SERVICE BULLETIN
MAINTENANCE OF WAY EQUIPMENT

DATE: 5-26-2005 **BULLETIN NO:** 05-006

TITLE: 203438 PLC MAIN MODULE w/ PROGRAM GROUP

RATING:

☐ **DIRECTIVE**
(Action Is Required)

☐ **ALERT**
(Potential Problem)

☒ **INFORMATION**
(Action Is Optional)

☐ **PRODUCT IMPROVEMENT**
(Enhance Product)

PRODUCT SERIES / MODEL: W141 Series A1 Rail Lifters

SERIAL NO: All W141A1-26 and Higher Models

SUMMARY: A PLC Main Module w/ Program Group is now available as a repair item. The new Module includes a new Program Chip with the Operating Program already loaded into the PLC. This makes installation easier for the customer so they do not have to load the Operating Program themselves after installing the new Module.

OPERATIONAL IMPACT: To provide a PLC Main Module w/ Program Group with the Operating Program already loaded to make it easier for the customer to replace the PLC Main Module.

ACTION: If the PLC Main Module needs to be replaced, the PLC Main Module w/ Program Group part #203438 can be ordered in place of ordering the PLC Main Module and/or Program Chip separately, and then having to load the Operating Program themselves. Follow the instructions in this Service Bulletin to install the new PLC Main Module w/ Program.

CONTACT: If you have any questions or if we can be of any service, please contact the Service Department at the Columbia, SC. facility, 803-822-9160.

SAFETY INFORMATION

⚠️ **WARNING**

■ **FOLLOW APPLICABLE RAILROAD LOCKOUT - TAGOUT PROCEDURE TO REMOVE ALL ENERGY SOURCES FROM MACHINE. FAILURE TO COMPLY COULD RESULT IN SEVERE BODILY INJURY.**

PLC MAIN MODULE INSTALLATION

Main and Expansion Module Removal - See Figure 1, Figure 2 and Figure 3

1. The PLC Modules are located inside of the Main Control Box ahead of the Travel Seat on the Travel Platform of the Machine. Loosen the two thumb screws on the front panel of the Main Control Box and swing open to gain access to the PLC Modules.
3. Disconnect all wires from the Main Module (1). It is not necessary to disconnect the wires from the Expansion Module (2).
4. Remove the left End Stop (B) from the Mounting Rail (A).
5. **Important:** Both Modules (1 - 2) must be removed from the Mounting Rail (A) as one unit. Push down slightly on the top of both Modules and then pull out the bottom of both Modules to disconnect them from the Mounting Rail (A).
6. Disconnect the Main Module (1) from the Expansion Module (2) by pulling the two Modules apart. Be sure to keep the Modules straight when disconnecting so as not to damage the Connector (3).
7. Remove the Connector (3) from the Main Module (1).

Main and Expansion Module Installation - See Figure 1, Figure 4 and Figure 5

1. Make sure the new Program Chip (4) is installed in the Main Module (1).
2. Install the Connector (3) in the Main Module (1).
3. Align the Connector (3) in the Main Module (1) with the Expansion Module (2) and push the Modules together until firmly seated. Be sure to keep the Modules straight when connecting so as not to damage the Connector (3).
4. **Important:** Both Modules (1 - 2) must be installed on the Mounting Rail (A) as one unit. Hook the top of both Modules over the top of the Mounting Rail (A). Push down slightly on the top of both Modules and then push in the bottom of both Modules to connect them to the Mounting Rail (A).
5. Install the left End Stop (B) on the Mounting Rail (A).
6. Reconnect all wires to the Main Module (1).
7. Swing in the front panel of the Main Control Box to close and then secure with the two thumb screws.
8. Start the machine engine.
9. Pull out the Neutral Start Switch in the Main Control Box to the RUN position to boot-up (turn on) the PLC.
10. Test different operating functions of the machine to be sure they are operating properly with the new PLC program.
11. If the machine functions are not operating properly, try re-loading the PLC Program. See PLC Program Loading instructions in this Service Bulletin.
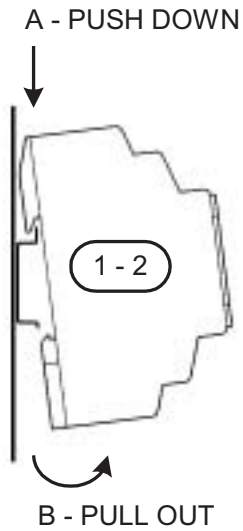
PLC MAIN MODULE INSTALLATION

