

 BY JOHNSON CONTROLS	MODEL YT (STYLE J) CENTRIFUGAL LIQUID CHILLERS	
RENEWAL PARTS	Supersedes: 160.55-RP1 (307)	Form 160.55-RP1 (315)

**MODEL YT
(STYLE J)
OPTIVIEW™ CONTROL CENTER**

371-02264-104

371-02486-104

371-02448-104

371-02264-105

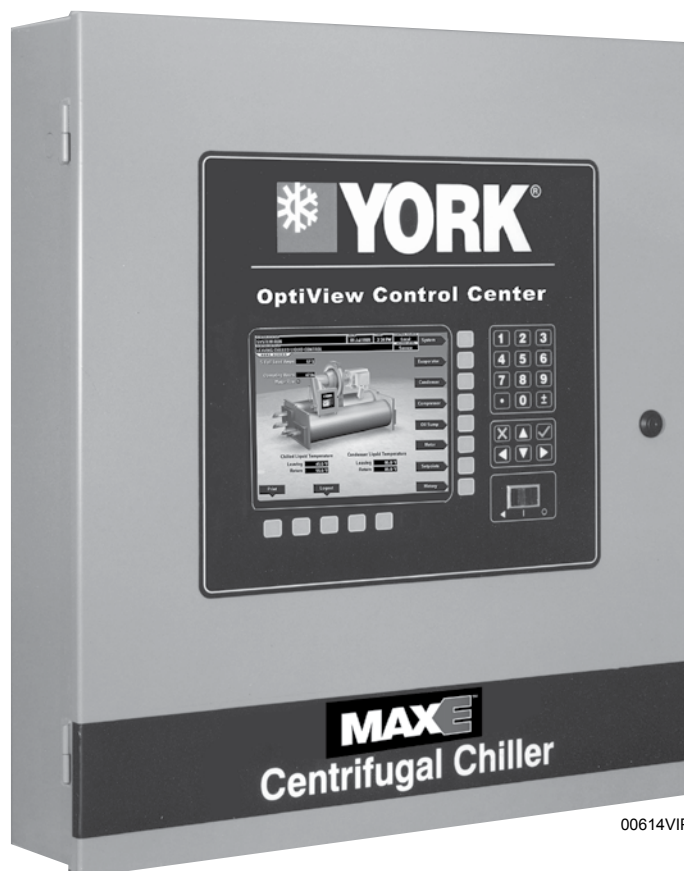
371-02486-105

371-02448-105

371-02264-106

371-02486-106

371-02448-106



00614VIP

Issue Date:
 March 31, 2015



IMPORTANT!

READ BEFORE PROCEEDING!

GENERAL SAFETY GUIDELINES

This equipment is a relatively complicated apparatus. During rigging, installation, operation, maintenance, or service, individuals may be exposed to certain components or conditions including, but not limited to: heavy objects, 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 rigging, installation, and 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 rigging, installation, and operating/service personnel. It is expected that these individuals 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 the on-product labels, this document and any referenced materials. This individual shall also be familiar with and comply with all applicable industry and 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:



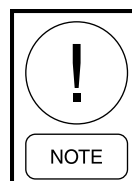
Indicates a possible hazardous situation which will result in death or serious injury if proper care is not taken.



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 or product 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>.

It is the responsibility of rigging, lifting, and operating/service personnel to verify the applicability of these documents to the equipment. If there is any question

regarding the applicability of these documents, rigging, lifting, and operating/service personnel 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.

