

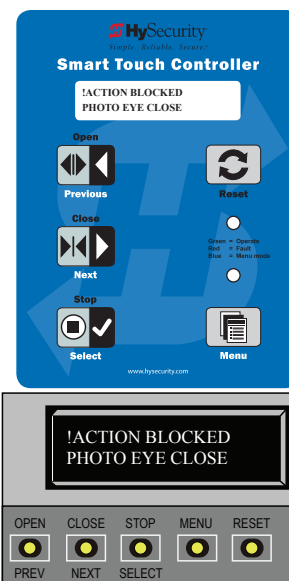
Troubleshooting

The Smart Touch and Smart DC Controllers report system malfunctions using three simultaneously occurring methods:

- Codes presented on its display (alert, fault or error)
- Activation of a buzzer which emits a series of chirps at defined intervals
- Gate travel stops

To help in diagnosing a controller board problem, the active status of each input on the Controller is indicated by its associated LED.

- On AC-powered gate operators: Active-input LEDs are always illuminated.
- On DC-powered gate or solar-powered gate operators (with AC input OFF): Press and hold the Tact button to illuminate the active-input LEDs.



NOTE: A qualified technician may troubleshoot the operator with the aid of the flowcharts found in this section. If it is necessary to call a distributor for assistance, be sure to have the model and serial numbers available. Other helpful information is the job name, approximate installation date, and service records of any recently-performed maintenance work.

SYSTEM DIAGNOSTIC MESSAGES

Code	Priority	How to clear
ALERT	Low	Enter new command such as Open or Close.
FAULT	Medium	Press the Stop or Reset button
ERROR	High Serious issue that may require technical service.	Errors can only be cleared by pushing the Reset button or cycling power.

NOTE: The green LED (D4 status LED) near the coin-sized battery on the Smart Touch Controller (and red LED beside the display on the Smart DC Controller) is the “heartbeat” of the processor. This LED flashes continuously and at a constant rate when the system is operating normally. If it is not lit, it indicates AC power is lost.

continued...

The Controller maintains self-diagnostics. Specific codes appear on the display and the Audio Alert buzzer emits distinctive chirping sounds. Any Alert, Fault, or Error is logged into memory and stamped with the date and time. These diagnostic messages can be retrieved for analysis purposes via optional laptop, PC-based S.T.A.R.T. software.

NOTE: S.T.A.R.T. configuration and diagnostic software is available at no charge from www.hysecurity.com. Schedule software updates as past of routine maintenance.

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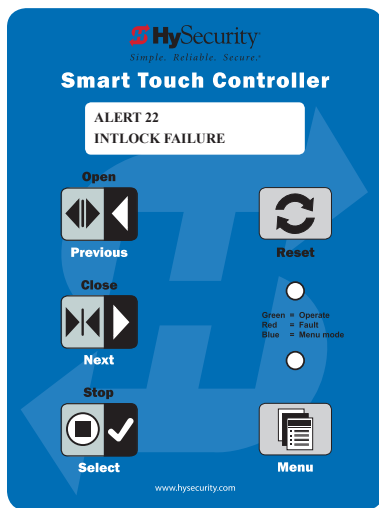
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STC ERROR CODES & THE 7-SEGMENT DISPLAY

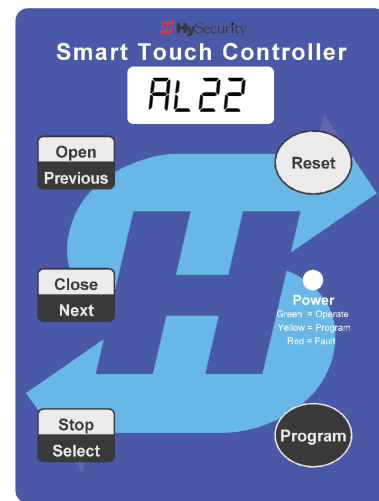
In 2014, HySecurity began shipping an OLED display that provides 2 lines of 16 characters. The display is much easier to read and interpret than the outdated 7-segment display which left you to decipher four letter codes. Retrofit kits for HySecurity hydraulic gate operators are available from your distributor.

For ease of use, this section's Table of Contents provides both the 7-segment codes and OLED display readouts.

