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SECTION 2 - FUTURA STARTUP PROCEDURES for HYDRO

Machine Room Preparations

FIELD WIRING CHECK

1. Verify Mainline disconnect is in the **OFF** position and properly locked out.
2. Verify all the circuit breakers on the front panel (located at the top of the controller) are in the off position. [See Figure 2-1.]

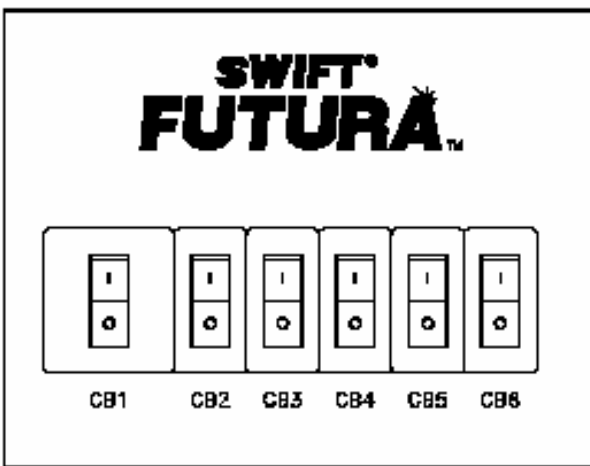


Figure 2-1

3. Turn the AUTO/TEST switch to the **TEST** position.
4. Verify that the following field wires are connected as described in the Installation portion of this manual.

Power wiring to the controller: The power wiring can be a 2, 3 or 4 circuit configuration, depending on the building power that is supplied.

- A. The first circuit common to all drive types is an independent single phase supply for the cab lighting circuit. Usually 120 VAC for North America and 230 VAC for the remainder of the world. This circuit should be a 15 amp fused circuit.

[See Figure 2-2.]

Cab Circuit Lighting

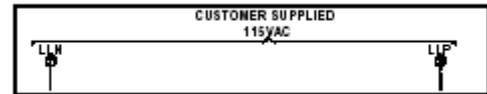


Figure 2-2

Note: The Futura controller transformer is not designed to support cab lighting and cab ventilation. Using the Futura 120 VAC control circuits in this manner may cause permanent damage to the main controller transformer.

- B. The second circuit requires common to all drive types (for the 1st controller of each group only) is a separate independent emergency backed single phase 120 VAC circuit for North America and 230 VAC circuit for the remainder of the world to supply power for the hall call circuitry. This circuit should also be a 15 amp fused circuit. [See Figure 2-3.]

Group Power Circuit

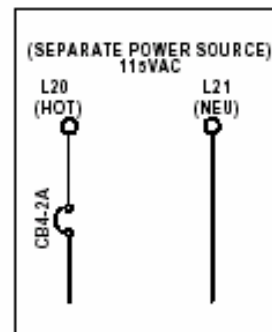


Figure 2-3



- C. The third circuit required common to all drive types is Main Line power. This power will either connect directly into a fuse block in the drive side of the controller or to the line side of a solid state starter. If a power transformer is used the secondary side will be wired to the fuse block in the drive side of the controller. [See Figure 2-4.]

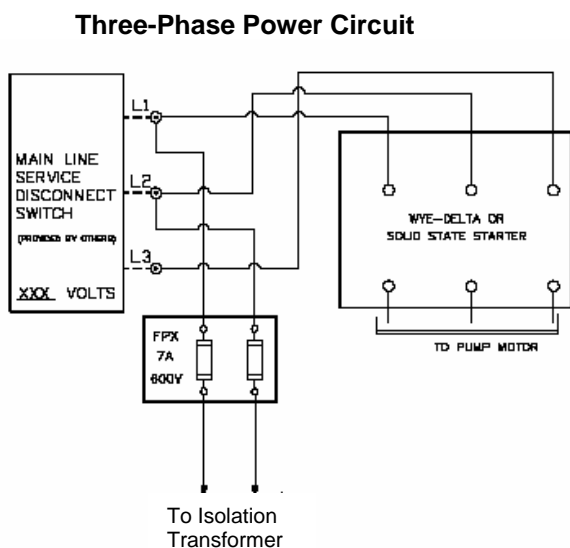


Figure 2-4

Warning!