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

ITEM	DESCRIPTION	QUANTITY	PART NUMBER	FIGURE
1	TERMINAL BLOCK (NEMA 1, 4, 12) (CE)	1	025-33290-000 025-34121-000	2 2
2	INPUT/OUTPUT BOARD	1	031-01743-001	2
3	MICROBOARD The Control Center could be equipped with one of the following microboards, depending upon the vintage of the Control Center. Regardless of which board is present, order part number 331-02430-602 (replacement microboards cannot be ordered by the basic board part number of 031-02430-000). 031-01730-000 - supplied in new production chillers until August 2003. Uses BIOS Eprom (item 14), BRAM (item 28) and Flash Memory Card (item 20). Part number 331-02430-602 is supplied as service replacement for this board. 031-02430-000 - supplied in new production chillers from August 2003 through August 2010. Uses BIOS Eprom (item 57) and BRAM (item 58) 031-02430-001 – Supplied in new production chillers and as replacement part number 331-02430-602 after August 2010. The board is supplied pre-programmed with the latest version of the YT "Controls" software and it comes with a BRAM (U38) (item 58A) and BIOS EPROM (U37) (item 57A). It is shipped with a label on the outside of the shipping box that lists the part number of the Microboard and the version of the "Controls" software. This board is the service replacement for 031-01730-000, 031-02430-000.	1	331-02430-602	2
4	POWER SUPPLY	1	025-34111-000	2
5	TRANSFORMER	1	025-30889-000	2
6	KEYPAD (NEMA 1) (NEMA 4/12 & CE)	1	024-30993-000 024-30994-000	1 1
7	FUSE, 5A	1	025-14019-000	2
8	FASTENER, PAWL, ADJUSTABLE (NEMA 1)	1	021-17252-000	1
9	SWITCH ROCKER (NEMA 1)	1	024-23143-000	1
10	DISPLAY KIT (See Note 1)	1	331-01771-000	8
11	COVER, DISPLAY	1	071-02264-346	8
12	CABLE, RIBBON (NEMA 1) (NEMA 4/12 & CE)	1	031-01772-000 031-02015-000	2 2
13	CABLE, RIBBON	1	031-01779-000	2
14	EPROM, BIOS (U45) Used on Microboard 031-01730-000 only. Not compatible with Microboard 031-2430-000. *IMPORTANT! Flash memory Card version C.MLM.02.00 CANNOT be used with this Eprom. The chiller will not run with this combination. The Flash Memory Card must be upgraded to version C.MLM.02.01 or later (ie; .02, .03, etc.). Refer to item 20.	1	031-01796-002*	2
15	FUSEHOLDER (For Item 16)	1	025-13991-000	2
16	FUSE, 15A	1	025-14384-000	2
17	FUSEHOLDER (For Item 7)	1	025-13991-000	2
18	CABLE, RIBBON [EM START & S.S.S. (MOD. A) ONLY]	1	031-01799-000	3
19	CABLE, SHIELDED (VSD APPLICATION ONLY)	1	571-02264-411	2

ITEM	DESCRIPTION	QUANTITY	PART NUMBER	FIGURE
20	FLASH MEMORY CARD, PROGRAMMED (U46) Used on Microboard 031-01730-000 only. Not compatible with Microboard 031-2430-000 or 031-02430-001. Refer to note 5 for version analysis. VERSION C.MLM.NN.NN.NNN Allows Display Screens to be displayed in English, Chinese, Traditional, Chinese Simplified, French, Portuguese or Spanish language. Supplied in new NEMA 1-4 OptiView Control Centers.	1	031-02004-001	2
	VERSION C.MLM.NN.NN.NNN Allows Display Screens to be displayed in English or French Language. Supplied in new CE OptiView Control Centers.		031-02004-002	
21	SWITCH, KNOB SELECTOR (NEMA 4/12, CE)	1	024-30931-000	5
22	CONTACT BLOCK (NEMA 4/12, CE)	2	024-30932-000	5
23	BUSS BAR (GROUND) (NEMA 4/12, CE)	1	025-34122-000	7
24	SUPPRESSOR (See Note 3)	6	031-00808-000	
25	CONTROL, CURRENT MOD. CM-2 (Electro-Mechanical Starter App. Only)	1	031-00947-000	3
26	DIODE BRIDGE (Electro-Mechanical Starter App. Only)	1	031-00210-000	3
27	RESISTOR, VARIABLE (Electro-Mechanical Starter App. Only)	2	025-20789-000	3,10
27A	RESISTOR ASSEMBLY (Includes both resistors configured for installation)	1	575-00364-001	3,10
28	IC, BRAM-U52 Used on Microboard 031-01730-000 only. Not compatible with Microboard 031-2430-000	1	031-02028-000	2
29A	TRANSDUCERS CONDENSER (STRAIGHT THREADS)		025-29148-019	
29B	EVAPORATOR (STRAIGHT THREADS)		025-29148-102	
29C	PURGE (NPTF)		025-29148-008	
29D	OIL PRESSURE (LOW SIDE) (NPTF)		025-29148-003	
29E	OIL PRESSURE (HIGH SIDE) (NPTF)		025-29148-004	
29F	SEAL, O-RING, (For Items 29A and 29B)		028-12961-002	
30A	THERMISTORS ENTERING CHILLED WATER TEMPERATURE	1	025-29964-000	
30B	LEAVING CHILLED WATER TEMPERATURE	1	025-29964-000	
30C	SENSOR WELL WITH THREADED TOP	1	026-32328-000	
30D	ENTERING CONDENSER WATER TEMPERATURE	1	025-29964-000	
30E	LEAVING CONDENSER WATER TEMPERATURE	1	025-29964-000	
30F	OIL TEMPERATURE (Straight threads W/ O-ring)	1	025-31301-000	
30G	DISCHARGE TEMPERATURE	1	025-28936-000	
30H	SEAL, O-RING, (For Item 30F)	1	028-12961-004	
31	BOARD, ADAPTIVE CAPACITY CONTROL (VSD App. Only) See 160.00-RP4 & 160.00-RP2. See Note 8 for replacement.	1	—	2
32	CIRCUIT BREAKER, POLE, 6A (CE)	1	024-30935-000	7
33	SWITCH, DISCONNECT (CE)	1	024-34171-000	7
34	CIRCUIT BREAKER, 25A (CE)	1	024-30956-000	7
35	CIRCUIT BREAKER 16A (CE)	1	024-30947-000	7

