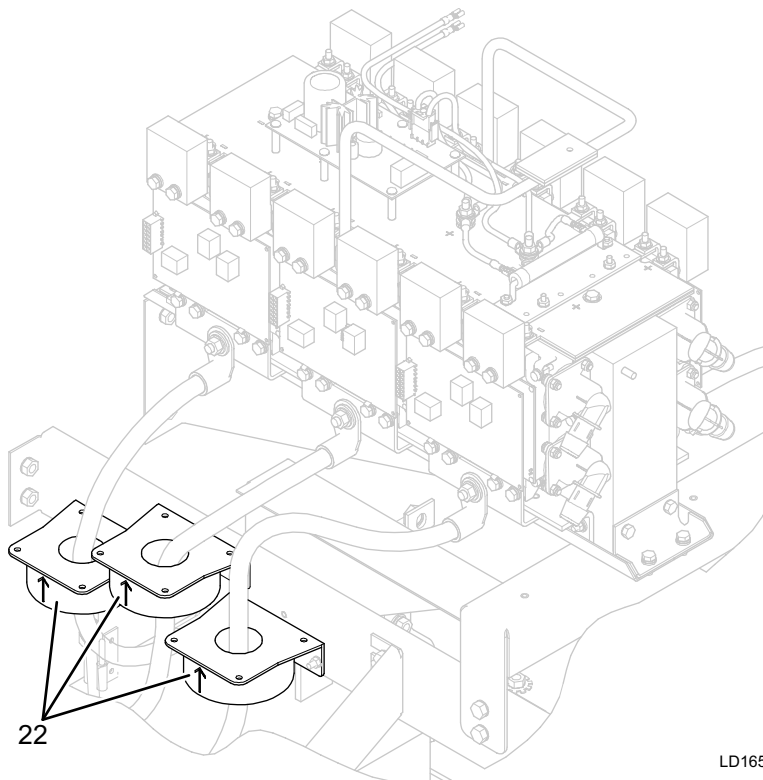
FIGURE 1 - CIRCUIT BREAKER (CB)

0490AMP VARIABLE SPEED DRIVE



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FIGURE 2 - DISCONNECT SWITCH (DS)



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FIGURE 3 - INPUT CURRENT TRANSDUCER (DCCT)

0490AMP VARIABLE SPEED DRIVE

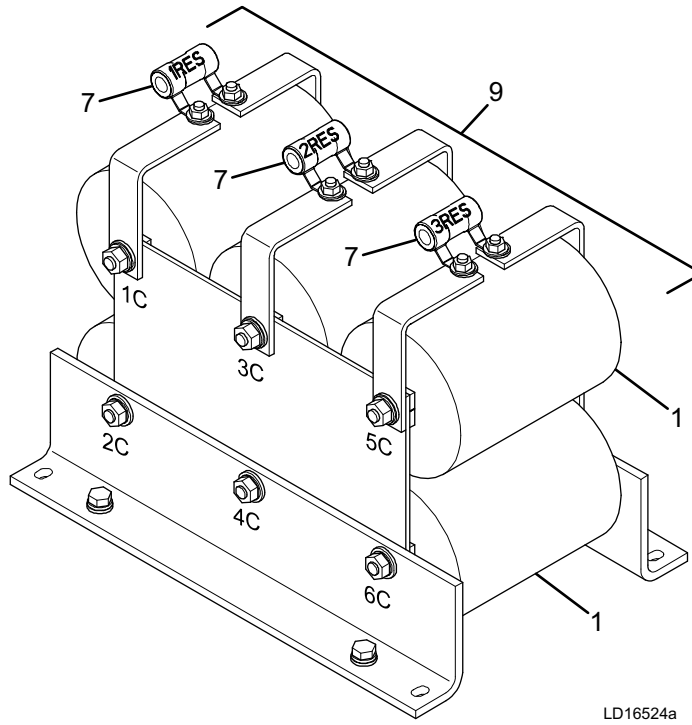


FIGURE 4 - INPUT FILTER CAPACITOR ASSEMBLY

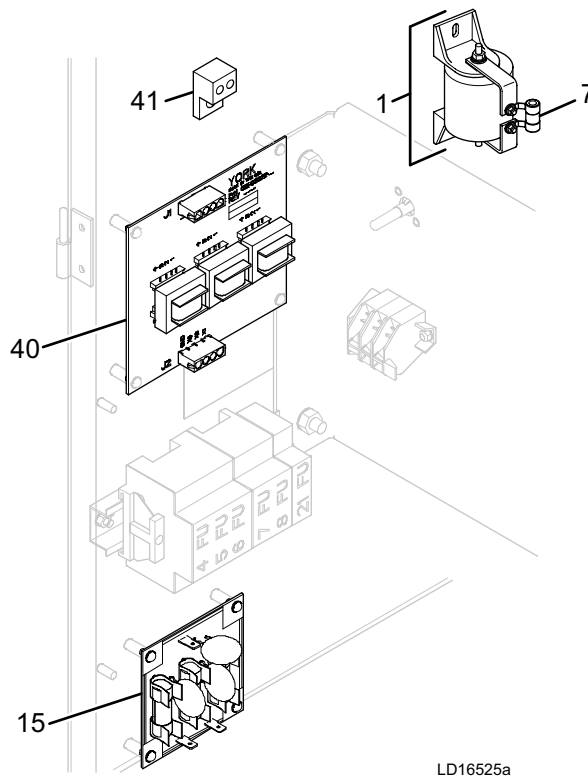
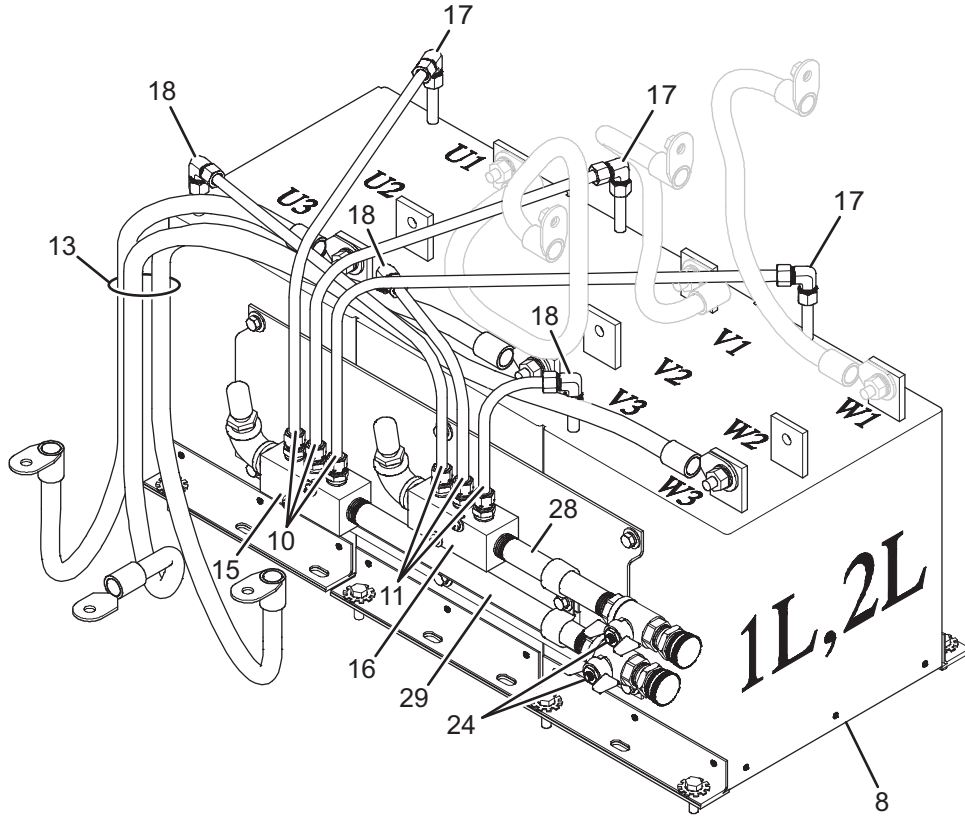


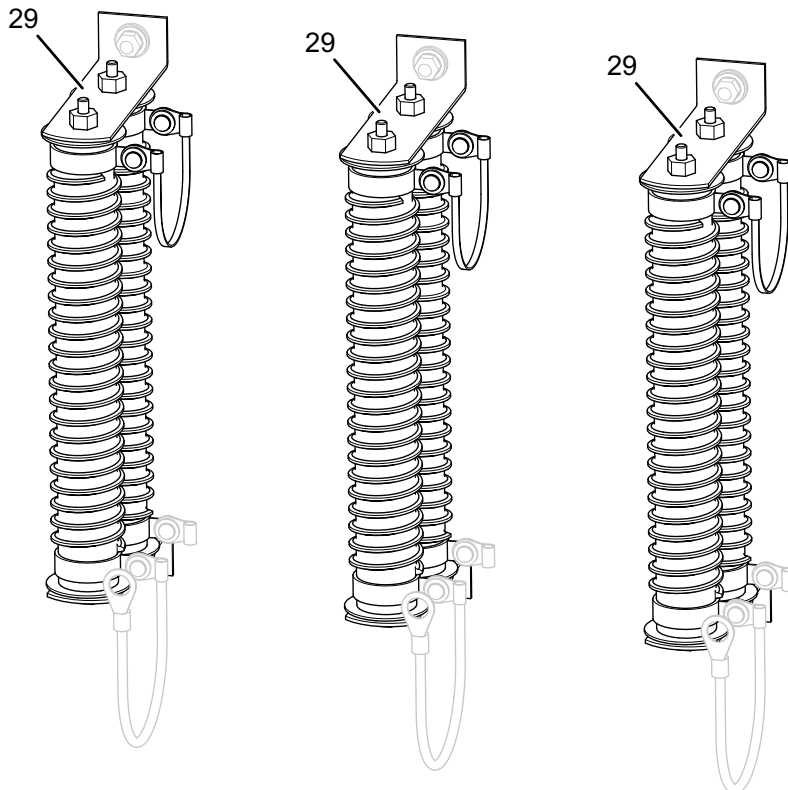
FIGURE 5 - LEFT SIDE OF VSD ENCLOSURE

0490AMP VARIABLE SPEED DRIVE



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FIGURE 6 - INPUT INDUCTOR (L1, L2)



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FIGURE 7 - RESISTOR ASSEMBLY

0490AMP VARIABLE SPEED DRIVE

TABLE 2 - FUSE COMPONENTS (0490 AMPS)

ITEM NUMBER	DESCRIPTION	YORK PART NUMBER	SAP PART NUMBER	QUANTITY	FIGURE
117	Fuse 1 AMP (4FU-6FU & 22FU-24FU)	025-43326-000	740259	6	8/9
105	Fuse 5 AMP Voltage Transient Board Fuses (16FU-18FU)	025-38523-000	739590	3	8
119	Fuse 5 AMP (19FU)	025-35901-000	-	1	9
122	Fuse 6 AMP (15FU)	025-35902-000	264466	1	9
12	Fuse 15 AMP 400-460 VAC 60 Hz, 400-415 VAC 50 Hz (7FU & 8FU)	025-35907-000	117822	2	8
118	Fuse 20 AMP (14FU & 21FU)	025-35908-000	117823	2	8/9
34	1 Pole Fuse Holder 30A	025-39951-000	359985	4	8/9
33	2 Pole Fuse Holder 30A	025-44520-000	740518	1	8
27	3 Pole Fuse Holder 30A	025-39952-000	343433	2	8/9
4	Input Power Fuse (1FU-3FU)	025-44202-000	839744	3	10
-	Input Power Fuse (1FU-3FU set of three)	371-05614-601	-	1	10

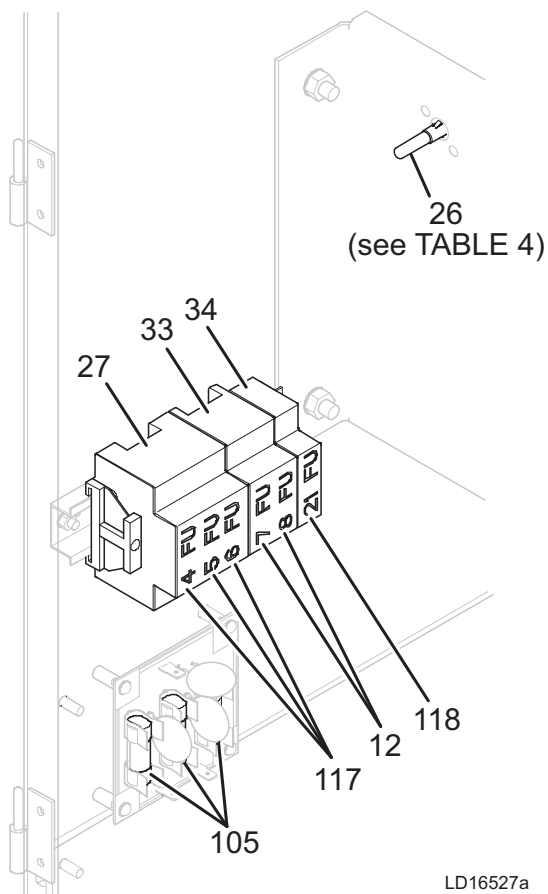


FIGURE 8 - FUSES AND FUSE HOLDERS (4FU-8FU & 21FU)

0490AMP VARIABLE SPEED DRIVE

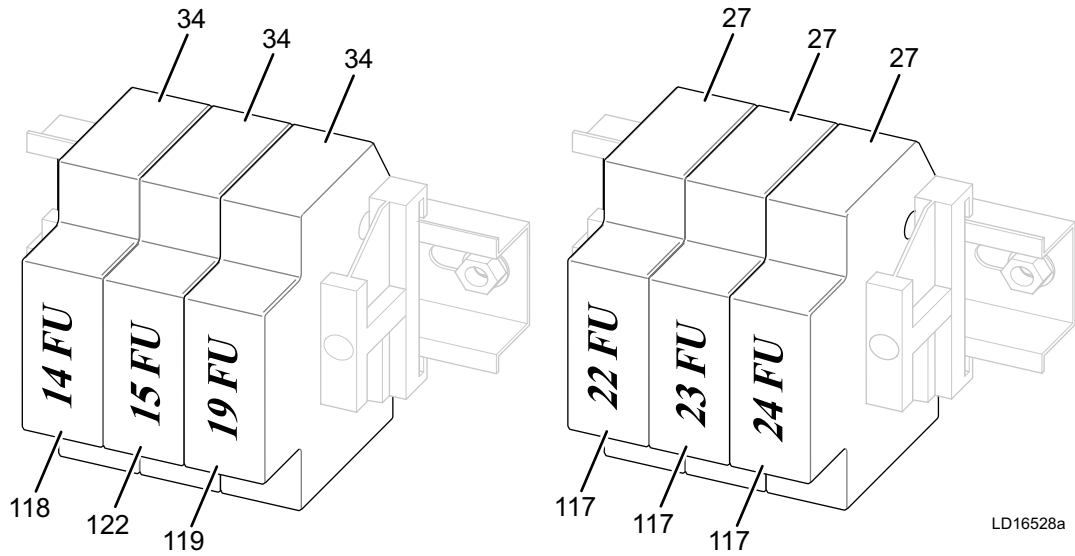


FIGURE 9 - FUSES AND FUSE HOLDERS (14FU, 15FU, 19FU & 22FU-24FU))