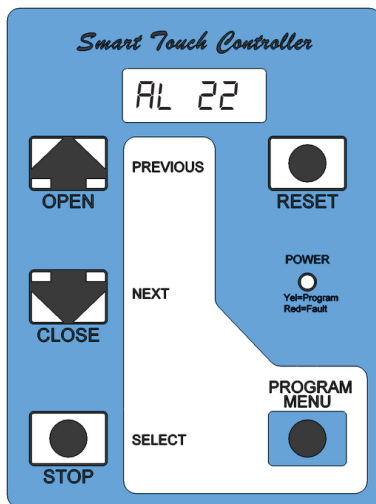
The type of displays you may come across working on HySecurity gate operators is illustrated below.



HySecurity 2 line, 16 character display (OLED)



HySecurity 7 segment display



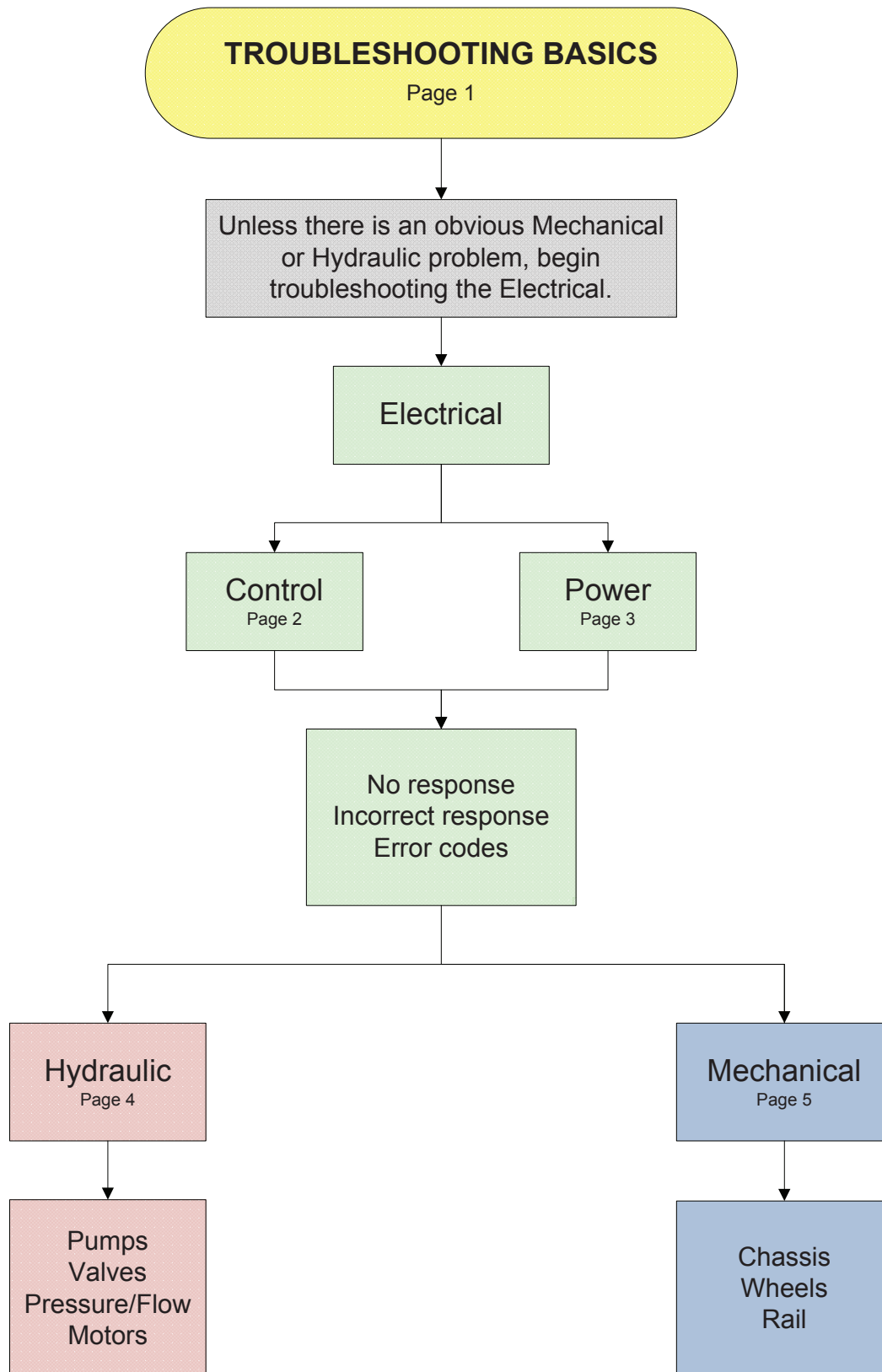
HySecurity 7 segment display



HySecurity Smart DC display

NOTE: ALERT 22 is associated with interlock or sequenced gates, so does not appear often on Smart DC gate operators unless an older version of S.T.A.R.T. was used with a PC laptop to upload the current release of operator code onto the gate operator. If ALERT 22 or ALERT 24 appears on the display, refer to your gate operator's manual.