FIGURE 1   SE02A158A-1
MAIN CONTROL BOX
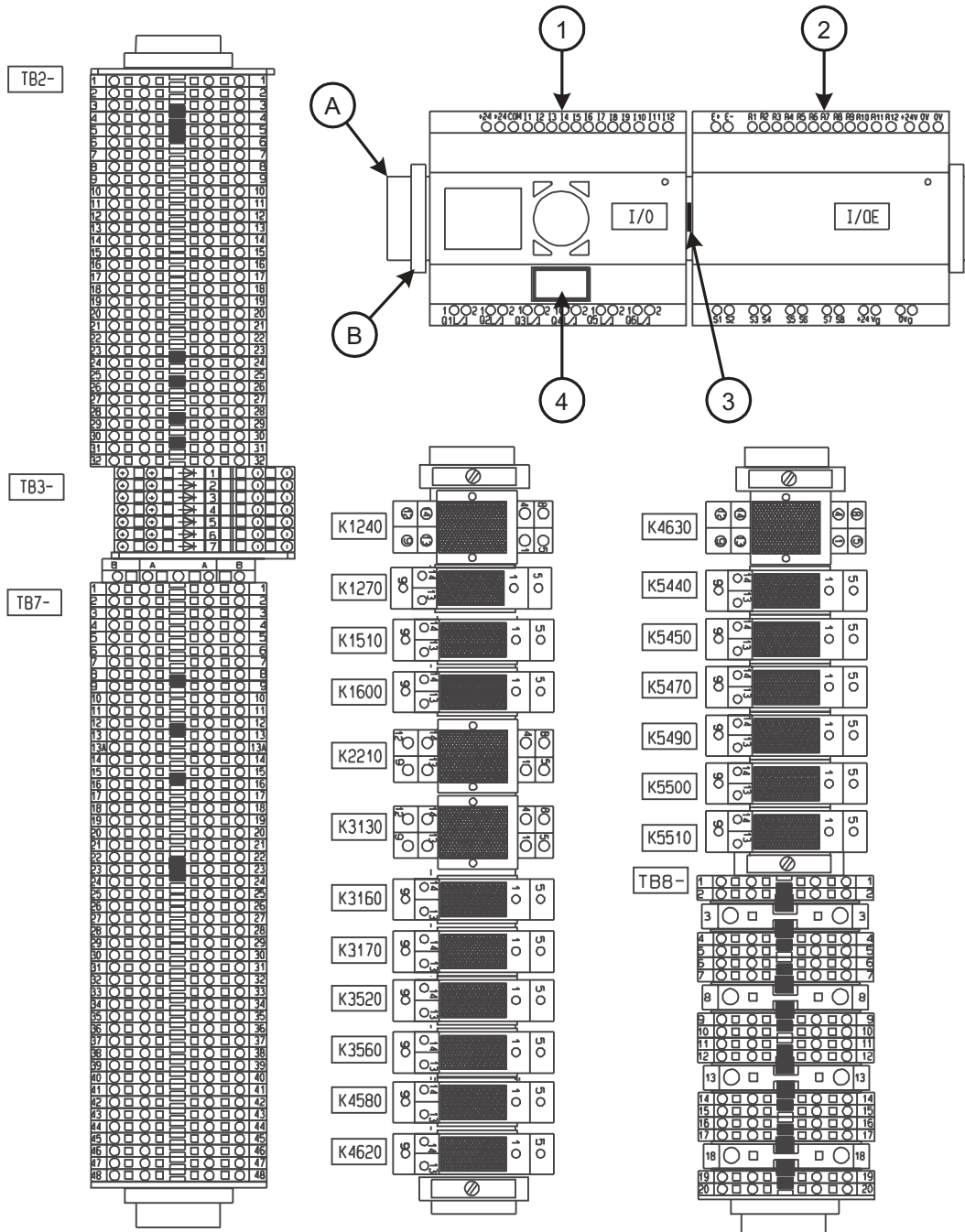
PLC MAIN MODULE INSTALLATION

FIGURE 2
REMOVING MODULES
FROM MOUNTING RAIL

A - PUSH DOWN

1 - 2

B - PULL OUT

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FIGURE 3
DISCONNECTING MODULES