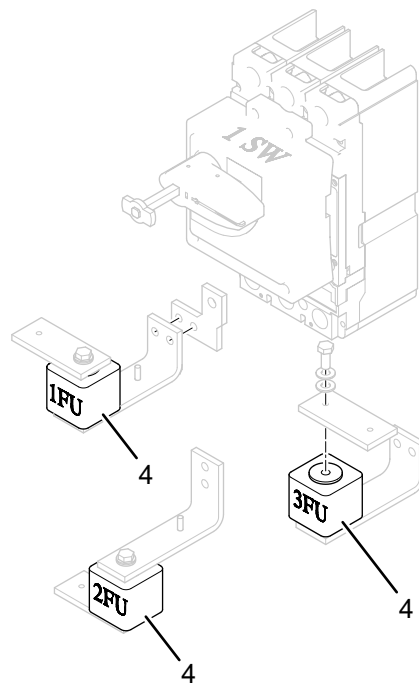


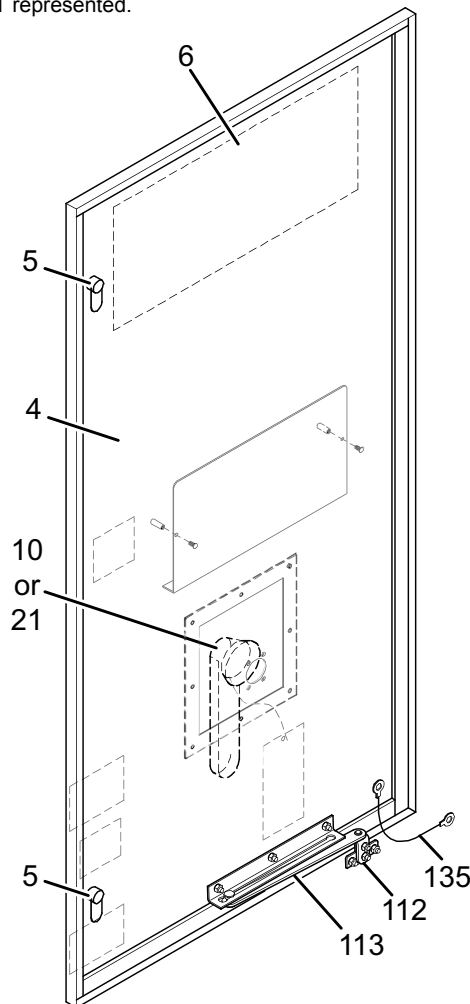
FIGURE 10 - INPUT POWER FUSES (1FU-3FU)

0490AMP VARIABLE SPEED DRIVE

TABLE 3 - DOOR COMPONENTS (0490 AMPS)

ITEM NUMBER	DESCRIPTION	YORK PART NUMBER	SAP PART NUMBER	QUANTITY	FIGURE
10	Circuit Breaker Door Mounting Kit	024-35429-000	736285	1	11
21	Disconnect Switch Handle	024-36614-000	736390	1	11
135	Door Ground Strap	525-32508-001	806677	2	11
4	Door Kit Left 60 Hz (Including all labels and latches)	371-05614-651	-	1	11
	Door Kit Left 50 Hz (Including all labels and latches)	371-05614-653	-		
	Door Kit Right 60 Hz (Including all labels and latches)	371-05614-656	-		
	Door Kit Right 50 Hz (Including all labels and latches)	371-05614-658	-		
5	Door Latch	029-25614-000	743380	4	11
113	Door Stop	029-23420-000	119865	1	11
112	Door Stop Mounting Plate	371-05614-553	840001	1	11
6	Label Front Door JCI Logo	035-23036-000	745608	1	11

NOTE: Items with an * are NOT represented.



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FIGURE 11 - DOOR COMPONENTS

0490AMP VARIABLE SPEED DRIVE

TABLE 4 - COOLING SYSTEM COMPONENTS (0490 AMPS)

ITEM NUMBER	DESCRIPTION	YORK PART NUMBER	SAP PART NUMBER	QUANTITY	FIGURE
1	Coolant Drain Valve	022-12207-000	839729	1	13
2	Coolant Drain Valve Cap	025-25526-000	-	1	13
3	Coolant Hose Barb Straight Kit (hose barb & hose)	371-05571-626	-	2	12
4	Coolant Hose Barb Elbow Kit (hose barb & hose)	371-05571-631	-	2	12
5	Coolant Hose Clamp 1"	023-08856-000	617439	26	12/13
6	Coolant Hose Clamp 2"	021-32226-000	730939	4	13
7	Coolant Hose External 1 1/2"	028-16373-000	742214	17"	13
8	Coolant Hose External 3/4 " ID by the foot (To the power panel)	028-16692-000	864411	70"	13
9	Coolant Hose Internal 3/4 " ID by the foot	028-16768-000	1056103	-	12/16
10	Coolant Hose on Inductor 3/8 "	325-44864-607	-	-	6/16
11	Coolant Hose on Inductor 1/2 "	325-44864-618	-	-	6/16
12	Coolant Manifold Supply Kit	371-06569-636	-	1	12
13	Coolant Manifold Return Kit	371-06569-641	-	1	12
14	Coolant Manifold Clamp	028-16554-000	839771	2	12
15	Coolant Manifold on Inductors 3/8"	325-44864-603	-	2	6/16
16	Coolant Manifold on Inductors 1/2"	325-44864-615	-	2	6/16
17	Coolant Manifold on Inductors Fittings Elbow 3/8"	325-44864-609	-	6	6/16
18	Coolant Manifold on Inductors Fittings Elbow 1/2"	325-44864-616	-	6	6/16
19	Coolant Pump	026-33890-000	3590	1	13
20	Coolant Pump Flange Set	023-20283-000	733193	1	13
21	Coolant Reservoir Fill Plug	028-16378-000	742218	1	13
22	Coolant Reservoir Hose Clamp	021-19150-000	564227	1	13
23	Coolant Reservoir 3" PVC with Fill Plug Kit	371-05614-671	-	1	13
24	Coolant Valves on Inductors	325-44864-605	-	4	6
25	Elbow 45°	028-16369-000	742210	1	13
26	Enclosure Temperature Sensor with connector	571-05182-283	807091	2	8/18
27	Flow Restrictor	028-16620-000	839778	2	12
	Inhibitor	013-02987-000	-	5 gal	-
28	Input Inductor Drain Pipe Kit (5")	325-44458-601	-	1	6
29	Input Inductor Drain Pipe Kit (12")	325-44458-603	-	1	6
30	Internal Cooling Fan	025-32557-000	738735	1	12
31	Internal Cooling Coil	026-46734-000	839767	1	12
32	Output Inductor Drain Pipe Kit (1.25")	325-44864-611	-	1	16
33	Output Inductor Drain Pipe Kit (8")	325-44864-613	-	1	16
34	Relay, Control Fan / Pump	024-30441-000	664298	1	12
42	Shell and Tube Heat Exchanger 3", 150/300 PSI	026-37572-000	104160	1	13
-	Shell and Tube Heat Exchanger Head Gaskets (set of two) 3"	371-03716-001	-	1	-

NOTE: Items with an * are NOT represented.

0490AMP VARIABLE SPEED DRIVE

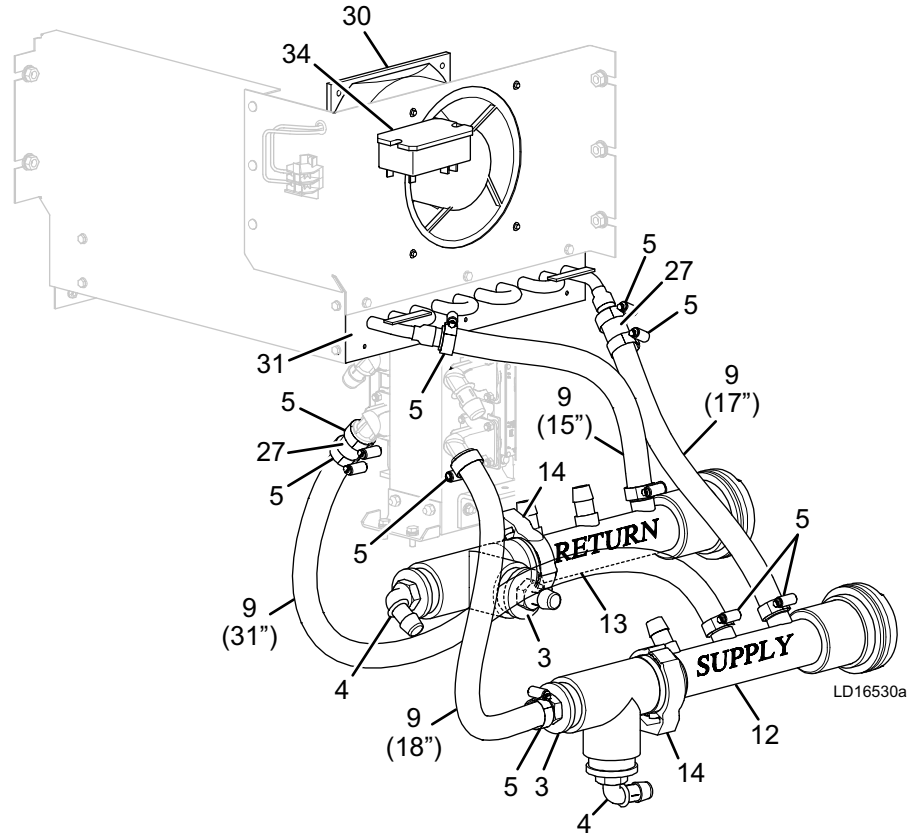


FIGURE 12 - COOLING SYSTEM COMPONENTS

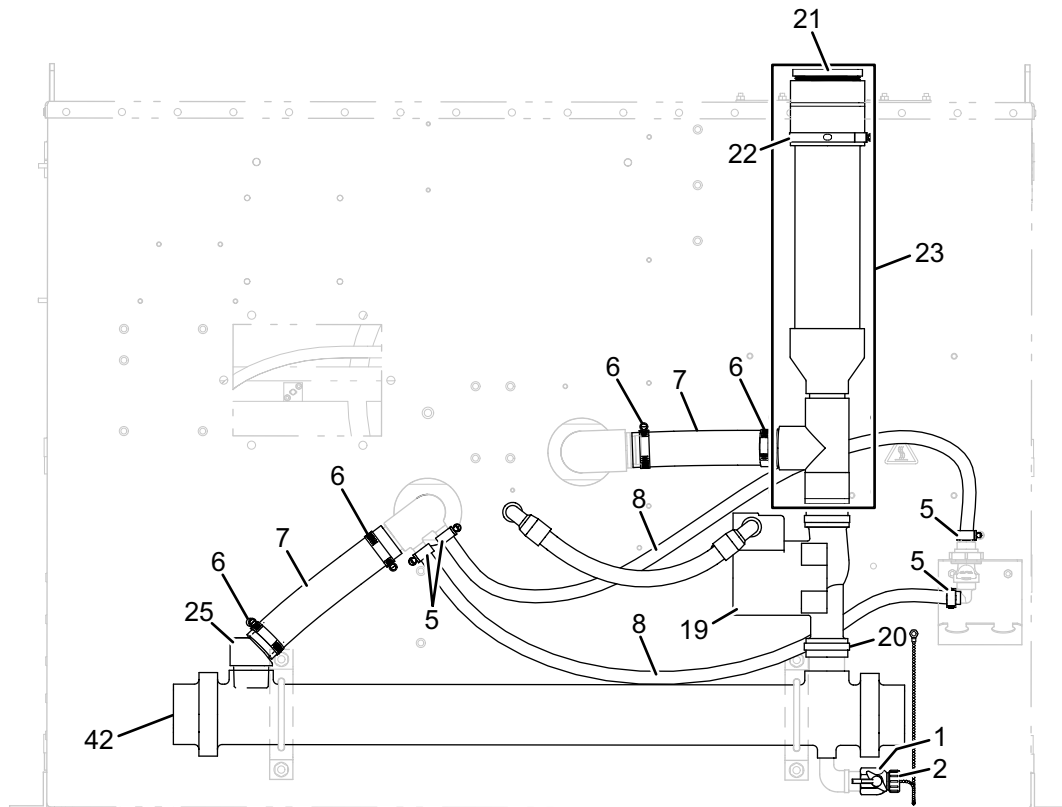


FIGURE 13 - COOLING SYSTEM COMPONENTS

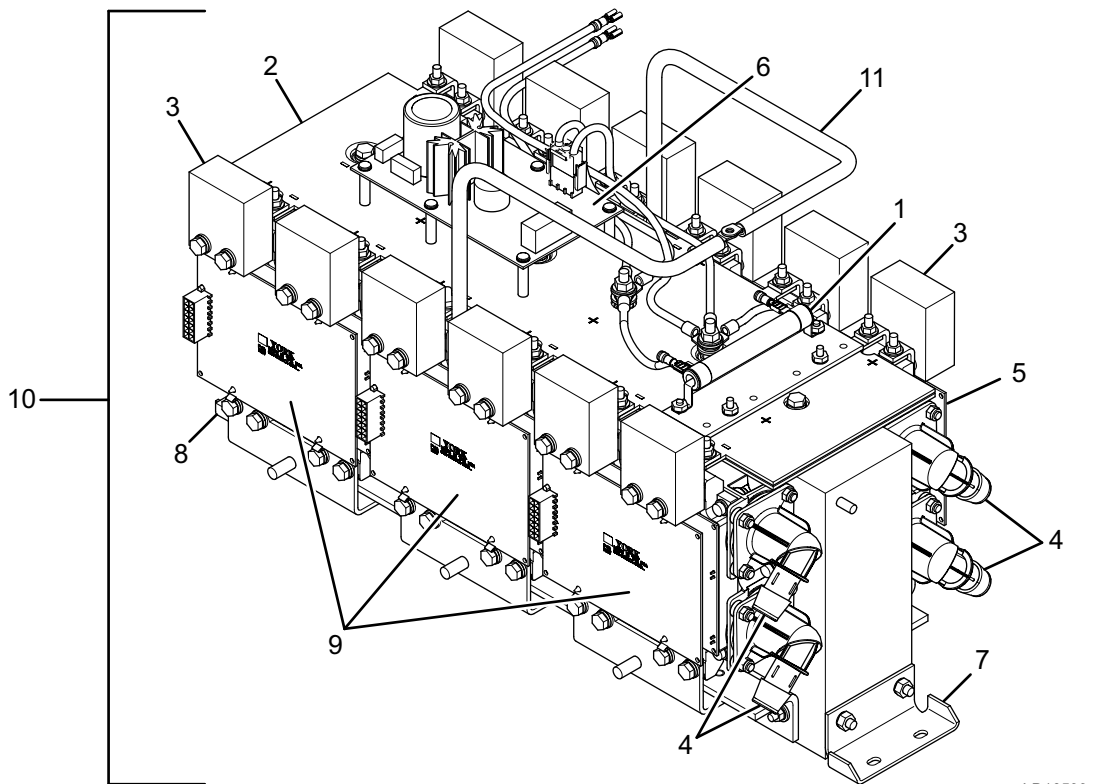
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0490AMP VARIABLE SPEED DRIVE

TABLE 5 - POWER ASSEMBLY COMPONENTS (0490 AMPS)

ITEM NUMBER	DESCRIPTION	YORK PART NUMBER	SAP PART NUMBER	QUANTITY	FIGURE
1	Bus Bleeder Resistor (ea.)	371-06165-001	840018	1	14
2	Bus Plate Assembly Kit	371-06619-601	-	1	14
3	Bus Snubber Capacitor (ea.)	025-42835-000	740149	12	14
4	Coolant Hose Barb on power assembly Kit	371-05526-606	-	4	14
5	Inverter Gate Driver Board	031-02901-004	839195	3	14
-	Inverter Power Module Kit (one phase)	371-05904-608	-	-	-
-	Inverter Power Module Kit (two phases)	371-05904-609	-	-	-
-	Inverter Power Complete Kit (all phases)	371-05904-611	-	-	-
-	Inverter Power Wiring (wiring between Inverter & L3)	571-06569-233	1059328	1	-
6	Power Supply Board	031-02903-002	839200	1	14
7	Power Unit Mounting Foot Front	071-05508-312	749269	1	14
8	Power Unit Mounting Foot Rear	071-05508-310	749268	1	14
9	Rectifier Gate Driver Board	031-02901-003	839194	3	14
-	Rectifier Power Module Kit (one phase)	371-05904-613	-	-	-
-	Rectifier Power Module Kit (two phases)	371-05904-614	-	-	-
-	Rectifier Power Complete Kit (all phases)	371-05904-616	-	-	-
-	Rectifier Power Wiring (wiring between 1L/2L and rectifier)	571-06569-232	1059327	1	-
10	VSD Rectifier/Inverter Power Unit Complete Kit	371-06619-621	-	1	14
11	Wiring Ground	571-05526-241	807110	2	14

NOTE: Items with an * are NOT represented.