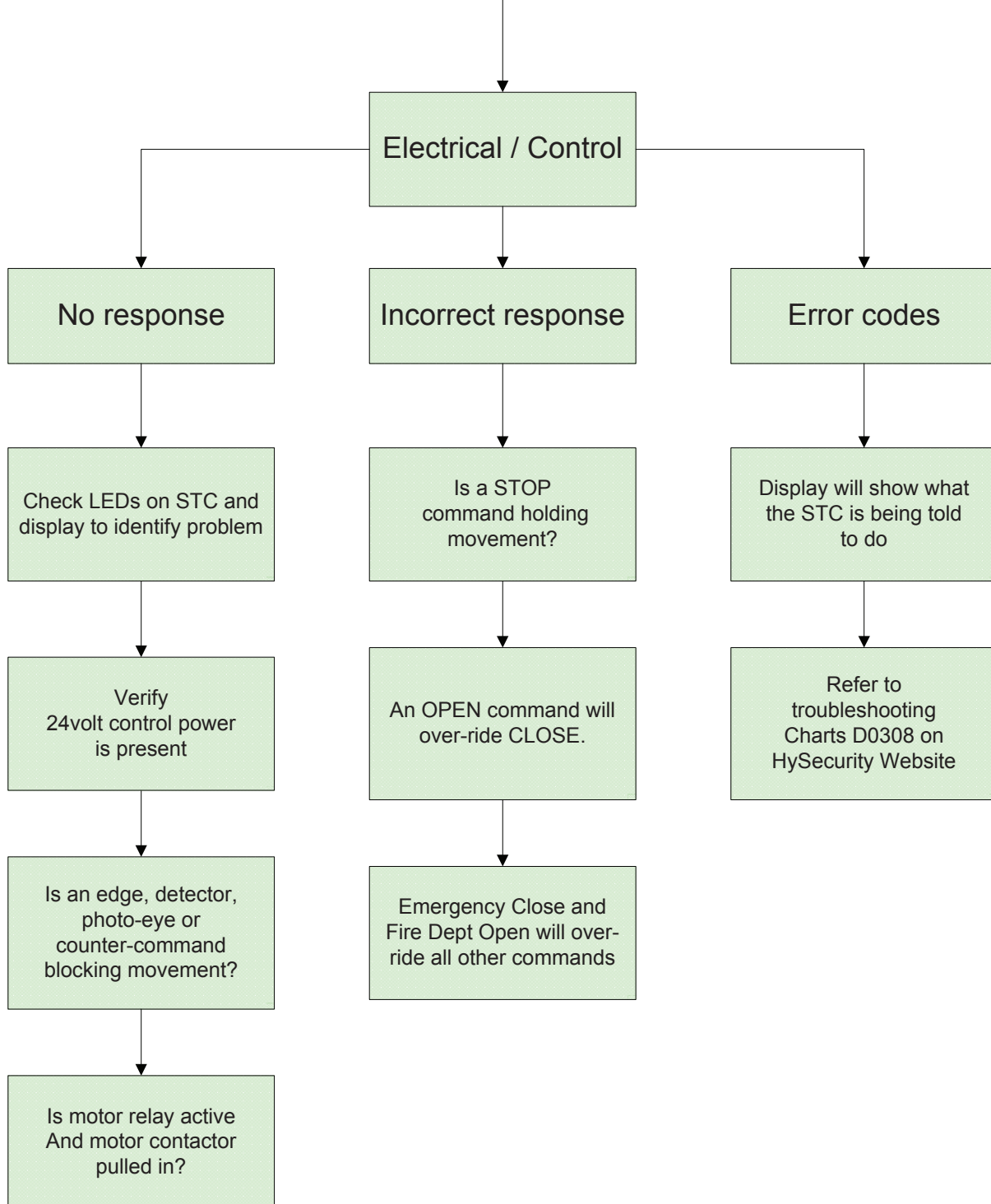
TROUBLESHOOTING BASICS: ELECTRICAL 1