1

3

2

I/O
MAIN
MODULE

I/OE
EXPANSION
MODULE
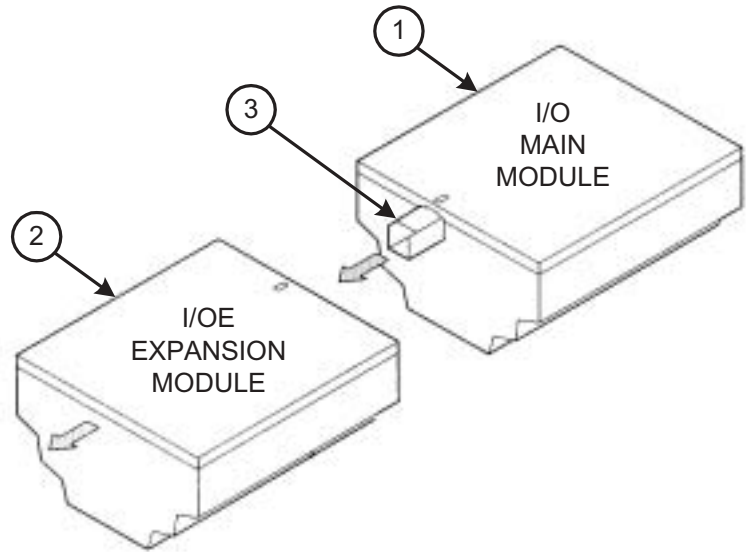
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FIGURE 4
CONNECTING MODULES

1

3

2

I/O
MAIN
MODULE

I/OE
EXPANSION
MODULE
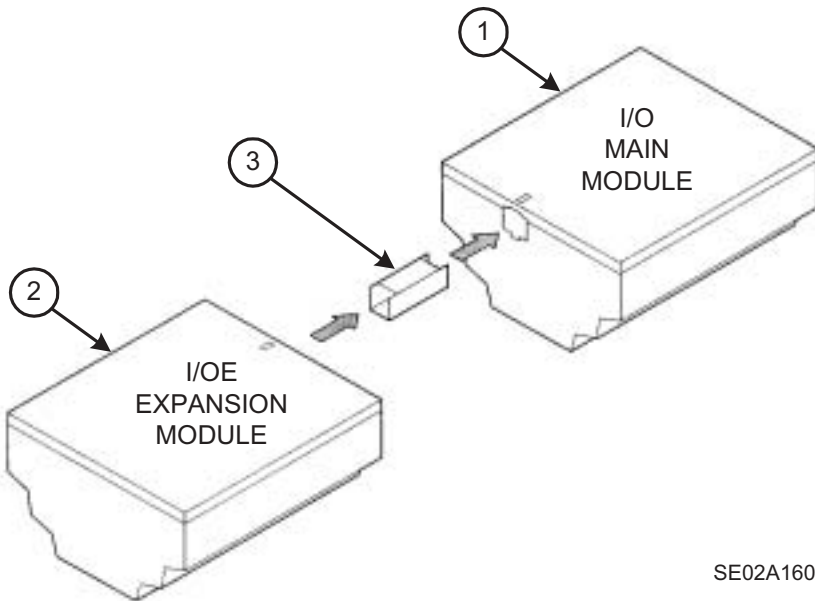
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FIGURE 5
INSTALLING MODULES
ON MOUNTING RAIL