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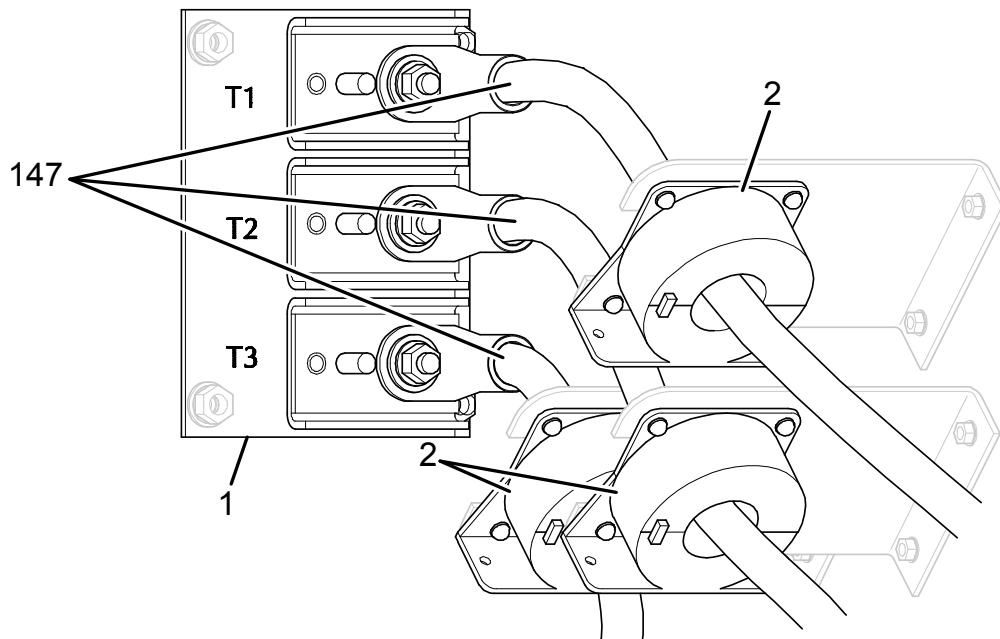
FIGURE 14 - POWER ASSEMBLY COMPONENTS

0490AMP VARIABLE SPEED DRIVE

TABLE 6 - OUTPUT COMPONENTS (0490 AMPS)

ITEM NUMBER	DESCRIPTION	YORK PART NUMBER	SAP PART NUMBER	QUANTITY	FIGURE
1	Motor Connection Plate	371-05614-357	839971	1	15
2	Output Current Transducer (DCCT)	025-45590-000	1045992	3	15
3	Output Harmonic Filter Capacitor 0490	025-45337-000	-	12	16
4	Output Harmonic Filter Assembly	025-46349-000	1059278	1	16
147	Output Power Wiring (wiring between 3L and motor connection plate)	571-06569-234	1059329	1	15
5	Output Voltage Isolator Board	031-02022-001	743845	1	18

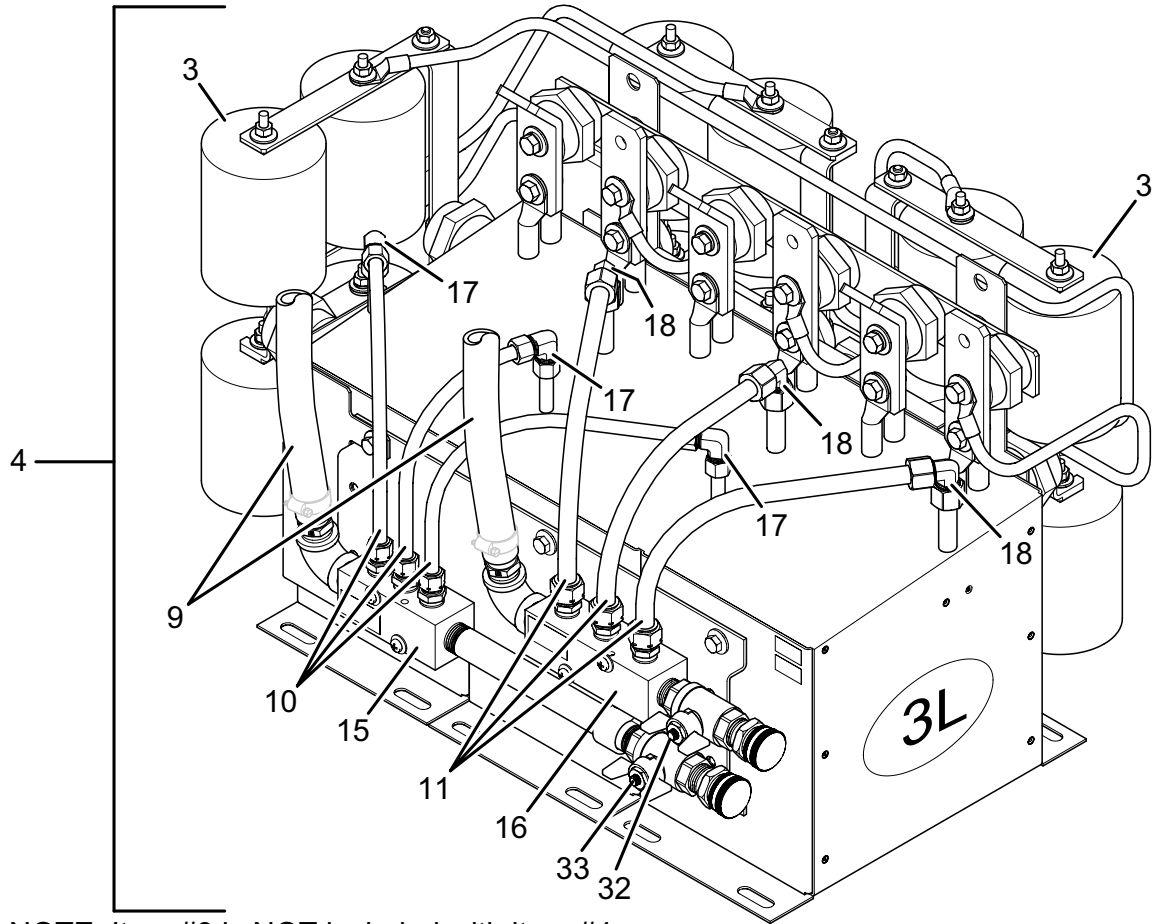
NOTE: Items with an * are NOT represented.



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FIGURE 15 - OUTPUT COMPONENTS

0490AMP VARIABLE SPEED DRIVE



NOTE: Item #9 is NOT included with item #4

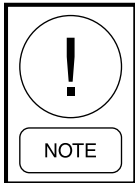
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FIGURE 16 - HARMONIC FILTER

0490AMP VARIABLE SPEED DRIVE

TABLE 7 - DRIVE LOGIC BOARD AND COMPONENTS (0490 AMPS)

ITEM NUMBER	DESCRIPTION	YORK PART NUMBER	SAP PART NUMBER	QUANTITY	FIGURE
1	<i>PROM Chip U35 (for 031-02911-00X board)</i>	031-03048-001	744215	1	17
2	<i>PROM Chip U38 (for 031-02911-00X board)</i>	031-03049-001	744216	1	17
3	VSD Logic Board	031-02911-003	839782	1	17
4	U66 485 Communications Driver	031-02074-000		1	17
-	VSD Logic Board Kit (includes all software)	331-02911-603	-	-	-



PROM Chips U35 and U38 must be ordered as a set.

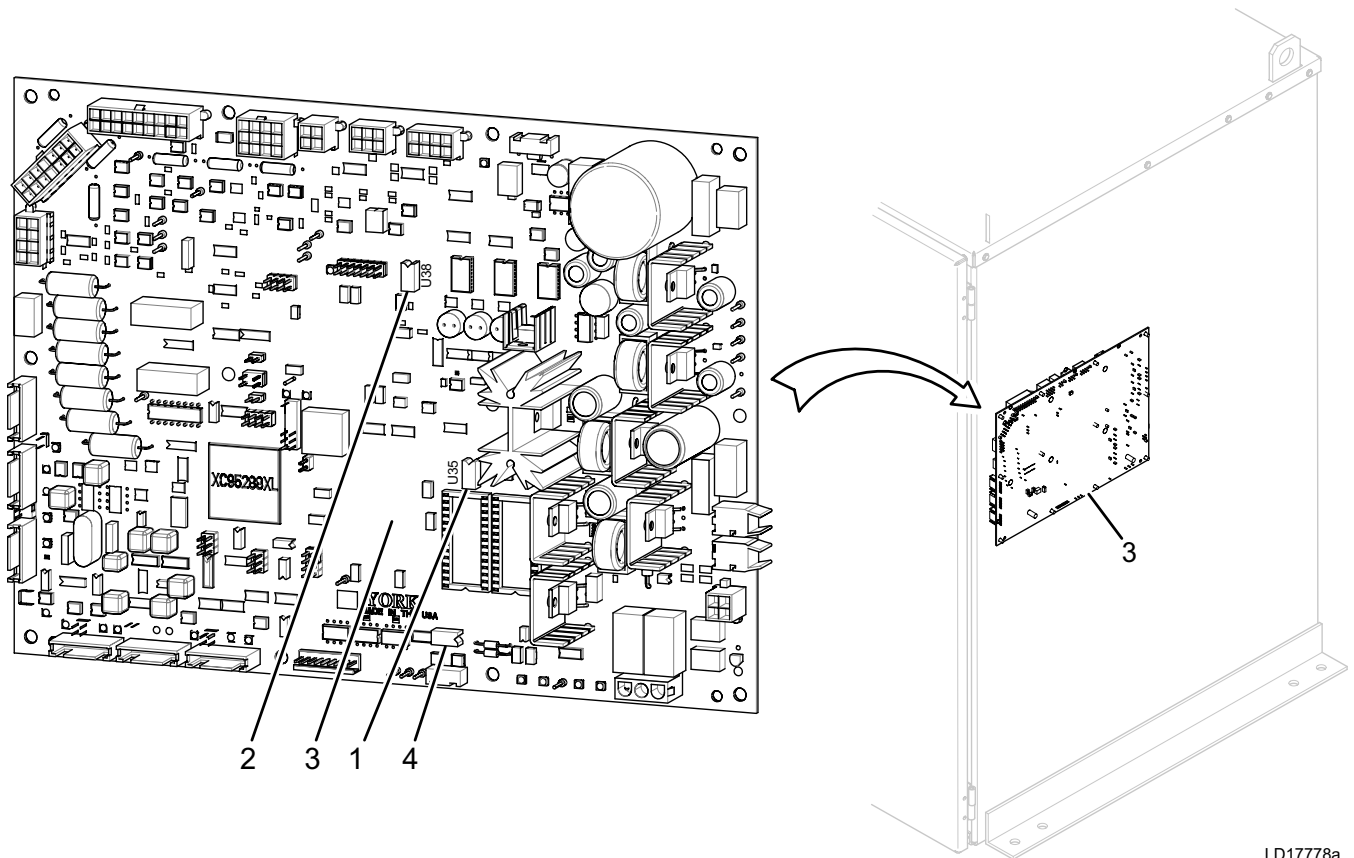


FIGURE 17 - DRIVE LOGIC BOARD AND COMPONENTS

0490AMP VARIABLE SPEED DRIVE

1

TABLE 9 - WIRING HARNESSSES AND CONNECTORS (0490 AMPS)

BOARD NAME	BOARD PART NUMBER	POSITION	HOUSING PART NUMBER (SAP PART NUMBER)	PIN PART NUMBER (SAP PART NUMBER)
Line Voltage Isolator Board	031-02022-000	J1	025-19671-000 (737534)	025-22215-000 (62701)
Line Voltage Isolator Board	031-02022-000	J2	025-21417-000 (737658)	025-22215-000 (62701)
Output Voltage Isolator Board	031-02022-001	J1	025-21417-000 (737658)	025-22215-000 (62701)
Output Voltage Isolator Board	031-02022-001	J2	025-21417-000 (737658)	025-22215-000 (62701)
Input DC Current Transducer	-	-	025-43356-000 (740274)	025-43357-000 (740275)
Input DC Current Transformer (Complete Cable)				Assembly # 571-05614-211 (840019)
Output DC Current Transducer	-	-	025-43356-000 (740274)	025-43357-000 (740275)
Output DC Current Transformer (complete Cable)	-	-		Assembly # 571-05614-213 (840020)
VSD Logic Board	031-02911-003	J1	025-19672-000 (737535)	025-22215-000 (62701)
VSD Logic Board	031-02911-003	J2	025-42614-000 (740129)	025-28386-000 (737925)
VSD Logic Board	031-02911-003	J3	025-35964-000 (739253)	025-28386-000 (737925)
VSD Logic Board	031-02911-003	J4	025-28384-000 (737920)	025-28386-000 (737925)
VSD Logic Board	031-02911-003	J5	025-28959-000 (738246)	025-28386-000 (737925)
VSD Logic Board	031-02911-003	J6	025-28382-000 (737916)	025-28386-000 (737925)
VSD Logic Board	031-02911-003	J7	025-35966-000 (550505)	025-28386-000 (737925)
VSD Logic Board	031-02911-003	J8 - J13	Assembly # 571-05614-241 (840026)	N/A
VSD Logic Board	031-02911-003	J14	025-28959-000 (738246)	025-28386-000 (737925)
VSD Logic Board	031-02911-003	J15	025-29130-000 (738262)	025-28386-000 (737925)
VSD Logic Board	031-02911-003	J17	025-21136-000 (737636)	025-19674-000 (737537)

0490AMP VARIABLE SPEED DRIVE

TABLE 9 - WIRING HARNESSSES AND CONNECTORS (0490 AMPS) (CONT'D)