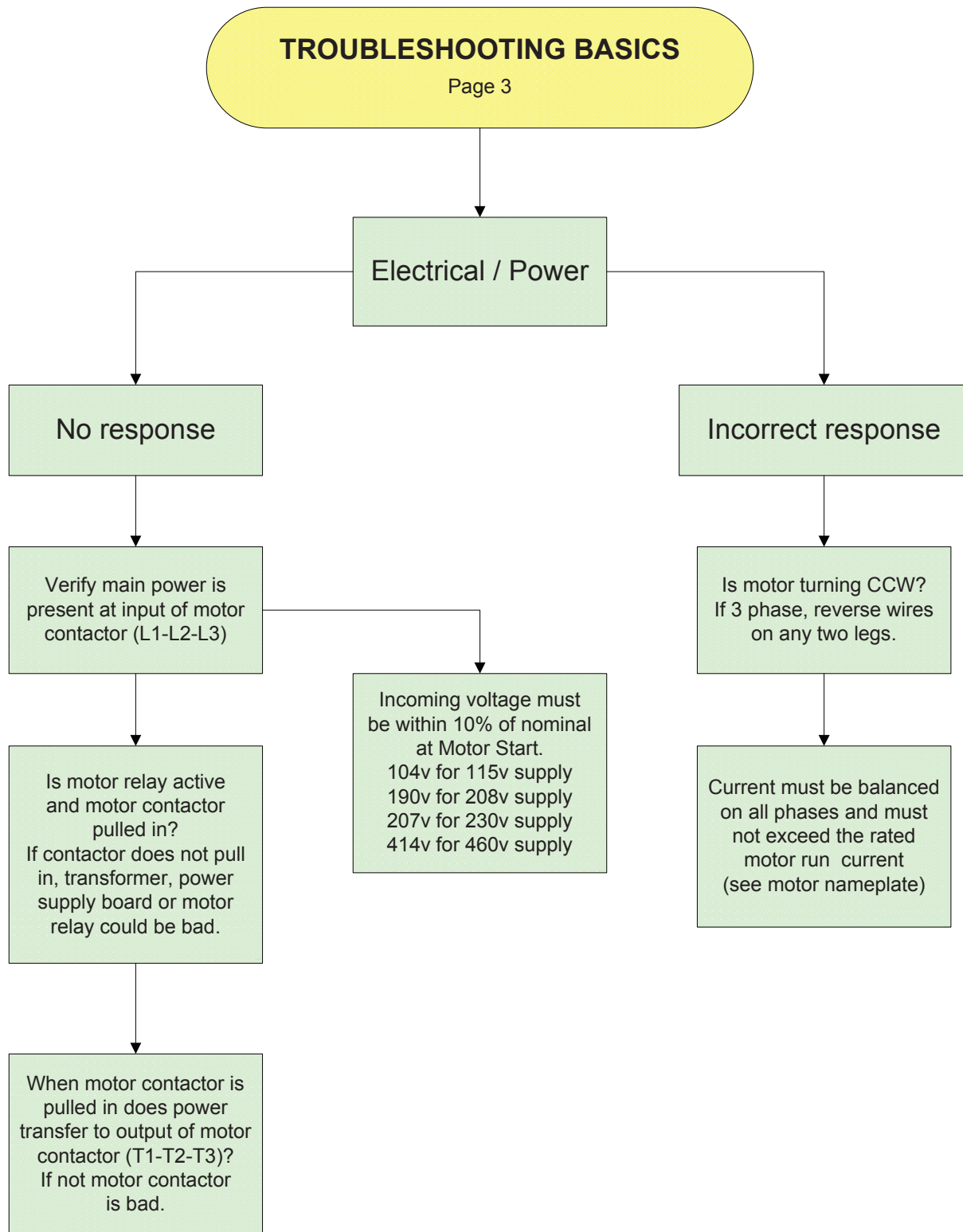
TROUBLESHOOTING BASICS: ELECTRICAL CONTROL