ITEM	DESCRIPTION	QUANTITY	PART NUMBER	FIGURE
36	CIRCUIT BREAKER (CE)	1	02-30936-000	7
37	MOUNT, ANTI-VIBRATION	4	021-19191-000	2
38	BACKLIGHT BULB	1	See Note 4	8
39	BACKLIGHT INVERTER BOARD	1	See Note 4	8
40	BACKLIGHT INVERTER BOARD RIBBON CABLE	1	See Note 4	8
41	DISPLAY INTERFACE BOARD	1	See Note 4	8
42	DISPLAY INTERFACE BOARD RIBBON CABLE	1	031-01769-000	8
43	STRIP, NEOPRENE	2.8 FT	028-07533-000	8
44	E-LINK GATEWAY (Optional) BACnet MSTP, N2, Modbus RTU	1	025-43893-000	2
44A	E-LINK INSTALLATION KIT (Power and Comms Wiring)	1	025-43894-000	2
45	ANALOG I/O BOARD (optional) (Hot Gas Bypass Control)	1	371-02514-000	2
46	EVAPORATOR REFRIGERANT TEMPERATURE SENSOR	1	025-34159-000	
46A	SEAL, O-RING, (For Item 46)	1	028-12961-004	
47	DROP LEG thermistor	1	025-29964-000	
48	WIRING HARNESS, 8 inch, Power supply to Microboard J1 12 inch		571-02264-272 571-03774-272	
49	FUSE, F1 & F2, 5 AMP (revision E and later 031-01730-000 Microboards and all 031-02430-000 Microboards)	1	025-34592-000	2
50	FUSE, 5A (4FU, 6FU)	2	025-15759-000	2
51	FUSE, 4A (5FU)	1	025-34566-000	2
52	FUSEHOLDER (For Items 50 and 51)	1	025-34565-000	2
53	RS-485 DRIVER IC. U53, U54, U91 On 031-01730-000 Microboard. U45, U46, U47 on 031-02430-000 Microboard (supplied in package of 4 each)	3	031-02074-000	2
54	HOUSING, CONNECTOR P8, 22 POSITION	1	025-34117-000	2
55	HOUSING, CONNECTOR P9, 20 POSITIONS	1	025-34116-000	2
56	CONTACTS, SOCKETS FOR P8, P9	42	025-28386-000	2
57	EPROM, BIOS (U37) Used on Microboard 031-02430-000 only. Not compatible with Microboard 031-01730-000. Refer to note 6 for version analysis.	1	031-02429-001	2
57A	EPROM, BIOS (U37) Used on Microboard 031-02430-001 only. Not compatible with Microboard 031-01730-00 or 031-02430-000. Refer to note 6 for version analysis.	1	031-02429-002	2
58	BRAM (U38) Used on Microboard 031-02430-000 only. Not compatible with Microboard 031-01730-000 or 031-02430-001	1	031-02431-000	2
58A	BRAM (U38) Used on Microboard 031-02430-001 only. Not compatible with Microboard 031-01730-000 or 031-02430-001.	1	031-02565-000	2
59	PROGRAM CARD Used to download YT chiller operating program into 031-02430-000 or 031-02430-001 Microboards. Contains the YT chiller operating program. Refer to note 7 for version analysis.	1	031-02469-001	6
60	CONTROL LOGIC - 7LK (MOD A Solid State Starter Retrofit App. only)	1	031-00936-002	9
61	CONTROL LOGIC - 14LK (MOD A Solid State Starter Retrofit App. only)	1	031-00936-003	9
62	CONTROL LOGIC - 26LK (MOD A Solid State Starter Retrofit App. only)	1	031-00936-004	9
63	CONTROL LOGIC - 33LK (MOD A Solid State Starter Retrofit App. only)	1	031-00936-005	9

NOTES:

- The replacement Liquid Crystal Display supplied by YORK might not be by the same manufacturer as the original Display. Each Display requires a specific Display Interface Board (Item 41), Backlight Inverter Board (Item 46), and Backlight Inverter Board ribbon cable (Item 40). Therefore, the Liquid Crystal Display is not available separately. **Service replacement Displays or supporting components must not be arbitrarily selected! Non-compatibility of components will result in incorrect operation!** To assure compatible supporting components, the Display is supplied as a kit (331-01771-000), which contains a replacement Display and all compatible supporting components on a mounting plate. For future reference, a label attached to the side of the mounting plate (Fig. 9) lists the YORK part numbers of these compatible components and the required configuration of the Microboard Program Jumpers. These Program Jumpers must be configured for this Display by a qualified Service Technician following instructions in YORK Service manual 160.54-M1. The contents of the kit are as follows:

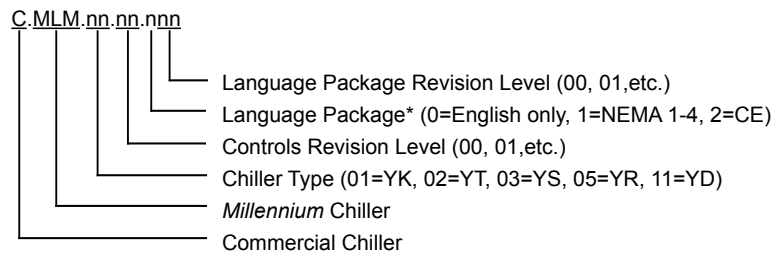
- | | |
|--|---|
| a. Liquid Crystal Display | e. Appropriate Backlight Inverter Board (Item 39) for Display. |
| b. Backlight Bulb (Item 38) | f. Appropriate Backlight Inverter Board ribbon cable (Item 40) for Item 39. |
| c. Appropriate Display Interface Board (Item 41) for Display | g. All mounting hardware. |
| d. Appropriate Display Interface Board ribbon cable (Item 42) for Item 41. | h. Installation instructions. |

Starting in July of 2012 the display now uses an LED backlight which eliminates the need for the backlight inverter. The LED backlight requires a different backlight cable which is provided in the display kit.

- IMPORTANT!** Revision "E"(and later) boards require BIOS Eprom 031-01796-002 (supplied with revision "E" and later boards). If Flash Memory Card 031-02004-001 is used, it **MUST** be version C.MLM.02.01 or later (ie: .02, .03, etc). The latest version of this Memory Card is supplied with the replacement board. The chiller will not run with C.MLM.02.00 in a revision "E" board.

Return all unused Flash memory Cards with Warranty return boards.

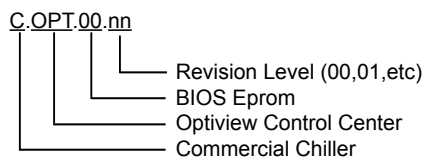
- Extra Suppressors are shipped in cloth bag. They are applied at solenoids and relays located on chiller.
- Refer to label (Fig. 9) on Display mounting plate for YORK part number of applicable replacement part. **Service replacement Display supporting components must not be arbitrarily selected! Non-compatibility of components will result in incorrect operation!**
- Flash Memory Card (Item 20) version analysis:



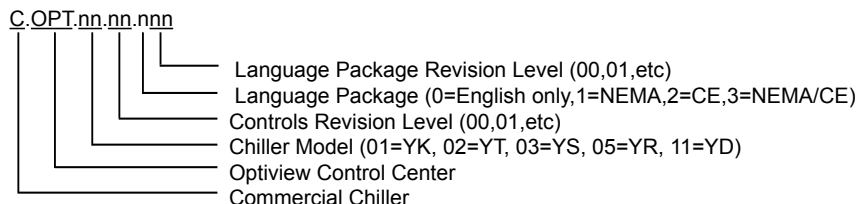
*1 = Supplied in new NEMA 1-4 OptiView Control.

2 = Supplied in new CE (European Community) OptiView Control Centers.

- BIOS Eprom (item 57) version analysis:



- Program Card (item 59) version analysis:



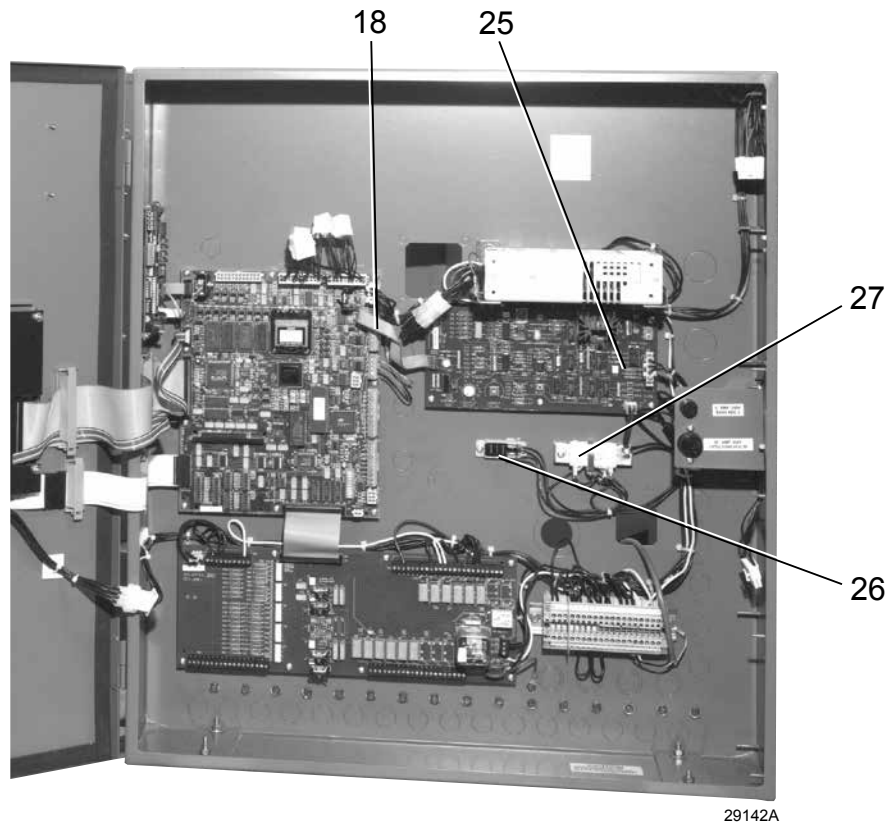
- Microboard 031-02430-001 can perform the ACC Surge Mapping function by itself eliminating the need for the ACC board. Some wiring changes are required for the PRV pot and communications wiring. Refer to the 160.55-M1 manual for details.



FIGURE 1 - FRONT OF OPTIVIEW CONTROL CENTER



FIGURE 2 - INSIDE OF CONTROL CENTER



29142A

FIGURE 3 - ELECTRO-MECHANICAL STARTER APPLICATIONS

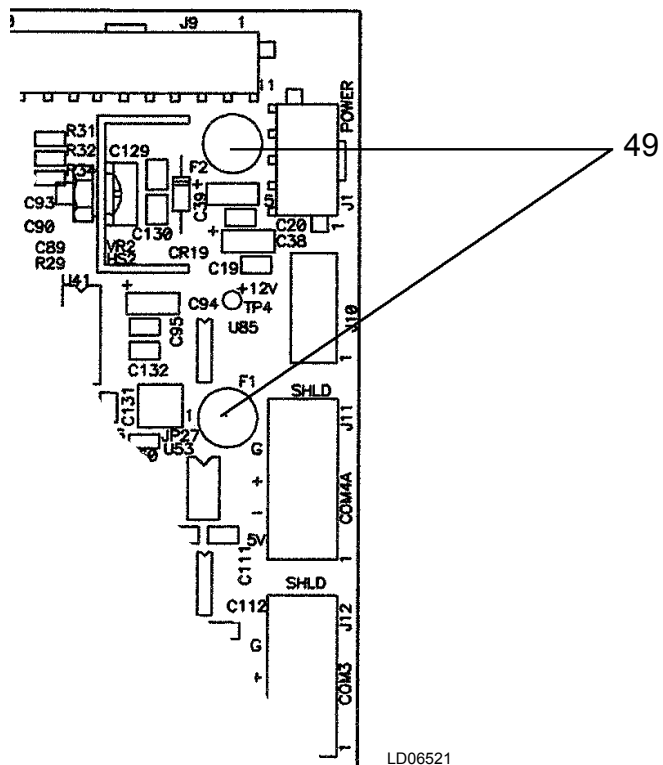


FIGURE 4 - ALL 031-02430-000, 031-02430-001 AND 031-01730-000 MICROBOARDS THAT ARE REVISION E AND LATER (REF ITEM 3)