BOARD NAME	BOARD PART NUMBER	POSITION	HOUSING PART NUMBER (SAP PART NUMBER)	PIN PART NUMBER (SAP PART NUMBER)
VSD Logic Board	031-02911-003	J18	Assembly # 571-05614-227 (840022)	N/A
VSD Logic Board	031-02911-003	J19	025-21137-000 (737637)	025-19674-000 (737537)
VSD Logic Board	031-02911-003	J25	025-35966-000 (550505)	025-28386-000 (737925)
VSD Logic Board	031-02911-003	J36	Assembly # 571-05614-291 (840034)	N/A
IGBT Gate Driver Board - Inverter	031-02901-004	J1	025-42614-000 (740129)	025-28386-000 (737925)
IGBT Gate Driver Board - Rectifier	031-02901-003	J1	025-42614-000 (740129)	025-28386-000 (737925)
Gate Driver Power Supply Board	031-02903-001	J1	025-29185-000 (62736)	025-19674-000 (737537)
Gate Driver Power Supply Board	031-02903-001	J2	025-44494-000 (839746)	025-28386-000 (737925)
Gate Driver Power Supply Board	031-02903-001	J7	025-19671-000 (737534)	025-11083-000 (737290)
Gate Driver Power Supply Board	031-02903-001	J8	025-19672-000 (737535)	025-22215-000 (62701)
Ambient Temperature at Sensor	-	-	025-29130-000 (738262)	025-28386-000 (737925)
Ambient Temperature at Cable	-	-	025-32564-000 (738737)	025-30999-000 (738540)
CPC CONNECTORS				
CPC CONNECTORS	HOUSING PART NUMBER (SAP PART NUMBER)	PIN PART NUMBER (SAP PART NUMBER)	COMPLETE CABLE (SAP PART NUMBER)	
Magnet Bearing Controller	025-37873-000 (739490)	025-40463-000 (873883)	571-05614-291 (840034)	
Motor Monitoring	025-44974-000 (828162)	025-40463-000 (873883)	571-05614-286 (840033)	
OptiView Communication	025-37873-000 (739490)	025-40463-000 (873883)	571-05614-227 (840022)	
OptiView Power	025-44974-000 (828162)	025-37875-000 (739491)	571-05614-236 (840025)	
UPS	025-44974-000 (828162)	025-37875-000 (739491)	571-05614-235 (840024)	

Note: All items in Table 9 are NOT shown

0490AMP VARIABLE SPEED DRIVE

1

TABLE 10 - POWER WIRING SECTION (0490 AMPS)

SECTION	PART NUMBER	SAP NUMBER
Damping Resistors 2 Sets of Wires (2L1E-2L3E, 3L1A-3L3A, and braided wires)	571-06569-251	1059330
Input Power Wiring Circuit Breaker (Wiring between circuit breaker and 1L)	571-06569-231	1059326
Input Power Wiring Disconnect Switch (Wiring between disconnect switch and 1L)	571-06569-231	1059326
Inverter Power Wiring (Wiring between Inverter and 3L)	571-06569-233	1059328
Output Power Wiring (Wiring between 3L and motor connection plate)	571-06569-234	1059329
Rectifier Power Wiring (Wiring between 1L, 2L and rectifier)	571-06569-232	1059327

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0774AMP VARIABLE SPEED DRIVE

TABLE 11 - INPUT COMPONENTS (0774 AMPS)

ITEM NUMBER	DESCRIPTION	YORK PART NUMBER	SAP PART NUMBER	QUANTITY	FIGURE
11	Circuit Breaker	224-37855-000	913802	1	19
29	Circuit Breaker Handle	026-46045-000	741273	1	19
10	Circuit Breaker Insulator	071-04459-310	748934	1	*
75	Damping Resistor Kit (includes 2 resistors & bracket)	025-44857-000	913761	6	22
11	Disconnect Switch	024-36974-000	704473	1	20
29	Disconnect Switch Handle	024-36614-000	736390	1	20
43	Disconnect Switch Lug Kit	025-43345-000	740272	1	20
24	Ground Lug	025-32835-000	738755	4	22
2	Input Current Transducer (DCCT)	025-42749-000	740134	3	21
5	Input Filter Assembly	371-05992-341	913807	1	22
3	Input Filter Capacitor for Assembly	025-42834-000	740148	9	22
1	Input Filter Capacitor with Resistor	025-43928-000	740379	1	22
6	Input Filter Resistor for Assembly	025-42616-000	740130	4	22
6	Input Line Inductor (1L)	025-42768-000	740137	1	23
12	Input Load Inductor (2L)	025-44855-000	838276	1	31
37	Input Voltage Isolator Board	031-02022-000	65064	1	22
36	Input Power Wiring Circuit Breaker (wiring between circuit breaker & 1L)	571-05992-231	913818	1	19
36	Input Power Wiring Disconnect Switch (wiring between disconnect switch & 1L)	571-05992-201	913816	1	20
8	Voltage Transient Board (Fuses are not included)	031-02453-000	743895	1	19

NOTE: Items with an * are NOT represented.

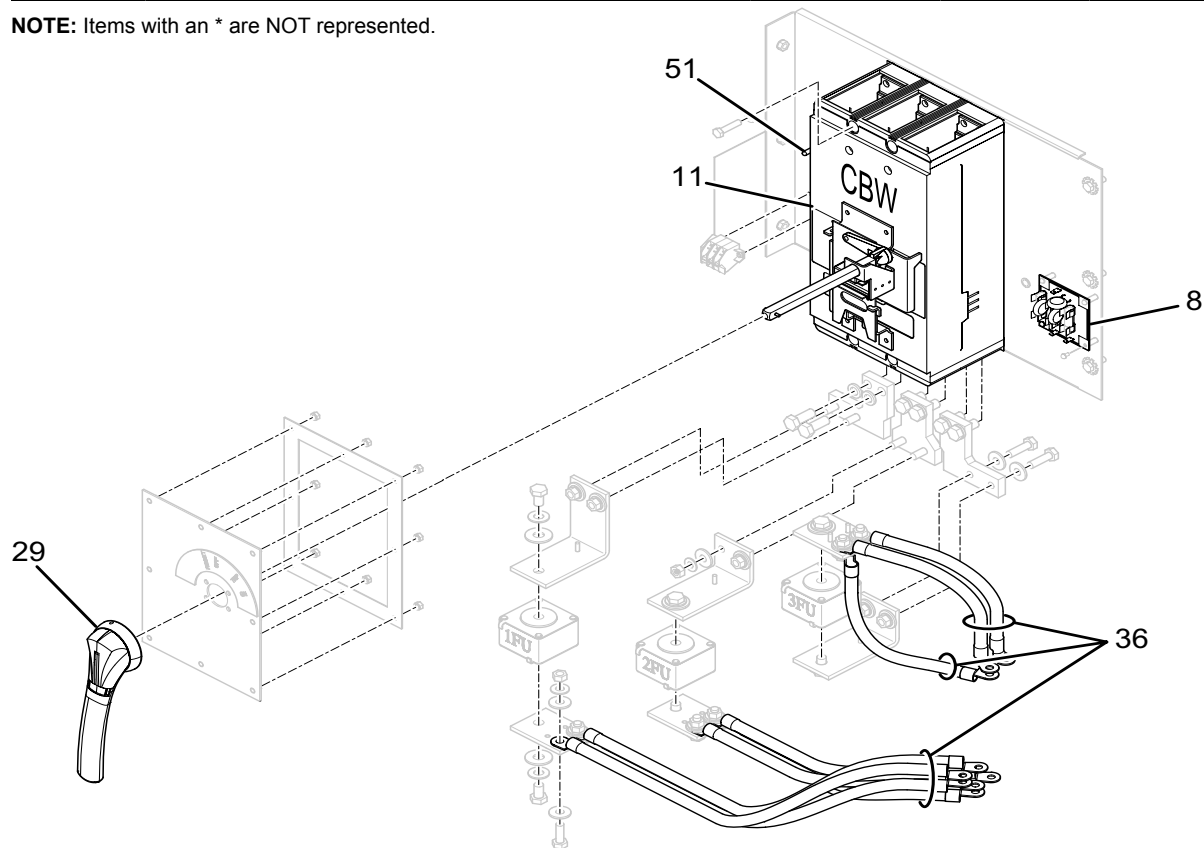


FIGURE 19 - CIRCUIT BREAKER (CB)

LD17774

0774AMP VARIABLE SPEED DRIVE

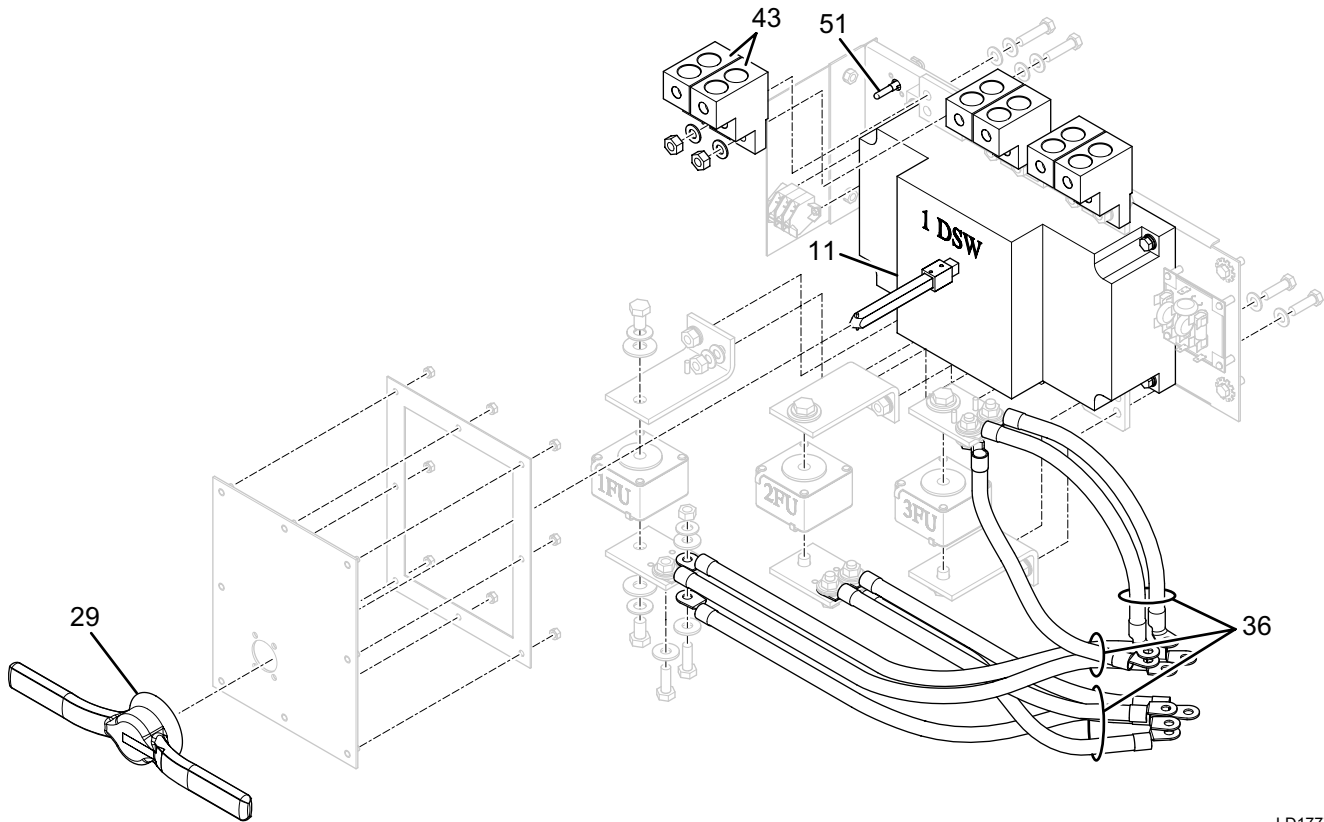


FIGURE 20 - DISCONNECT SWITCH (DS)

LD17773

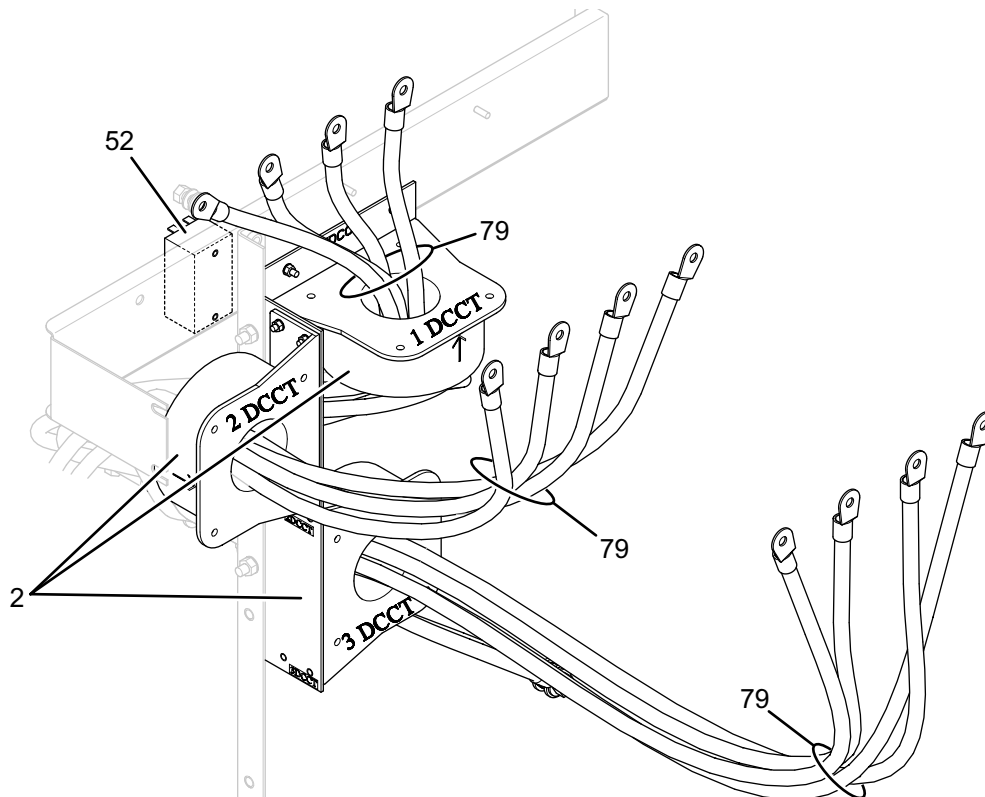
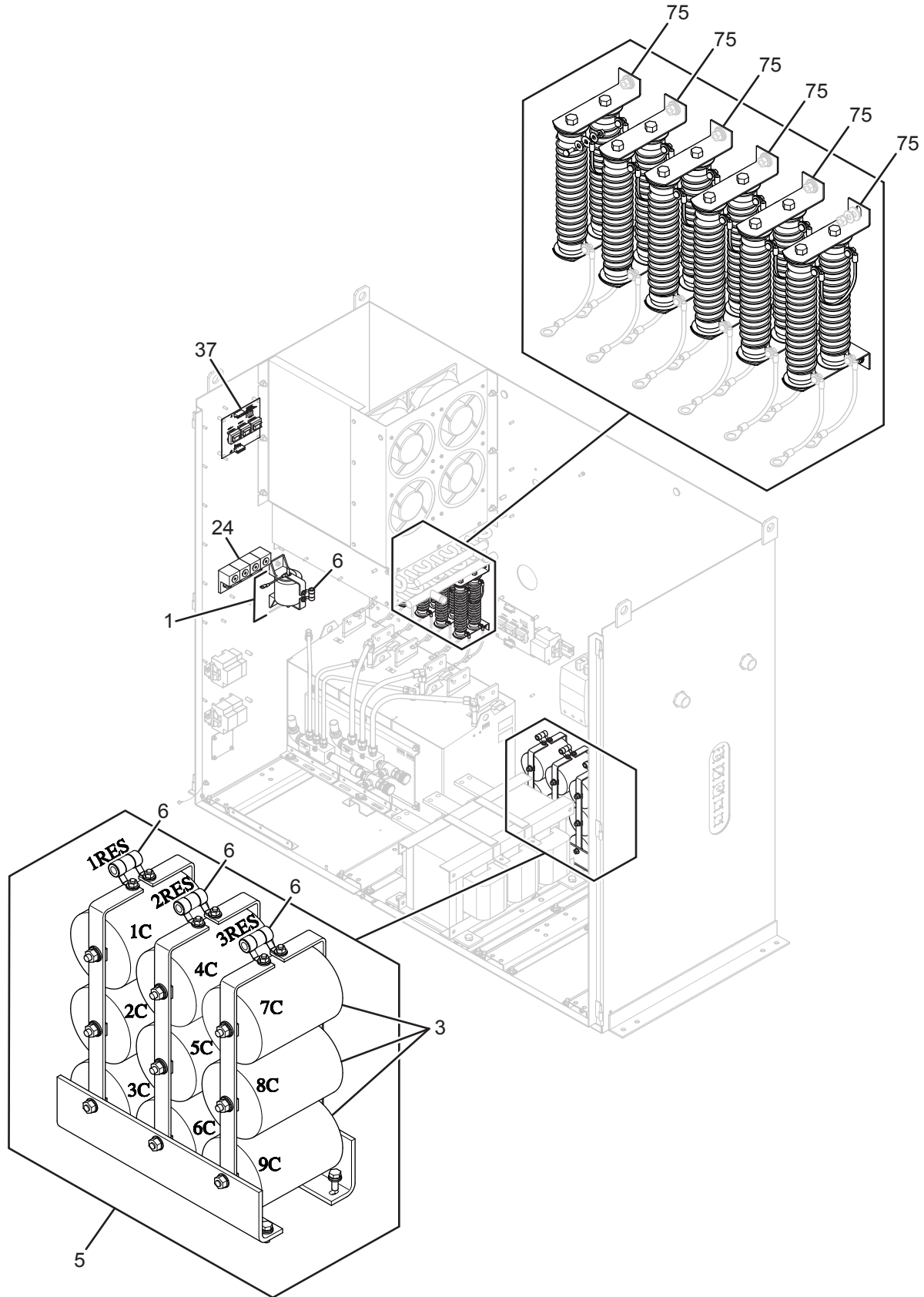