All wire sizes are to be in accordance to the applicable National Electrical Code.

Warning!



The main line power must supply a ground wire in accordance to National Electrical Code that is continuous to the source or to an earth ground connection.



Transformer Configuration

1. Verify all transformer taps are connected for proper voltage according to the Power Distribution page of the wiring diagrams.
2. Verify the mainline voltage:
 - A. Measure and record the input voltage at the mainline disconnect.
 - B. Ensure the voltage agrees with the job voltage +/- 10%. See the Power Distribution page of the wiring diagrams.
 - 1) Turn on CB1 and verify there is 115 VAC (or 230 VAC depending on Door Operator Power requirements) between terminals LD1 and LD2.
 - 2) Turn off CB1 and turn on CB3 and verify there is 115 VAC present between LH and LCO terminals.
 - 3) Turn off CB3 and turn on CB5 and verify there is 115 VAC present between LSN and LCO.
 - 4) Turn off CB5. CB4 will be tested during group startup.
 - C. Temporary Wiring Installation
 - 1) Verify the mainline disconnect is in the **OFF** position.
 - 2) Install the following temporary jumpers. [See Table 1.]

Warning! These jumpers are to be of a high visibility color, a minimum of 36" (1M) in length and only installed for temporary operation. Never operate a car at high speed with temporary jumpers. They must be removed as the door and safety circuit wiring is installed.

TEMPORARY JUMPERS		
Circuit	From	To
Hoistway Safeties	LCS	HS
Car Safeties	HS	CS
Car Stop Switch	CS	ICS
Up Normal Limit	LCS	UNL
Down Normal Limit	LCS	DNL
Normal Power	VG+	NP
Group Common	VGC	VC
Group Power	V+	VG+
Car Gate Switch	ICS	CG
Door Locks	ICS	GL
Car Insp. Switches	CS	II
Down Slowdown Limit	LCS	SD1
Up Slowdown Limits	LCS	SU1
Power Switch	V+	DRVS

Table 1

AC Voltage and Switch Test

- 1) Turn on the mainline disconnect.
- 2) Turn on CB2 and CB6 and verify the following:
 - The SPU front panel LED should flash red and then stay lit constant green.
 - 115 VAC voltage is present between LCS and LCO.
 - Verify that there is 24 VDC across V+ and VC on the SPU link board.



SPU Power-Up, Initialization and Wizard Operation

SPU Power-UP and Wizard Connection

1. Verify the mainline disconnect switch and verify CB2 and CB6 are in the **ON** position.
2. Connect the Diagnostic Terminals Serial Port to the Human Interface Port on the SPU Link using a 9 pin RS-232 cable.
3. Start the Wizard program
4. At opening screen click on the Terminal button.
5. Cycle off CB2 then back on the check terminal for Confidence Test. [See Figure 2-8.]

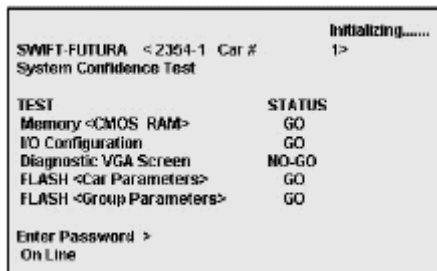


Figure 2-8

6. Verify the Job Number shown on the confidence test matches the Job Number shown on the controllers and all tests are a "GO". Should there be a "NO-GO" in the Flash tests, go to System Initialization on page 11-4.

Note: Presently an on board video card on the SPU is no longer utilized and a "NO-GO" will appear at the Diagnostic VGA Screen test. Disregard this message.

7. Type in the password "INSTALL" and press enter.
8. Verify the prompt returned on the screen matches the car number. [i.e. C# 1=> is car 1 of this group.]
9. Type in "IVE=15" and press enter.
10. Type in "WRT" and press enter.
11. Type in "GET" and press enter.

12. Click the close button and return to the Wizard start menu.
13. Click on the Run Wizard button to connect to the Wizard Main Menu.
14. Click on the car to monitor. This should be the car you are connected to. This will take you to the Car Main Menu.
15. Click the Diagnostics Button to display the diagnostics window.



System Initialization (For NO-GO Tests)

Note: Contact CEC Tech Support before using this procedure.