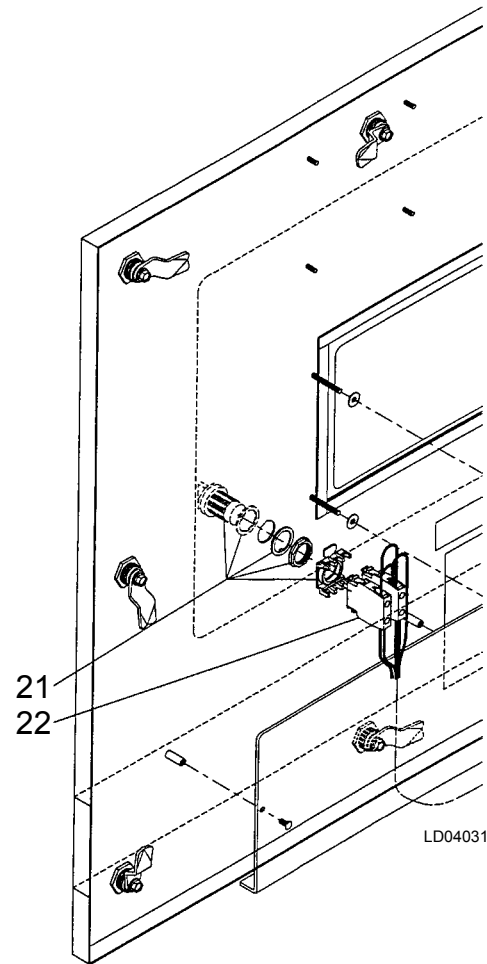
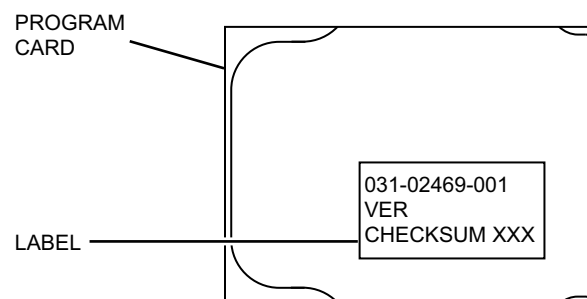