FIGURE 21 - CURRENT TRANSDUCER (DCCT)

LD17775

0774AMP VARIABLE SPEED DRIVE



2

FIGURE 22 - INPUT FILTER COMPONENTS

LD17776

0774AMP VARIABLE SPEED DRIVE

TABLE 12 - FUSE COMPONENTS (0774 AMPS)

ITEM NUMBER	DESCRIPTION	YORK PART NUMBER	SAP PART NUMBER	QUANTITY	FIGURE
86	Fuse 1 AMP (4FU-6FU & 19FU-21FU)	025-43326-000	740259	6	23/24
26	Fuse 5 AMP Voltage Transient Board Fuses (16FU-18FU)	025-38523-000	739590	3	23
88	Fuse 7 AMP (13FU-15FU)	025-35903-000	117821	3	25
57	Fuse 10 AMP 460 VAC 60 Hz (7FU-10FU)	025-35905-000	739234	4	23
	Fuse 12 AMP 400 VAC 60 Hz, & 400, 415 VAC 50Hz (7FU-10FU)	025-35906-000	652698		
87	Fuse 20 AMP (11FU, 12FU & 27FU)	025-35908-000	117823	3	23/25
35	2 Pole Fuse Holder	025-43899-000	740368	3	23/25
32	1 Pole Fuse Holder 30A	025-39951-000	359985	1	23
31	3 Pole Fuse Holder 30A	025-39952-000	343433	3	23-25
24	Input Power Fuse (1FU-3FU)	025-42615-000	913760	3	23
-	Input Power Fuse (1FU-3FU set of three)	371-05992-601	-	-	

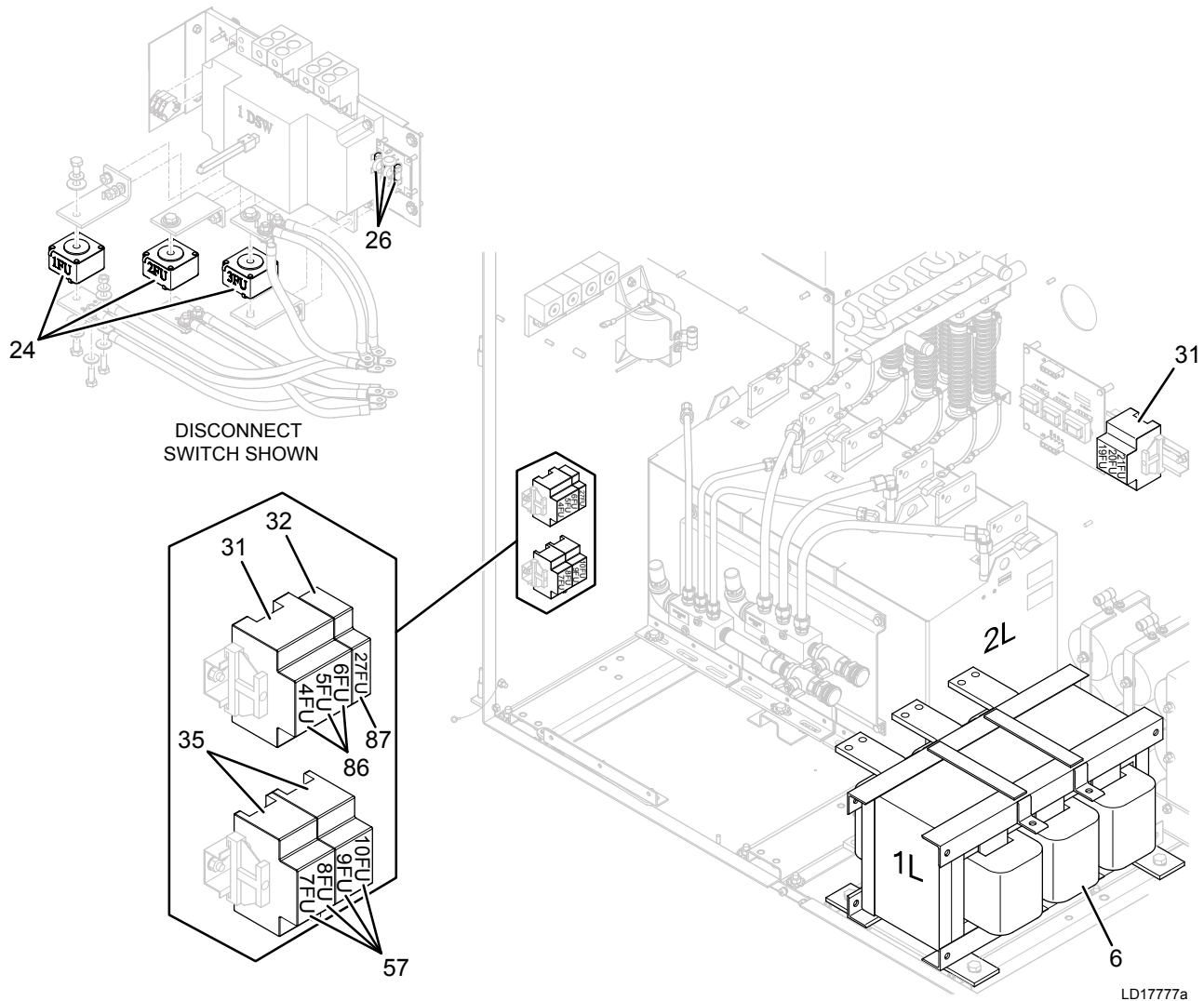
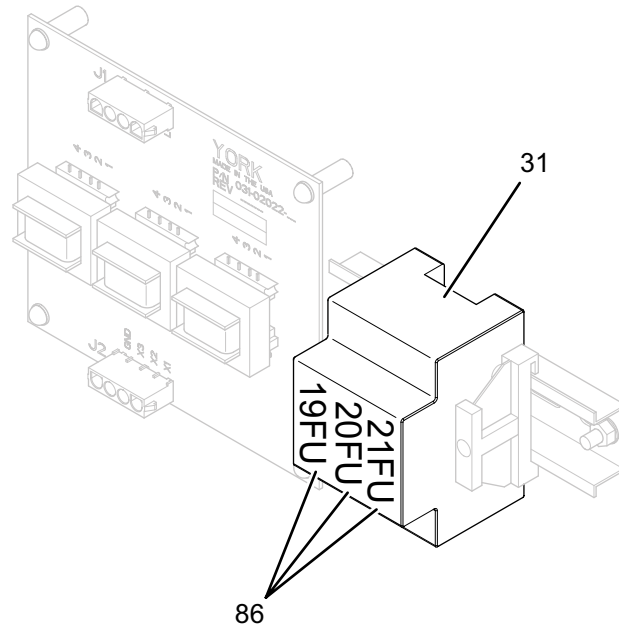


FIGURE 23 - FUSES AND FUSE HOLDERS (1FU-10FU, 19FU-21FU & 27FU)

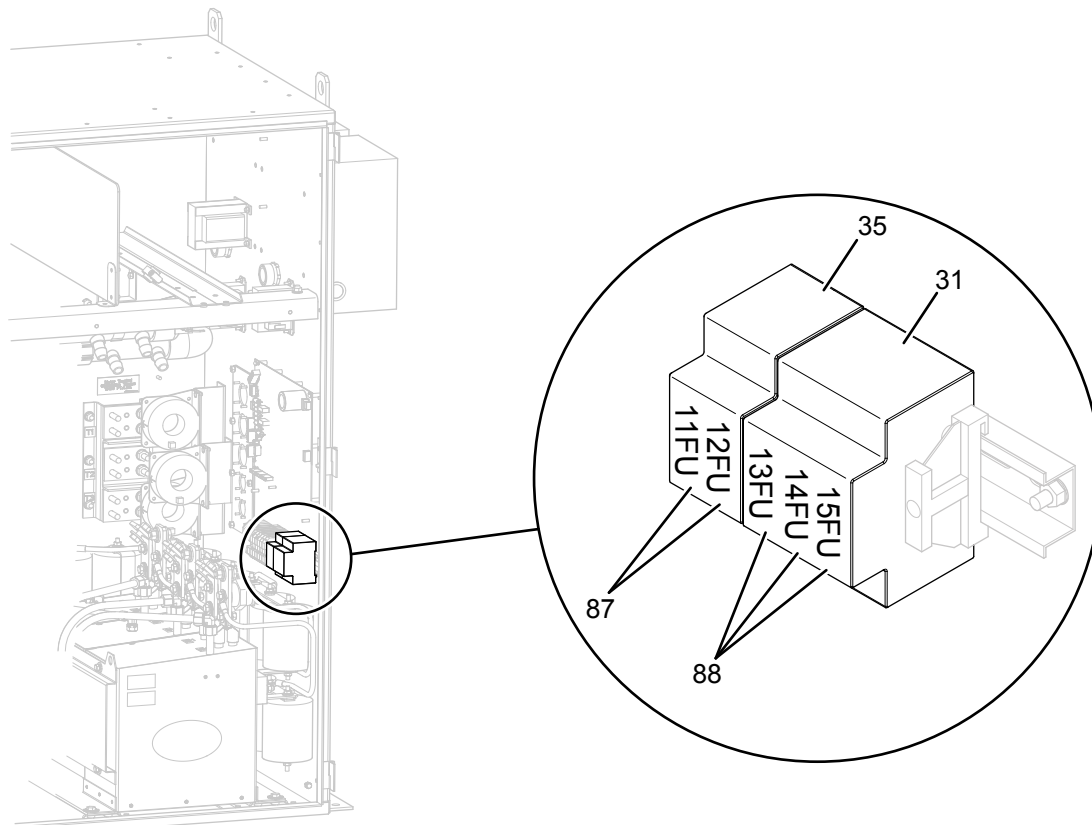
0774AMP VARIABLE SPEED DRIVE



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LD17780

FIGURE 24 - AUXILIARY FUSES (19FU-21FU)



LD18019

FIGURE 25 - FUSES AND FUSE HOLDERS (11FU-15FU)

0774AMP VARIABLE SPEED DRIVE

TABLE 13 - DOOR COMPONENTS (0774 AMPS)

ITEM NUMBER	DESCRIPTION	YORK PART NUMBER	SAP PART NUMBER	QUANTITY	FIGURE
29	Circuit Breaker Door Mounting Kit	026-46045-000	741273	1	26
	Disconnect Switch Handle	024-36614-000	736390		
105	Door Ground Strap	525-32508-001	806677	2	26
4	Door Kit Left 60 Hz (Including all labels & latches)	371-05992-651	-	1	26
	Door Kit Left 50 Hz (Including all labels & latches)	371-05592-653	-		
	Door Kit Right 60 Hz (Including all labels & latches)	371-05992-656	-		
	Door Kit Right 50 Hz (Including all labels & latches)	371-05592-658	-		
3	Door Latch	029-25614-000	743380	4	26
19	Door Stop Mounting Plate	371-05614-553	-	1	26
97	Door Stop Assembly	029-23420-000	119865	1	26
52-1	Label Front Door JCI Logo	035-23036-000	745608	1	26

NOTE: Items with an * are NOT represented.

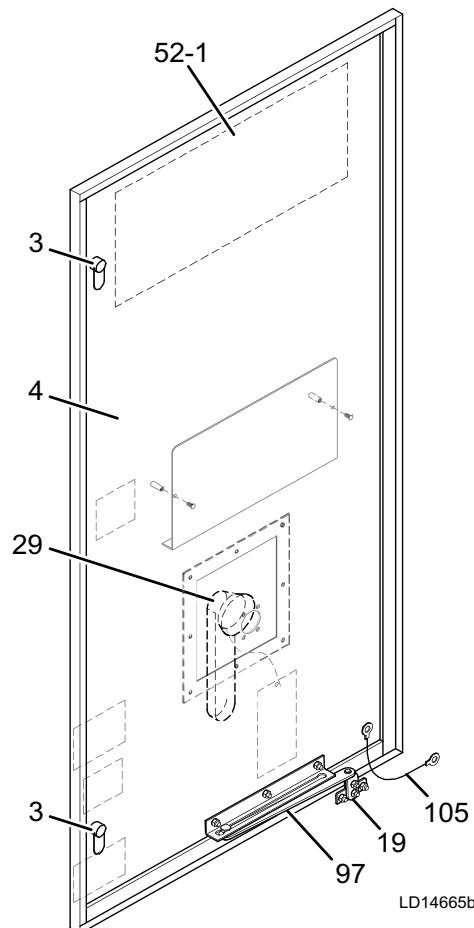


FIGURE 26 - DOOR COMPONENTS

0774AMP VARIABLE SPEED DRIVE

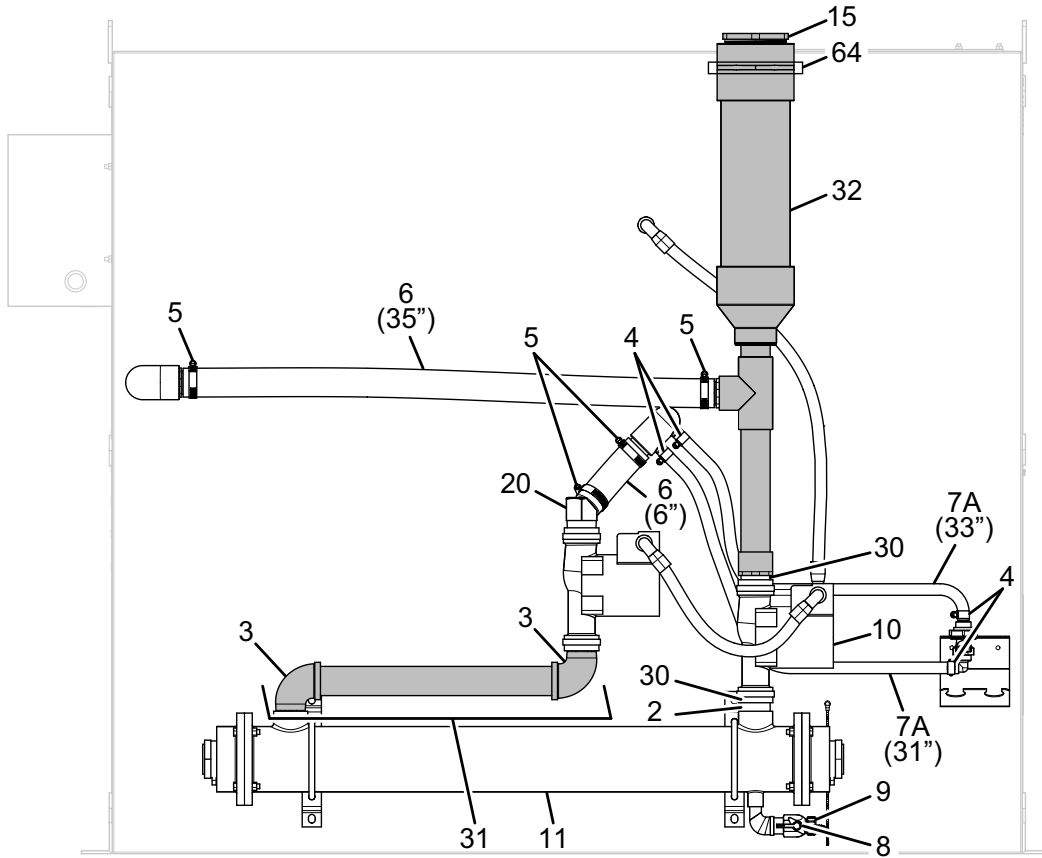
TABLE 14 - COOLING SYSTEM COMPONENTS (0774 AMPS)