A - PUSH DOWN

1 - 2

B - PUSH IN
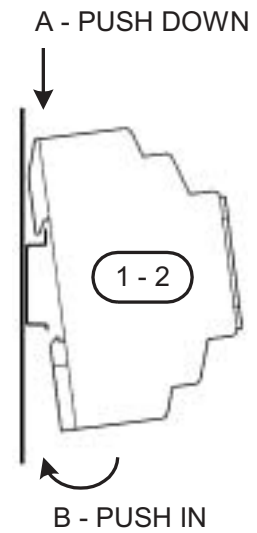
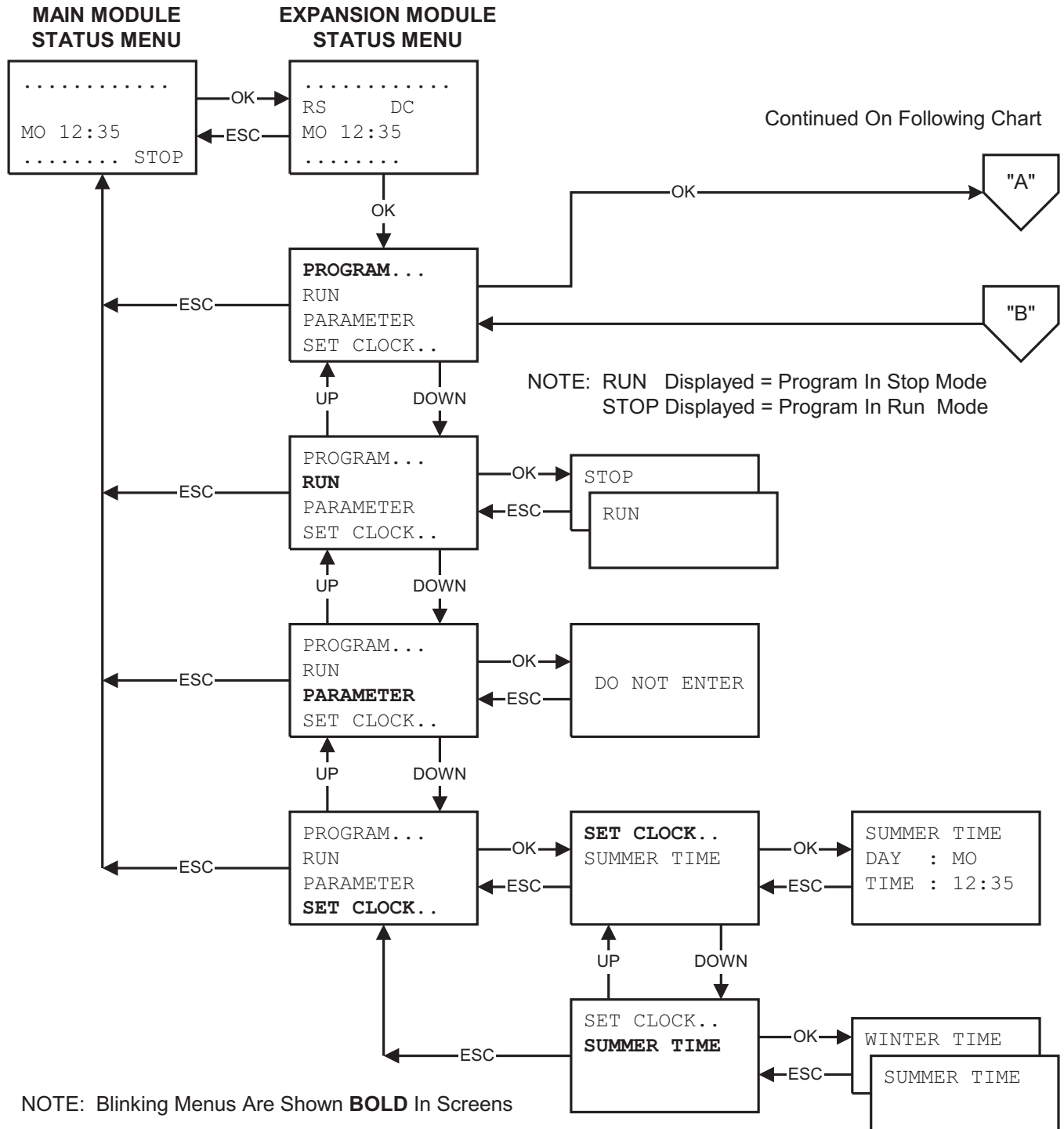SE02A159A-2

PLC PROGRAM LOADING

> *Note: See #1375 - W141A1 Operation and Service Manual - Section 2.1 - PLC Operation for Information on Status LED, Operating Button Functions, Selecting or Toggling Between Menus, Selecting Values, Language Menu, Setting Clock, etc.*