Note: *These procedures are to be used only if the confidence test shows a NO-GO in the FLASH TEST ONLY. [See Figure 2-9.]*

1. At the password prompt type in HUDSON.BAY and press enter.
2. Type in the following command “EPI2374” and press enter.
3. When “OK” is returned at the prompt, power down the SPU by turning off Circuit Breaker 2 (CB2).
4. Wait 10 seconds and Power up SPU by turning on Circuit Breaker 2 (CB2).
5. At the password prompt type in “INSTALL” and press enter
6. Type in “GET” and press enter. This will move all of the stored default parameters into active parameter files.
7. If a parameter is out of the acceptable range, it will appear at the prompt. A proper value must be entered for this parameter in order for the test to be successful. See parameter listing for the proper default value. (i.e. if DPF is returned then type in “DPF=320” and press ENTER).
8. Type in “WRT” and press enter after every change.
9. Repeat step 6,7,& 8 until an OK is received after the GET command.
10. Once the OK is returned type in “WRT” and press enter.
11. Type in “GRP” and press enter to enter into the Group parameter files.
12. Repeat steps 2,6,7,& 8 for clearing a NO-GO Group Flash test while in the Group mode.
13. Once the OK is returned at the Group prompt, type in “WRT” and press enter.

14. Type in “CAR” and press enter to return to the car prompt.
15. Return to step 5 of the SPU Power-Up and Wizard connection.

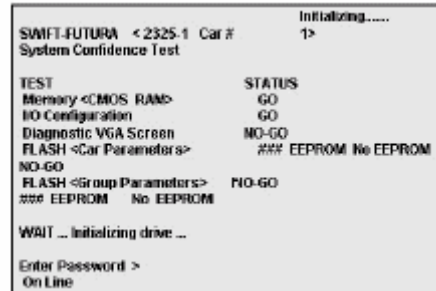


Figure 2-9



Running the Car on Inspection

1. Using either the “On Board” Diagnostic Display (if equipped), the Diagnostics Screen in the Wizard or the RVU screen, verify that the elevator is on inspection.
2. Place the controller in setup mode by performing the following steps.

Note: Setup mode disables DPP feed back from the car top unit. If the car top unit is installed and operational this will not be required.

- A. Press and hold the SPU button until the Display, Door Disconnect and Reset button light up. (Controller must be on Inspection for setup mode to activate)
- B. Release the SPU button and press the Display button once.
- C. The Display button will now flash red and green. This will indicate you are in the setup mode.

Note: This function can be activated in terminal mode by typing STM and pressing ENTER .

Note: This procedure will have to be done every time the power is turned off.

3. Verify the following inputs are activated.

SD1	SU1	PT
DRVS	CS	ICS
UNL	DNL	NP
GL	DL	

4. Verify the following relays are activated.

CG	DL
----	----

Note: If you have a rear (or side) door opening then you also need RCG & RDL relays active.

5. Momentarily press the up button and verify the SM relay energizes.

Running on Temporary Buttons

1. Remove jumper II to CS.
2. Remove jumper TIC to TIA.
3. Wire temporary run box as per Figure 2-10.

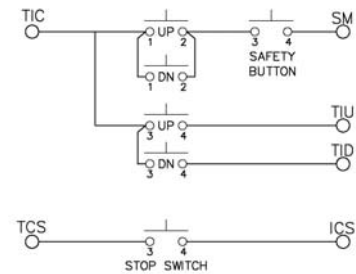


Figure 2-10

Note: Make these connections only if two-pole buttons are used.

4. Verify the elevator runs in the proper direction from the temporary run box.
5. Verify that a stop switch is wired in the safety circuit and opens the safety circuit when activated.
6. Set Leveling Speeds on valve to a value for a safe working speed for the elevator. (Usually 15 to 30 fpm)
7. Verify the car is on STM mode by observing Display button. Verify car runs without stopping without speed and position feedback from CPT Assembly (tape unit). If the controller is not in the STM mode, the car will stop every few feet even if the Temp Buttons remain pushed.
8. Temporarily reset Car BIT 2,3 (Type BITR2,3 and press Enter) to disable the panic motion fault feature during installation. Car BIT 2,3 must be set prior to final adjustments.