ITEM NUMBER	DESCRIPTION	YORK PART NUMBER	SAP PART NUMBER	QUANTITY	FIGURE
8	Coolant Drain Valve	022-12207-000	839729	1	27
9	Coolant Drain Valve Cap	025-25526-000	-	1	27
1	Coolant Hose Barb Straight Kit (hose barb & hose)	371-05992-626	-	-	33
2	Coolant Hose Barb Elbow Kit (hose barb & hose)	371-05992-631	-	-	30
4	Coolant Hose Clamp 1"	023-08856-000	617439	50	27/30/31
5	Coolant Hose Clamp 2"	021-32226-000	730939	4	27
6	Coolant Hose External 1 1/2"	028-16373-000	742214	38"	27
7A	Coolant Hose External 3/4 " ID by the foot (To the power panel)	028-16692-000	864411	64"	27
7B	Coolant Hose Internal 3/4 " ID by the foot	028-16768-000	1056103	50"	30
70	Coolant Hose on Inductor 3/8 "	325-44864-607	-		31
71	Coolant Hose on Inductor 1/2 "	325-44864-618	-		31
32	Coolant Manifold Kit	371-05992-672	-	1	28/30
31	Coolant Manifold Supply Kit	371-05992-636	-	1	28/30
30	Coolant Manifold Return Kit	371-05992-671	-	1	28/30
45	Coolant Manifold Clamp	028-16632-000	913766	5	30/31
49	Coolant Manifold Bracket	371-05182-399	-	2	30
72	Coolant Manifold on Inductors 3/8"	325-44864-603	-	2	31
73	Coolant Manifold on Inductors 1/2"	325-44864-615	-	2	31
74	Coolant Manifold on Inductors Fittings Elbow 3/8"	325-44864-609	-	6	31
75	Coolant Manifold on Inductors Fittings Elbow 1/2"	325-44864-616	-	6	31
10	Coolant Pump	026-33890-000	3590	1	27
30	Coolant Pump Flange Set	023-20283-000	733193	2	27
32	Coolant Reservoir 4" PVC with Fill Plug Kit	371-05992-673	-	1	27
15	Coolant Reservoir Fill Plug	028-16630-000	843247	1	
64	Coolant Reservoir Hose Clamp	021-33315-000	865765	1	
76	Coolant Valves on Inductors	325-44864-605	-	4	31
20	Elbow 45°	028-16559-000	839776	1	27
3	Elbow 90°	023-17785-000	617581	2	27
51	Enclosure Temperature Sensor with connector	571-05182-283	807091	1	20/28
62	Flow Restrictor	028-16619-000	-	4	30/32
-	Inhibitor Per Gallon	013-02987-000	-	6 Gallon	-
14	Internal Cooling Coil	026-45982-000	741251	1	29/30
19	Internal Cooling Fan	025-32557-000	738735	4	29
2	Nipple Pipe Stl Sch 40, 1-1/2 X 2.00" Lg.	023-18209-000	-	1	27
52	Relay, Control Fan / Pump	024-30441-000	664298	1	28
11	Shell & Tube Heat Exchanger, 150 PSI Condenser 4"	026-46071-000	-	1	27
	Shell & Tube Heat Exchanger, 300 PSI Condenser 4"	026-46434-000	913764		
	Shell & Tube Heat Exchanger Head Gaskets (set of two) 4"	371-03716-002	-	1	
31	Shell and Tube Heat Exchanger Outlet Assembly Kit	371-05992-662	-	1	27
60	Tee Adapter 'A'	371-05992-406	843294	1	30/32
61	Tee Adapter 'B'	371-05992-408	843295	1	30/32

NOTE: Items with an * are NOT represented.

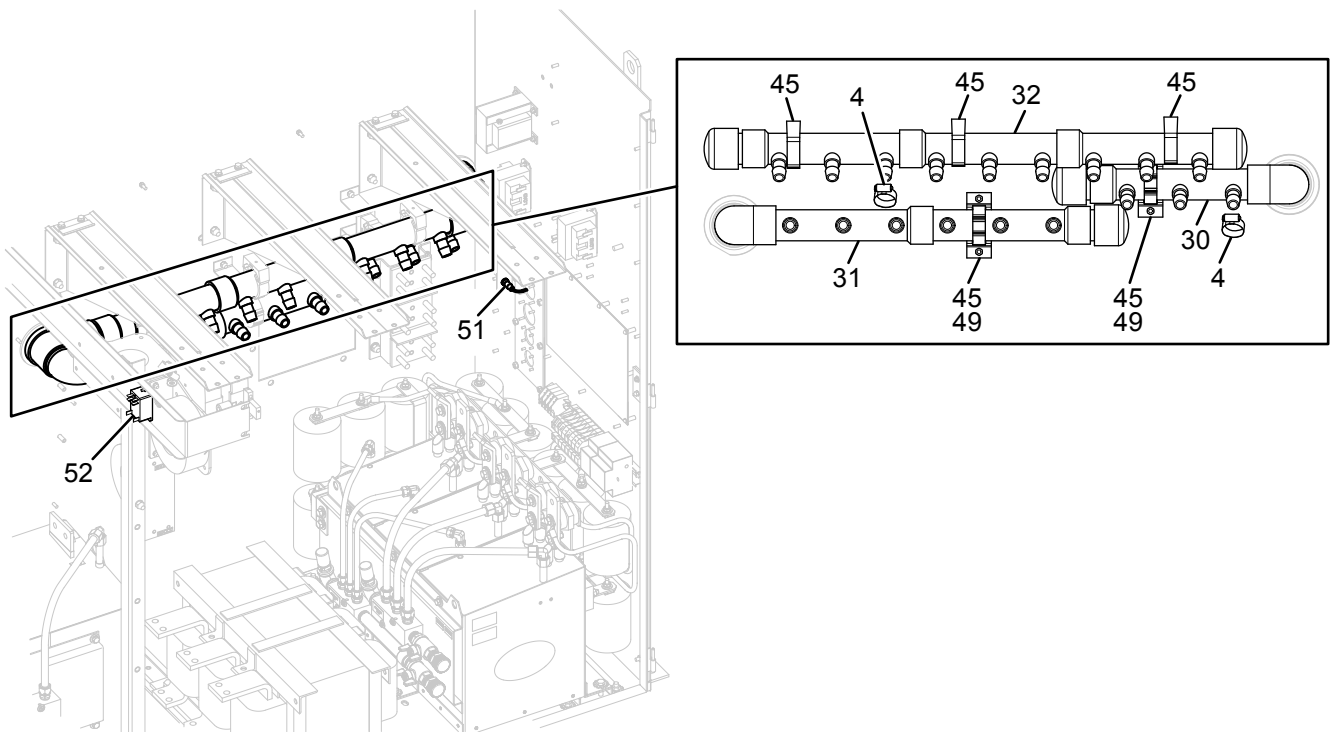
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0774AMP VARIABLE SPEED DRIVE