FIGURE 5 - INSIDE OF DOOR - NEMA 4/12, CE



LD09229

FIGURE 6 - PROGRAM CARD

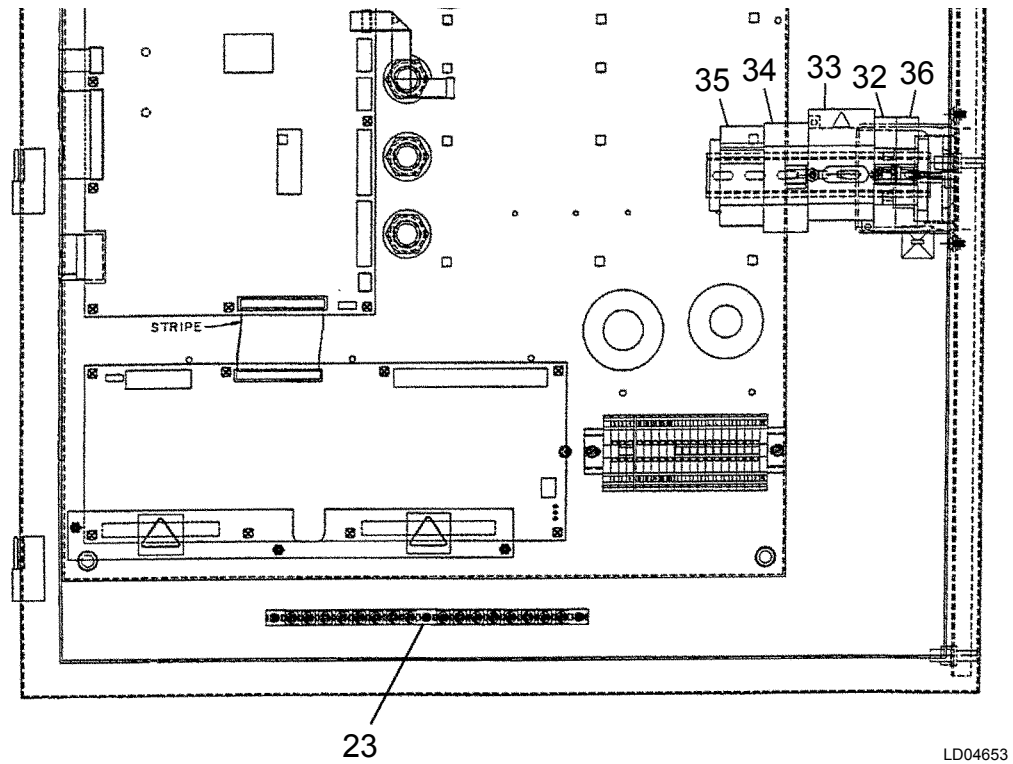
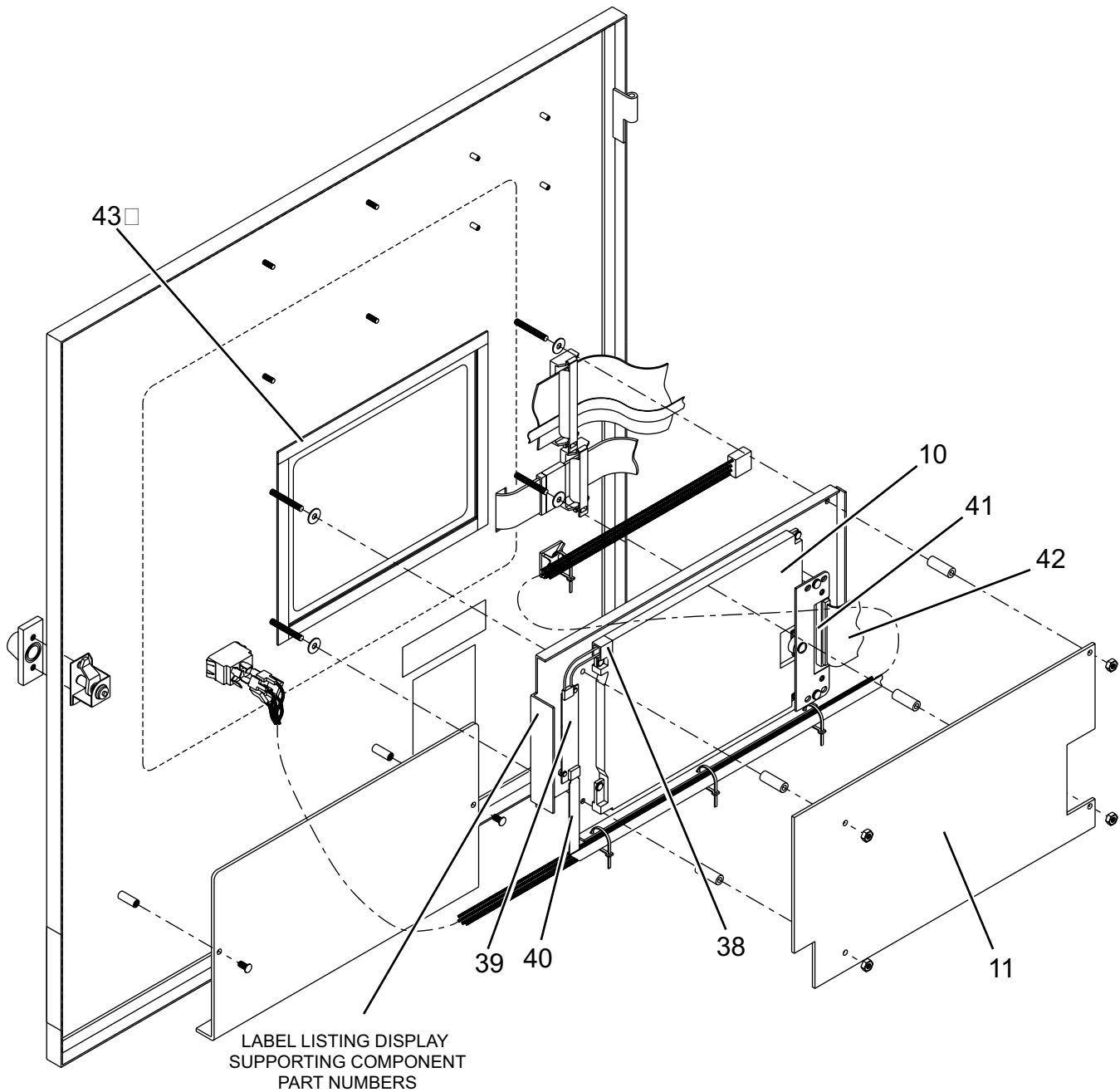


FIGURE 7 - INSIDE OF CONTROL CENTER - NEMA 4/12, CE



LD10439

FIGURE 8 - DISPLAY COMPONENTS (SEE NOTES 1 & 4, PAGE 4)