TROUBLESHOOTING BASICS

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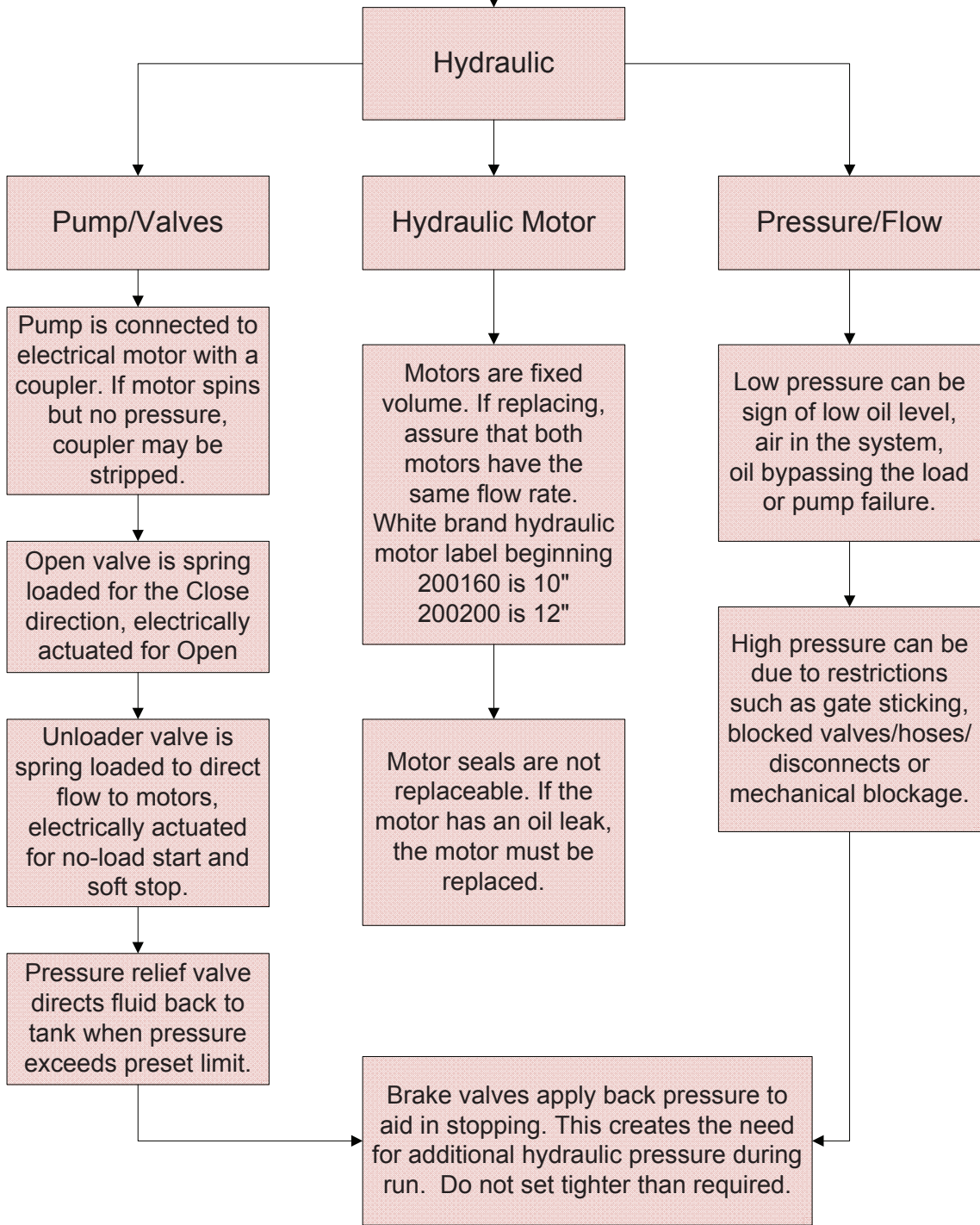
TROUBLESHOOTING BASICS: ELECTRICAL POWER