LD18020

FIGURE 27 - EXTERNAL COOLING SYSTEM

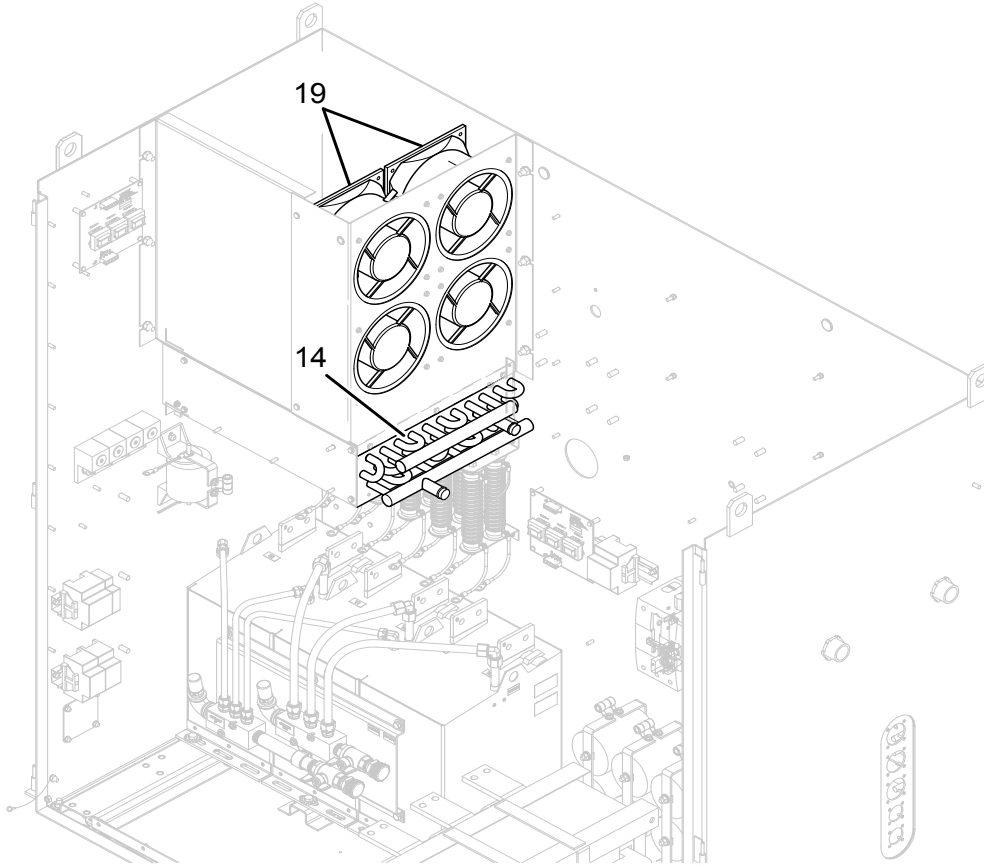


LD18021

FIGURE 28 - INTERNAL COOLING SYSTEM

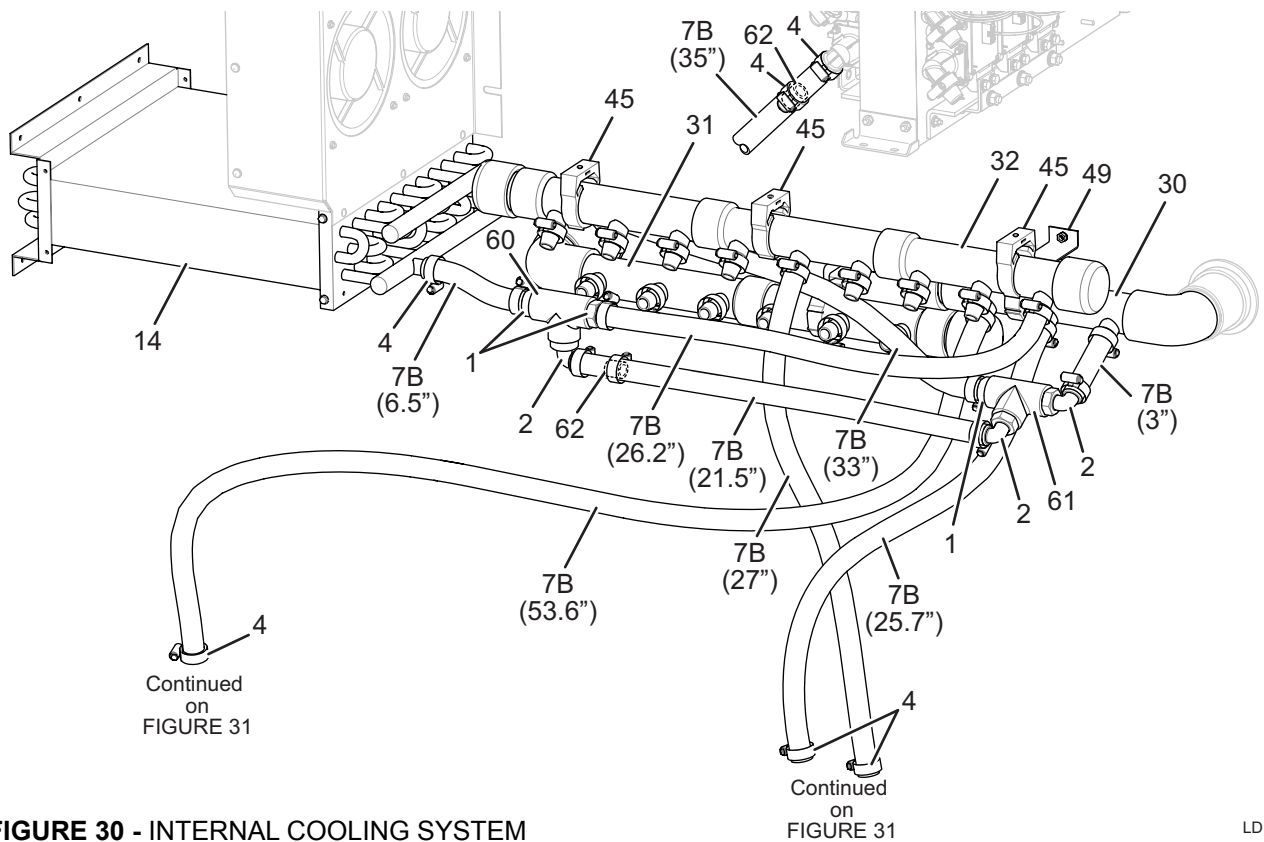
0774AMP VARIABLE SPEED DRIVE

2



LD18023

FIGURE 29 - INTERNAL COOLING SYSTEM



Continued
 on
 FIGURE 31

Continued
 on
 FIGURE 31

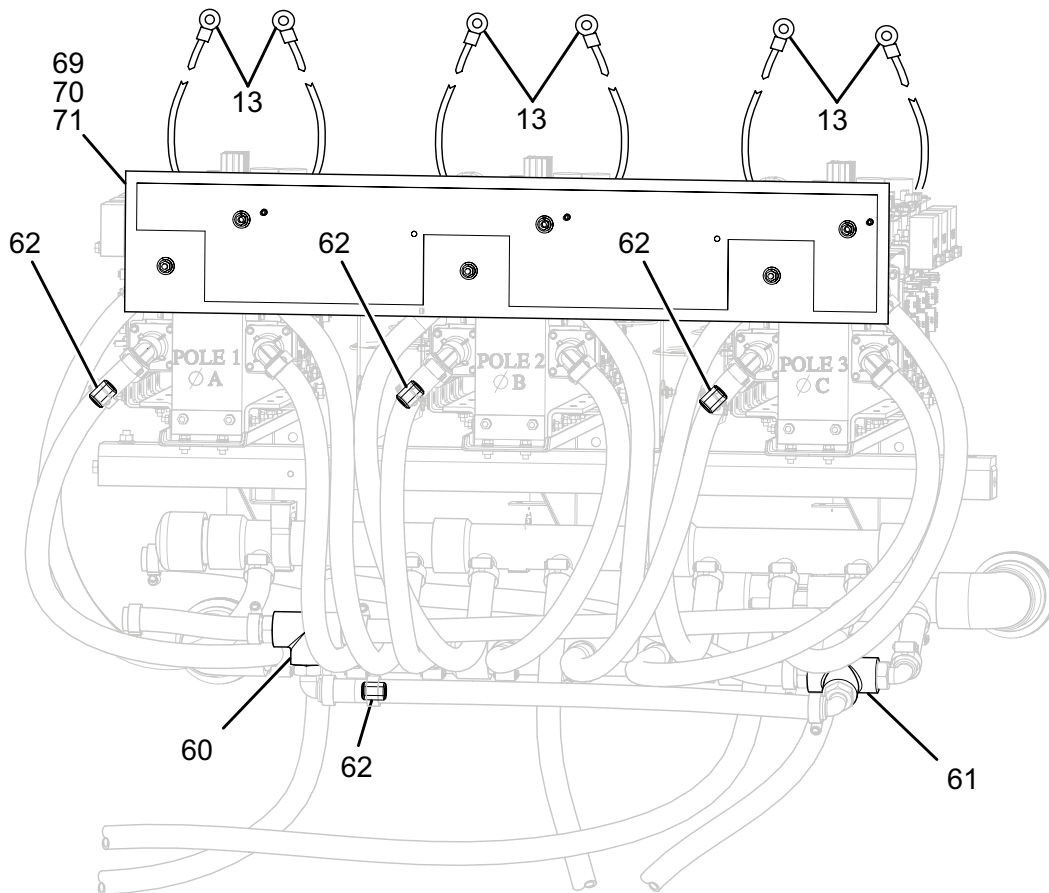
FIGURE 30 - INTERNAL COOLING SYSTEM

LD18025

0774AMP VARIABLE SPEED DRIVE

TABLE 15 - POWER ASSEMBLY COMPONENTS (0774 AMPS)

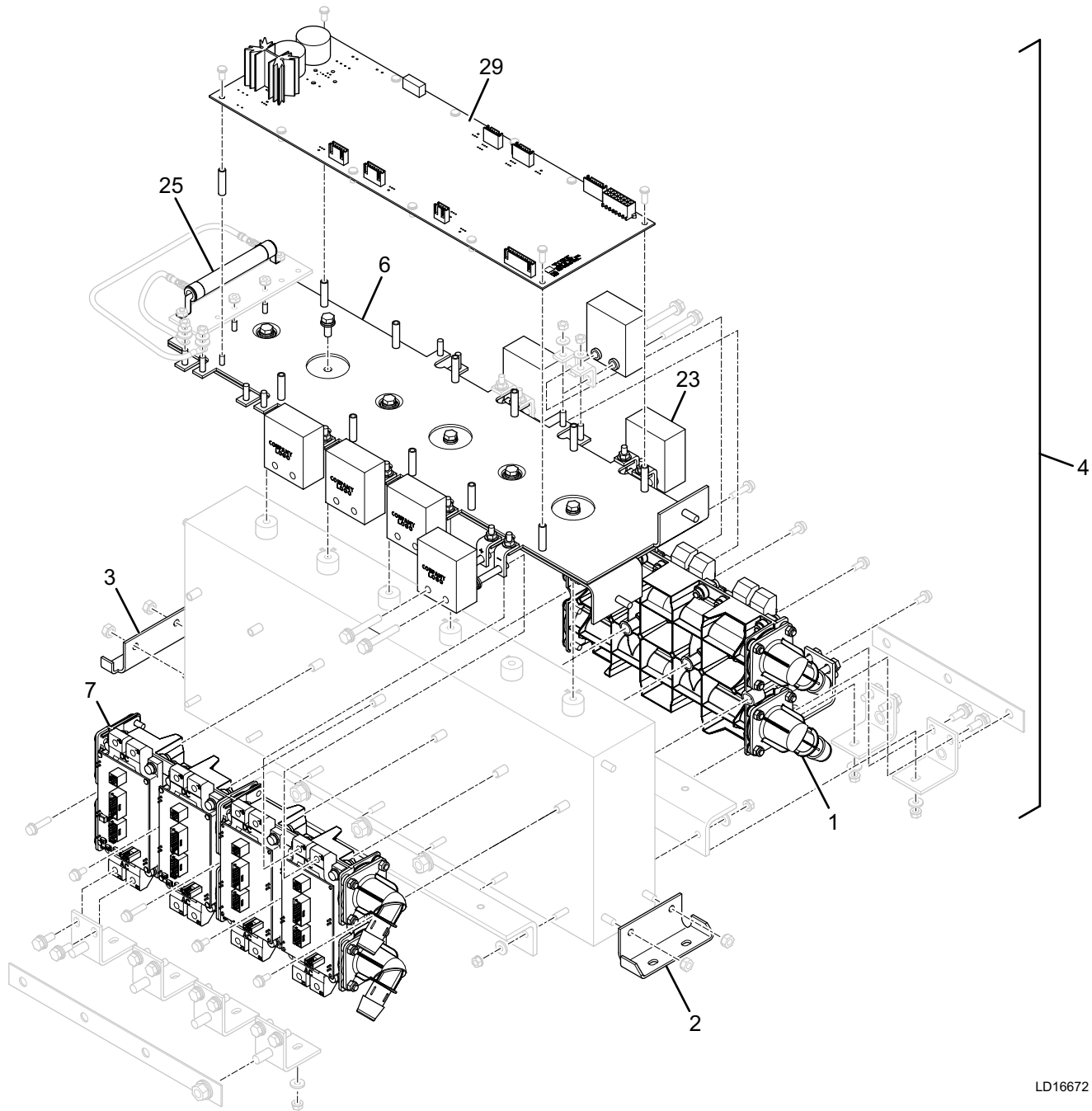
ITEM NUMBER	DESCRIPTION	YORK PART NUMBER	SAP PART NUMBER	QUANTITY	FIGURE
25	Bus Bleeder Resistor (ea.)	025-45188-000	843241	3	33
6	Bus Plate Assembly Kit	371-05526-601	-	3	33
70	Bus Plate (Positive or Negative)	071-05182-485	843250	2	32
23	Bus Snubber Capacitor (ea.)	025-42835-000	740149	21	33
29	IGBT Gate Driver Board	031-02762-001	744086	3	33
71	Insulator sheet between Bus Plates	071-05992-385	843267	1	32
1	Inverter Power Module Kit (one phase)	371-05999-611	-	3	33
83	Inverter Power Wiring (wiring between Inverter & L3)	571-05992-241	913821	1	34
2	Power Unit Mounting Foot Front	071-05508-312	749269	3	33
3	Power Unit Mounting Foot Rear	071-05508-310	749268	3	33
7	Rectifier Power Module Kit (one phase)	371-05526-616	-	3	33
79	Rectifier Power Wiring (wiring between 1L,2L&rectifier)	571-05992-221	913817	1	21
69	Spacer between Bus Plates	371-05182-490	843274	3	32
4	VSD Rectifier/Inverter Power Unit Complete Kit (IGBT, Capacitors, Heatsink, Coolant)	371-05999-621	-	3	33
13	Wiring Ground	571-05526-241	807110	6	32



LD18022

FIGURE 32 - POWER ASSEMBLY COMPONENTS

0774AMP VARIABLE SPEED DRIVE



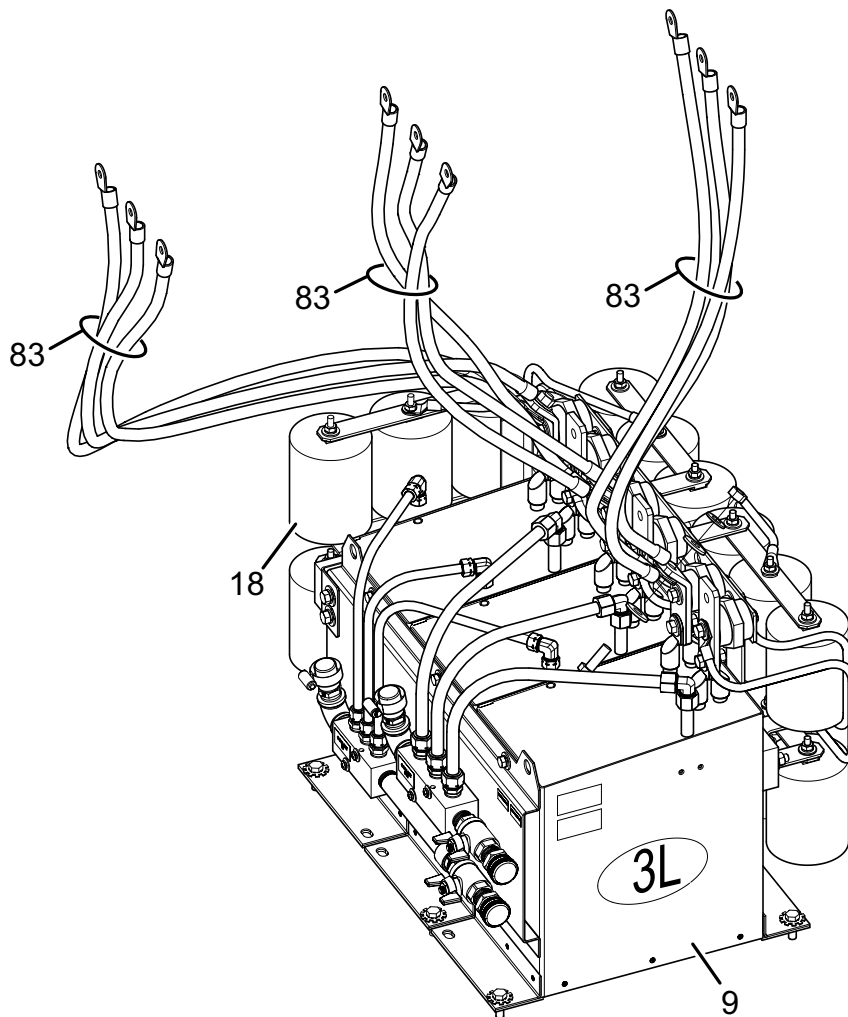
LD16672

FIGURE 33 - POWER POLE ASSEMBLY

0774AMP VARIABLE SPEED DRIVE

TABLE 16 - OUTPUT COMPONENTS (0774 AMPS)

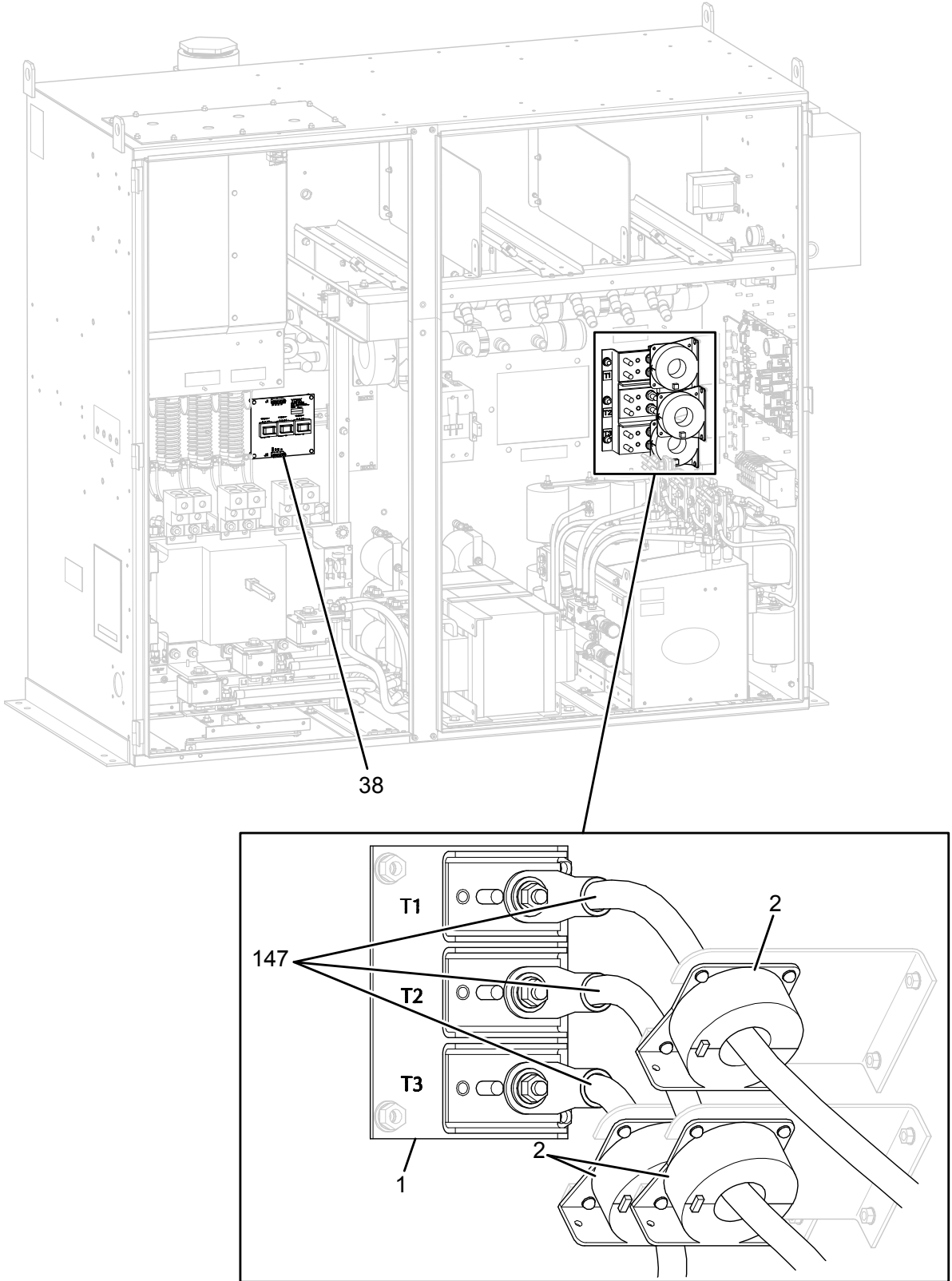
ITEM NUMBER	DESCRIPTION	YORK PART NUMBER	SAP PART NUMBER	QUANTITY	FIGURE
1	Motor Connection Plate	371-05992-366	843288	1	35
2	Output Current Transducer (DCCT)	025-45590-000	1045992	3	35
18	Output Harmonic Filter Capacitor	025-45337-000	-	18	34
9	Output Harmonic Filter Assembly	025-44856-000	838277	1	34
147	Output Power Wiring (wiring between 3L & motor connection plate)	571-05992-236	913819	1	35
38	Output Voltage Isolator Board	031-02022-001	743845	1	35



LD16534

FIGURE 34 - OUTPUT HARMONIC FILTER COMPONENTS #1

0774AMP VARIABLE SPEED DRIVE



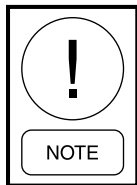
LD16670

FIGURE 35 - OUTPUT HARMONIC FILTER COMPONENTS #2

0774AMP VARIABLE SPEED DRIVE

TABLE 17 - DRIVE LOGIC BOARD AND COMPONENTS (0774 AMPS)

ITEM NUMBER	DESCRIPTION	YORK PART NUMBER	SAP PART NUMBER	QUANTITY	FIGURE
1	PROM Chip U35 (for 031-02911-00x board)	031-03048-001	744215	1	36
2	PROM Chip U38 (for 031-02911-00x board)	031-03049-001	744216	1	36
3	VSD Logic Board	031-02911-004	865805	1	36
	VSD Logic Board Kit (includes all software)	331-02911-604	-		
4	U66 485 Communications Driver	031-02074-000	-	1	36



PROM Chips U35 and U38 must be ordered as a set.