1.   Pull out the Neutral Start Switch in the Main Control Box to the RUN position to boot up (turn on) the PLC.
2.   After the PLC has successfully booted up (approximately 5 - 10 seconds), the Main Module Status Menu will be displayed on the LCD Display.
3.   In order to load the new program, the Status LED on the Main Module must be ON Steady to indicate that the PLC is operating in the STOP Mode.
     Note: If the Status LED is FLASHING, the PLC is operating in the RUN Mode. The RUN Mode must be changed to the STOP Mode. Go to Step 4 and/or see Figure 6 - Main Menu Flow Chart to change the PLC to the STOP Mode.
4.   To change the PLC from the RUN Mode to the STOP Mode:
     4.1   With the Main Module Status Menu displayed, press "OK" until the Program Menu is displayed.
     4.2   Scroll up / down until "STOP" is blinking. Press "OK" to change "STOP" to "RUN".
     4.3   Press "ESC" until Main Module Status Menu is displayed.
     4.4   Verify that the Status LED on the Main Module is ON Steady to indicate that the PLC is operating in the STOP Mode.
5.   To install the new program:
     5.1   With the Main Module Status Menu displayed, press "OK" until the Program Menu is displayed.
     5.2   Scroll up / down until "PROGRAM" is blinking. Press "OK" to enter the next screen.
     5.3   Scroll up / down until "CARD" is blinking. Press "OK" to enter the next screen.
     5.4   Scroll up / down until "CARD-DEVICE" is blinking. Press "OK" to enter the next screen.
     5.5   The "REPLACE ?" Screen will be displayed. Press "OK" to install the new program.
     5.6   After the new program is installed, press "ESC" until the Main Module Status Menu is displayed.
6.   In order for the new program to run, the Status LED on the Main Module must be FLASHING to indicate that the PLC is operating in the RUN Mode.
     Note: If the Status LED is ON Steady, the PLC is operating in the STOP Mode. The STOP Mode must be changed to the RUN Mode. Go to Step 7 and/or see Figure 6 - Main Menu Flow Chart to change the PLC to the RUN Mode.
7.   To change the PLC from the STOP Mode to the RUN Mode:
     7.1   With the Main Module Status Menu displayed, press "OK" until the Program Menu is displayed.
     7.2   Scroll up / down until "RUN" is blinking. Press "OK" to change "RUN" to "STOP".
     7.3   Press "ESC" until Main Module Status Menu is displayed.
     7.4   Verify that the Status LED on the Main Module is FLASHING to indicate that the PLC is operating in the RUN Mode.

PLC PROGRAM LOADING

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FIGURE 6
MAIN MENU FLOW CHART
Chart 1 of 2

MAIN MODULE STATUS MENU

```
. . . . . . . . . . .

MO 12:35
. . . . . . . . STOP
```

EXPANSION MODULE STATUS MENU

```
. . . . . . . . . . .
RS      DC
MO 12:35
. . . . . . . .
```

→ OK →
← ESC ←

Continued On Following Chart

— OK → "A"

```
PROGRAM...
RUN
PARAMETER
SET CLOCK..
```

← ESC

"B"

UP   DOWN

NOTE: RUN   Displayed = Program In Stop Mode
       STOP Displayed = Program In Run Mode

```
PROGRAM...
RUN
PARAMETER
SET CLOCK..
```

← ESC

→ OK →
```
STOP

RUN
```
← ESC

UP   DOWN

```
PROGRAM...
RUN
PARAMETER
SET CLOCK..
```

← ESC

→ OK →
```
DO NOT ENTER
```
← ESC

UP   DOWN

```
PROGRAM...
RUN
PARAMETER
SET CLOCK..
```

← ESC

→ OK →
```
SET CLOCK..
SUMMER TIME
```
← ESC

→ OK →
```
SUMMER TIME
DAY  : MO
TIME : 12:35
```
← ESC

UP   DOWN

```
SET CLOCK..
SUMMER TIME
```

← ESC

→ OK →
```
WINTER TIME

SUMMER TIME
```
← ESC

NOTE: Blinking Menus Are Shown **BOLD** In Screens

PLC PROGRAM LOADING

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FIGURE 6
MAIN MENU FLOW CHART
Chart 2 of 2

Continued From Previous Chart

"A" ──────────────────────→ RUN MODE ──────→

STOP MODE

"B" ←── ESC ──

```
PROGRAM
DELETE PROG
CARD...
```
── OK ──→
```
DO NOT ENTER
```
←── ESC ──

UP / DOWN

```
PROGRAM
DELETE PROG
CARD...
```
── OK ──→
```
DO NOT ENTER
```
←── ESC ──

ESC

UP / DOWN

```
PROGRAM
DELETE PROG
CARD...
```
── OK ──→
```
DEVICE-CARD
CARD-DEVICE
DELETE CARD
```
── OK ──→
```
DO NOT ENTER
```
←── ESC ── ←── ESC ──