TROUBLESHOOTING BASICS: HYDRAULIC

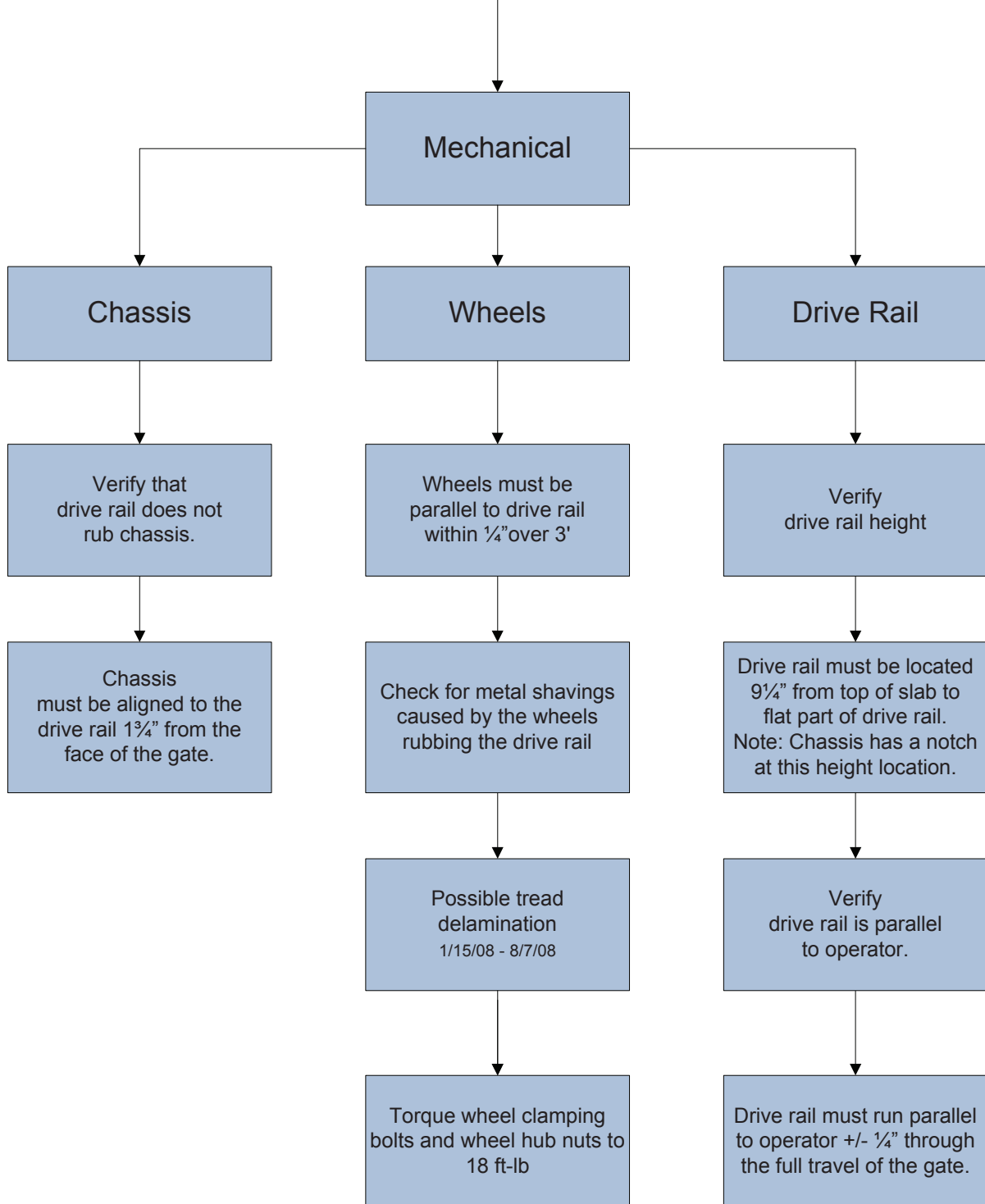
TROUBLESHOOTING BASICS