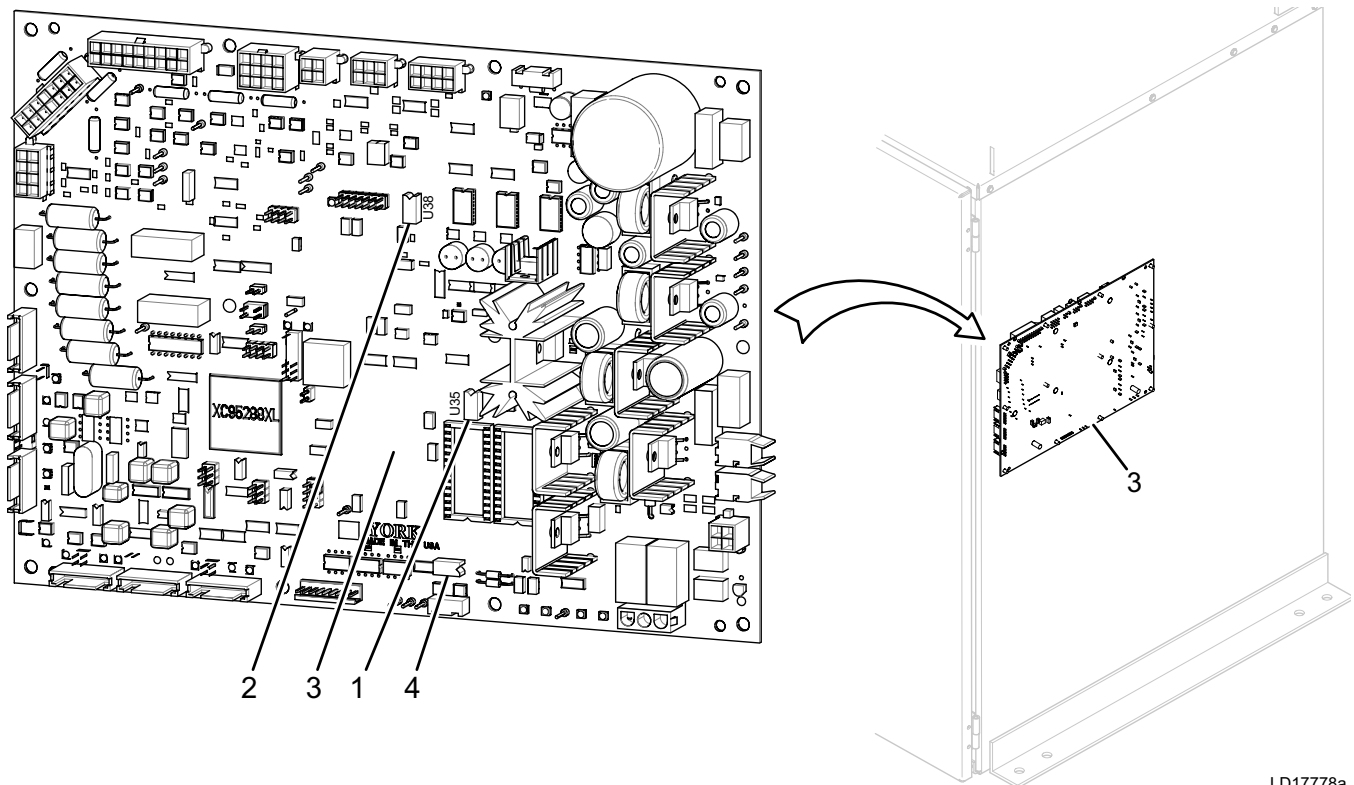
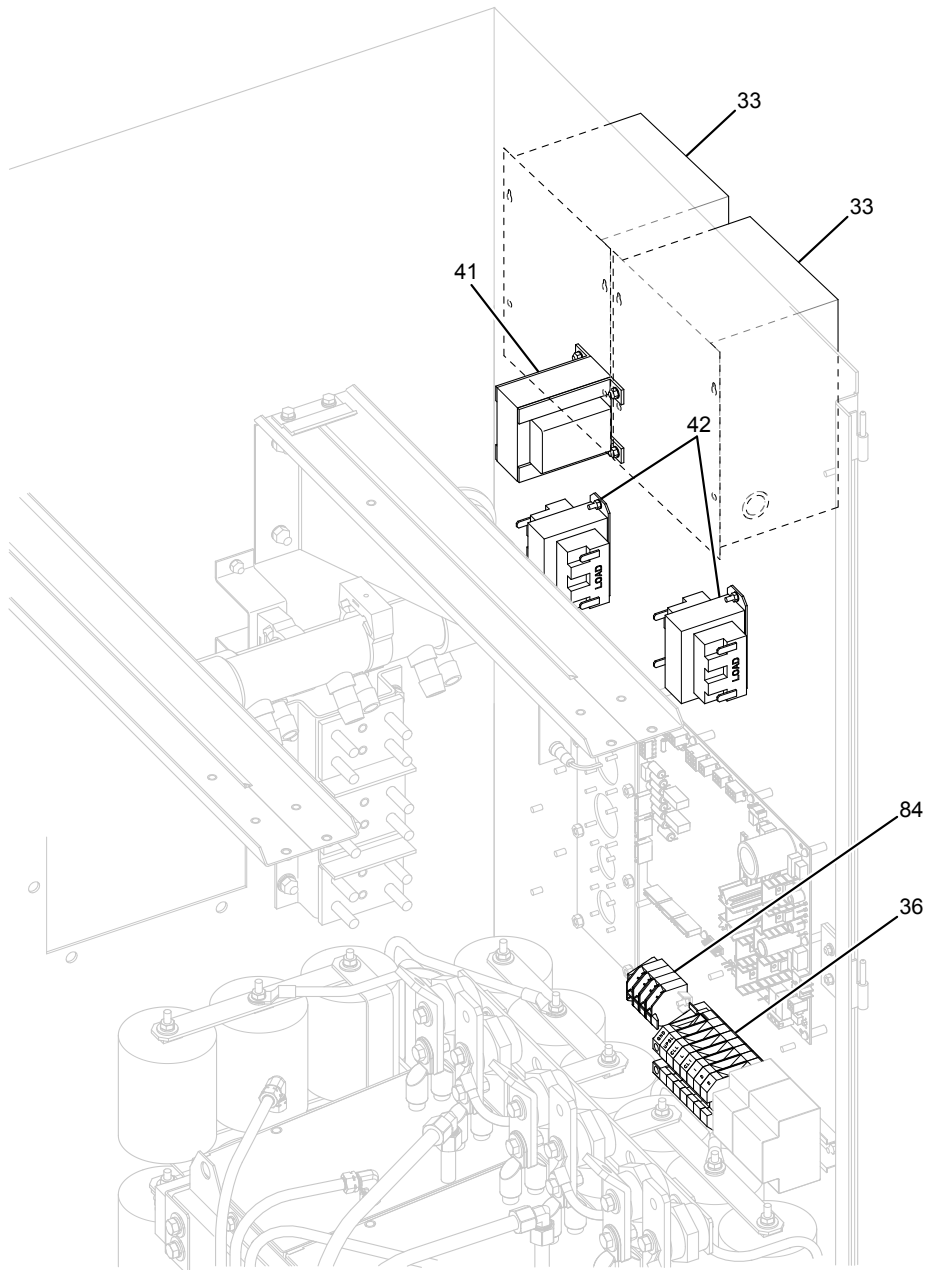


FIGURE 36 - DRIVE LOGIC BOARD AND COMPONENTS

0774AMP VARIABLE SPEED DRIVE

TABLE 18 - MISCELLANEOUS COMPONENTS (0774 AMPS)

ITEM NUMBER	DESCRIPTION	YORK PART NUMBER	SAP PART NUMBER	QUANTITY	FIGURE
33	Control Transformer 480VAC 3KVA	025-29627-002	117496	2	37
	Control Transformer 380/400/415VAC 3KVA	025-29627-003	738308	2	
42	Control Transformer 24 VAC 75 VA	025-27911-000	1312	2	37
41	Control Transformer	025-43339-000	740269	1	37
84	Terminal Block 4-pole	025-44853-004	839754	1	37
36	Terminal Block 8-pole	025-45041-000	839762	1	37



LD17779

FIGURE 37 - MISCELLANEOUS COMPONENTS

0774AMP VARIABLE SPEED DRIVE

TABLE 19 - WIRING HARNESSSES AND CONNECTORS (0774 AMPS)

BOARD NAME	BOARD PART NUMBER	POSITION	HOUSING PART NUMBER (SAP PART NUMBER)	PIN PART NUMBER (SAP PART NUMBER)
Line Voltage Isolator Board	031-02022-000	J1	025-19671-000 (737534)	025-22215-000 (62701)
Line Voltage Isolator Board	031-02022-000	J2	025-21417-000 (737658)	025-22215-000 (62701)
Output Voltage Isolator Board	031-02022-001	J1	025-21417-000 (737658)	025-22215-000 (62701)
Output Voltage Isolator Board	031-02022-001	J2	025-21417-000 (737658)	025-22215-000 (62701)
Input DC Current Transducer	-	-	025-43356-000 (740274)	025-43357-000 (740275)
Output DC Current Transducer	-	-	025-43356-000 (740274)	025-43357-000 (740275)
VSD Logic Board	031-02911-004	J1	025-19672-000 (737535)	025-22215-000 (62701)
VSD Logic Board	031-02911-004	J2	025-42614-000 (740129)	025-28386-000 (737925)
VSD Logic Board	031-02911-004	J3	025-35964-000 (739253)	025-28386-000 (737925)
VSD Logic Board	031-02911-004	J4	025-28384-000 (737920)	025-28386-000 (737925)
VSD Logic Board	031-02911-004	J5	025-28959-000 (738246)	025-28386-000 (737925)
VSD Logic Board	031-02911-004	J6	025-28382-000 (737916)	025-28386-000 (737925)
VSD Logic Board	031-02911-004	J7	025-35966-000 (550505)	025-28386-000 (737925)
VSD Logic Board	031-02911-004	J8 and J11	Assembly # 571-05992-205 (994025)	N/A
VSD Logic Board	031-02911-004	J9 and J12	Assembly # 571-05992-207 (994026)	N/A
VSD Logic Board	031-02911-004	J10 and J13	Assembly # 571-05992-209 (994027)	N/A
VSD Logic Board	031-02911-004	J14	025-28959-000 (738246)	025-28386-000 (737925)
VSD Logic Board	031-02911-004	J15	025-29130-000 (738262)	025-28386-000 (737925)
VSD Logic Board	031-02911-004	J17	025-21136-000 (737636)	025-19674-000 (144774)

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0774AMP VARIABLE SPEED DRIVE

TABLE 19 - WIRING HARNESSSES AND CONNECTORS (0774 AMPS) (CONT'D)

BOARD NAME	BOARD PART NUMBER	POSITION	HOUSING PART NUMBER (SAP PART NUMBER)	PIN PART NUMBER (SAP PART NUMBER)
VSD Logic Board	031-02911-004	J18	Assembly # 571-05992-227 (994032)	N/A
VSD Logic Board	031-02911-004	J19	025-21137-000 (737637)	025-19674-000 (737537)
VSD Logic Board	031-02911-004	J25	025-35966-000 (550505)	025-28386-000 (737925)
VSD Logic Board	031-02911-004	J36	Assembly # 571-05992-291 (994037)	N/A
IGBT Gate Driver Board	031-02762-001	J1	025-21136-000 (737636)	025-32506-000 (738721)
IGBT Gate Driver Board	031-02762-001	J2	025-42614-000 (740129)	025-28386-000 (737925)
IGBT Gate Driver Board	031-02762-001	J3	025-19671-000 (737534)	025-19673-000 (737536)
IGBT Gate Driver Board	031-02762-001	J4	025-19672-000 (737535)	025-22215-000 (62701)
IGBT Gate Driver Board - Inverter	031-02762-001	J5 and J6	Assembly # 571-05999-201 (843306)	N/A
IGBT Gate Driver Board - Rectifier	031-02762-001	J7 and J8	Assembly # 571-05526-211 (807107)	N/A
IGBT Gate Driver Board - Rectifier	031-02762-001	J9 and J11	Assembly # 571-05526-221 (807107)	N/A
IGBT Gate Driver Board - Inverter	031-02762-001	J10	Assembly # 571-05999-231 (843307)	N/A
Rectifier Resistor Board	031-02764-001	J1 and J4	Assembly # 571-05526-221 (807108)	N/A
Rectifier Resistor Board	031-02764-001	J2 and J3	Assembly # 571-05526-211 (807107)	N/A
Inverter Resistor Board	031-02765-001	J1	Assembly # 571-05999-231 (843307)	N/A
Inverter Resistor Board	031-02765-001	J2 and J3	Assembly # 571-05999-201 (843306)	N/A

0774AMP VARIABLE SPEED DRIVE

TABLE 19 - WIRING HARNESSES AND CONNECTORS (0774 AMPS) (CONT'D)

BOARD NAME	BOARD PART NUMBER	POSITION	HOUSING PART NUMBER (SAP PART NUMBER)	PIN PART NUMBER (SAP PART NUMBER)
Ambient Temperature at Sensor	-	-	025-29130-000 (738262)	025-28386-000 (737925)
Ambient Temperature at Cable	-	-	025-32564-000 (738737)	025-30999-000 (738540)
CPC CONNECTORS				
CPC CONNECTORS DESCRIPTION	HOUSING PART NUMBER (SAP PART NUMBER)	PIN PART NUMBER (SAP PART NUMBER)	COMPLETE CABLE (SAP PART NUMBER)	
Magnet Bearing Controller	025-37873-000 (739490)	025-40463-000 (873883)	571-05992-291 (994037)	
Motor Monitoring	025-44974-000 (828162)	025-40463-000 (873883)	571-05992-286 (994036)	
OptiView Communication	025-37873-000 (739490)	025-40463-000 (873883)	571-05992-227 (994032)	
OptiView Power	025-44974-000 (828162)	025-37875-000 (739491)	571-05992-217 (994031)	
UPS	025-44974-000 (828162)	025-37875-000 (739491)	571-05992-216 (994030)	

Note: All items in Table 19 are NOT shown

TABLE 20 - POWER WIRING SECTION (0774 AMPS)

DESCRIPTION	PART NUMBER	SAP NUMBER
Damping resistors (4L1-4L3)	571-05992-251	913822
Damping resistors 3 sets of wires (2L1G-2L3G, 3L1-3L3, 3L1E-3L3E, and braided wires)	571-05992-252	913823
Input Power Wiring Circuit Breaker (Wiring between circuit breaker and 1L)	571-05992-231	913818
Input Power Wiring Disconnect Switch (Wiring between disconnect switch and 1L)	571-05992-201	913816
Inverter Power Wiring (Wiring between Inverter and 3L)	571-05992-241	913821
Output Power Wiring (Wiring between 3L & motor connection plate)	571-05992-236	913819
Rectifier Power Wiring (Wiring between 1L, 2L and rectifier)	571-05992-221	913817



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