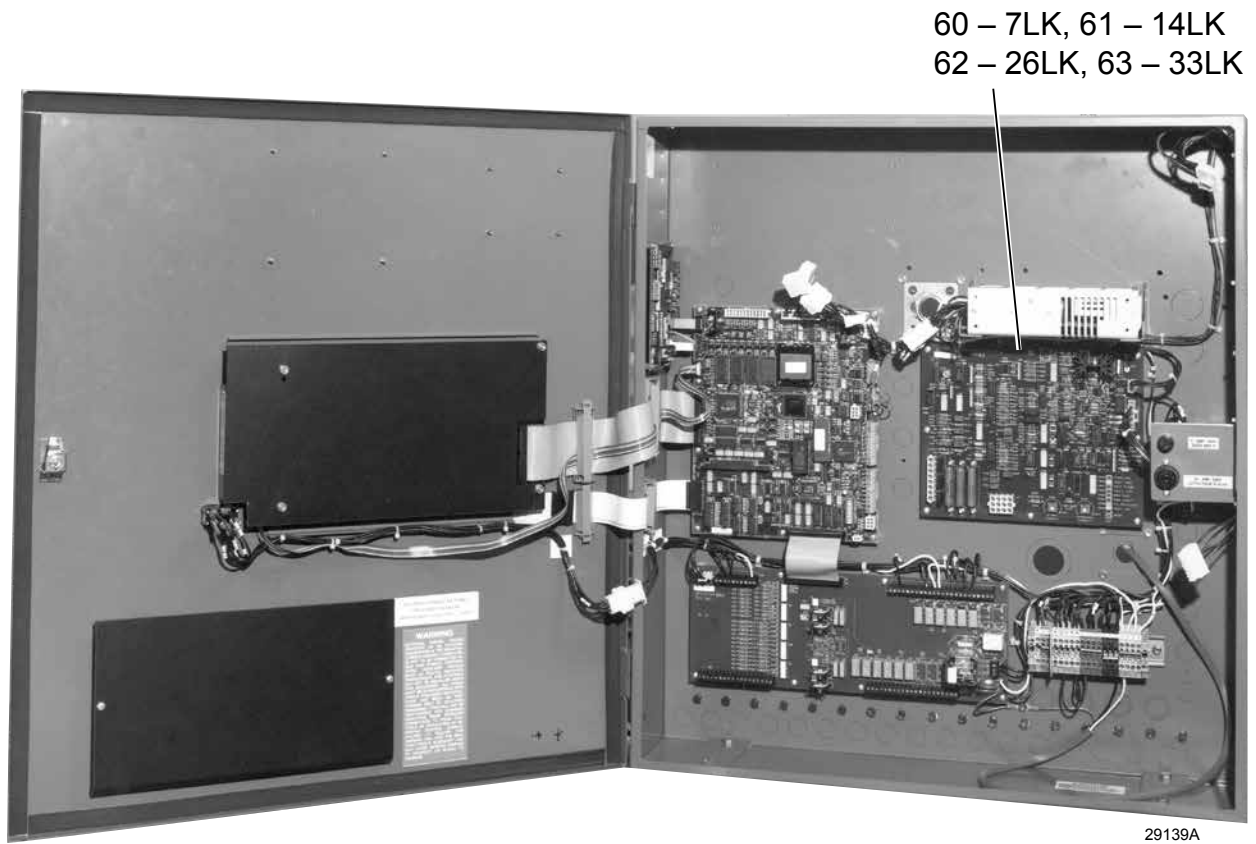


FIGURE 9 - MOD A SOLID STATE STARTER (RETROFIT APPLICATION ONLY)

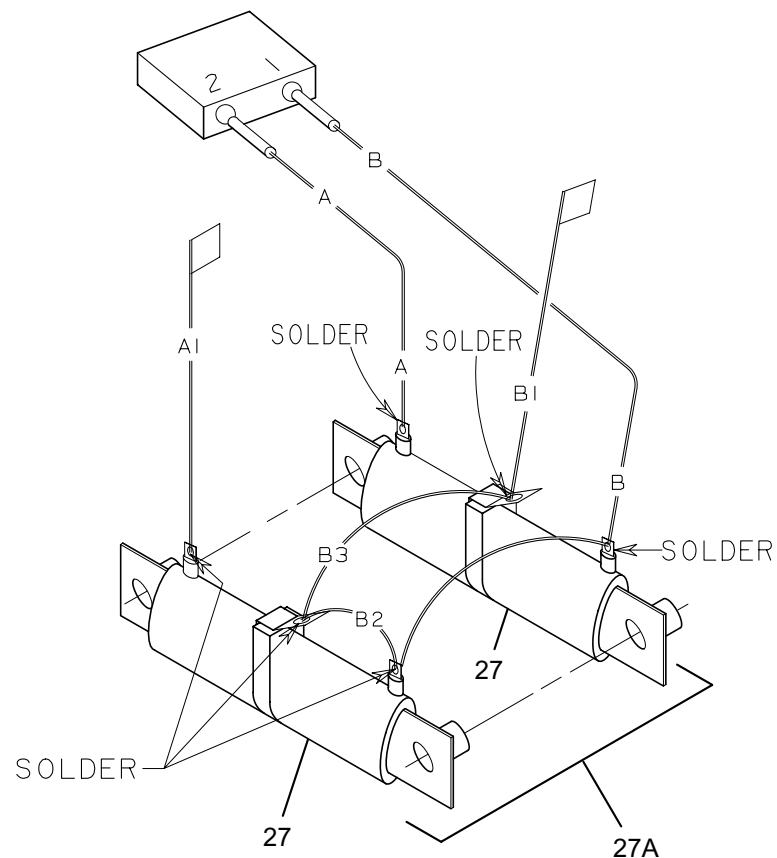


FIGURE 10 - RESISTOR ASSEMBLY (27A)



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