ESC

UP / DOWN

```
DEVICE-CARD
CARD-DEVICE
DELETE CARD
```
── OK ──→
```
REPLACE?
```
←── ESC ──

ESC

UP / DOWN

```
DEVICE-CARD
CARD-DEVICE
DELETE CARD
```
── OK ──→
```
DO NOT ENTER
```
←── ESC ──

ESC
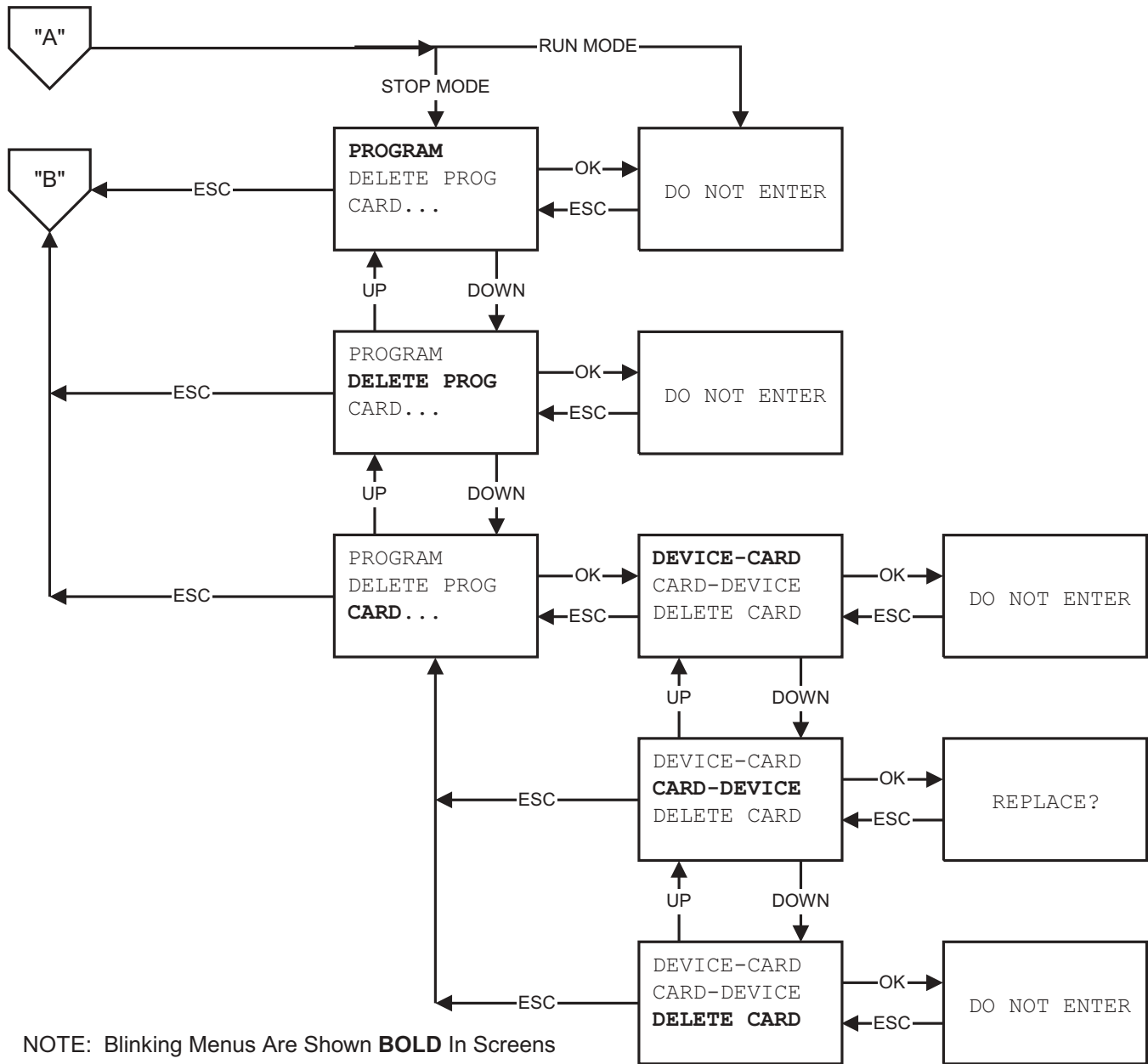
NOTE: Blinking Menus Are Shown **BOLD** In Screens

PLC MAIN MODULE w/ PROGRAM GROUP PARTS LIST

Note: See Figure 1 for Item Numbers.

ITEM	PART NO.	DESCRIPTION	QTY
	203438	PLC MAIN MODULE w/ PROGRAM GROUP	1
1	197502	Main Module Controller	1
2	————	Expansion Module (Not Part of Group)	0
3	————	Connector (Not Part of Group)	0
4	197982	Memory Module w/ Program	1