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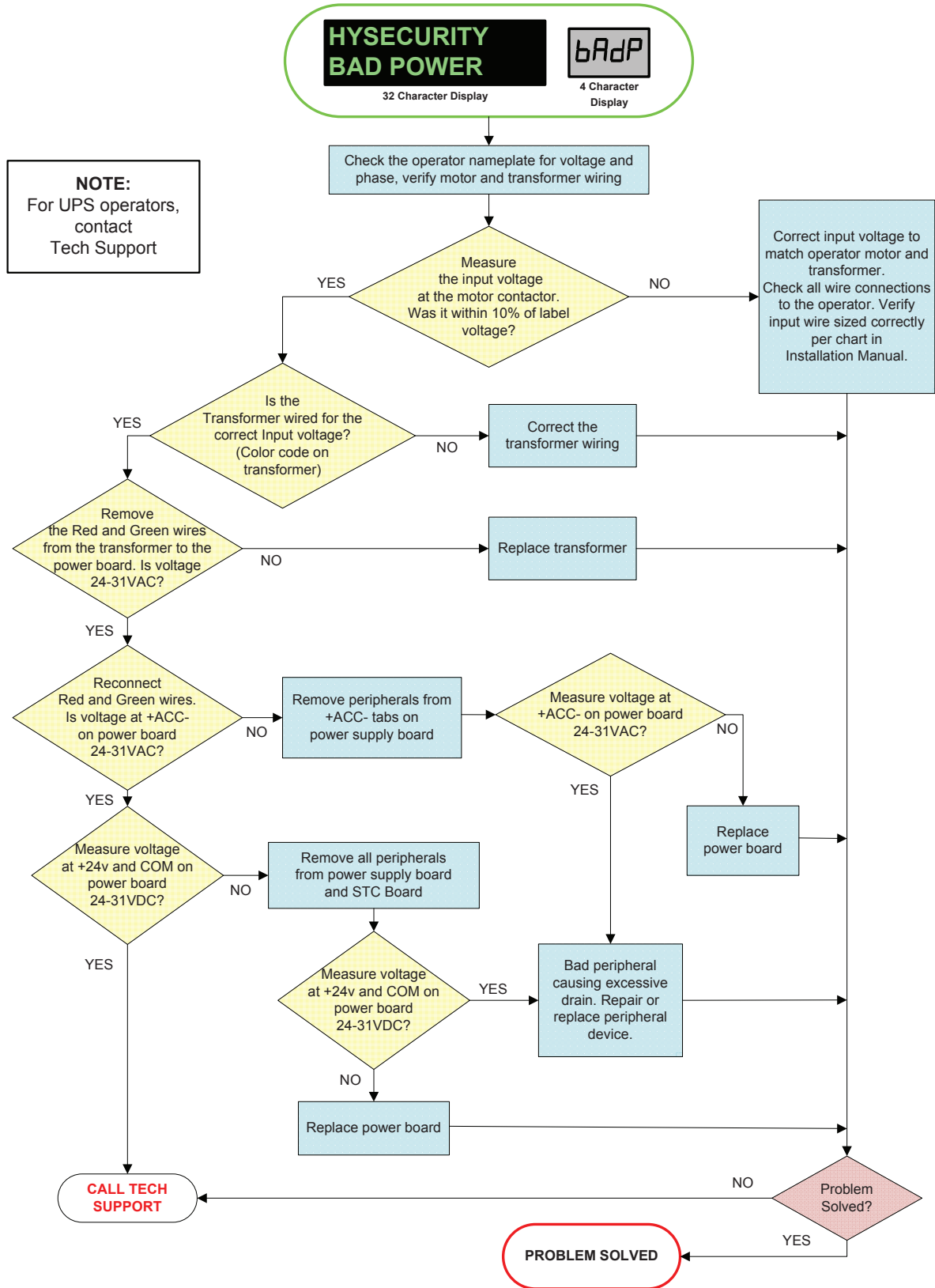


TROUBLESHOOTING BASICS: MECHANICAL

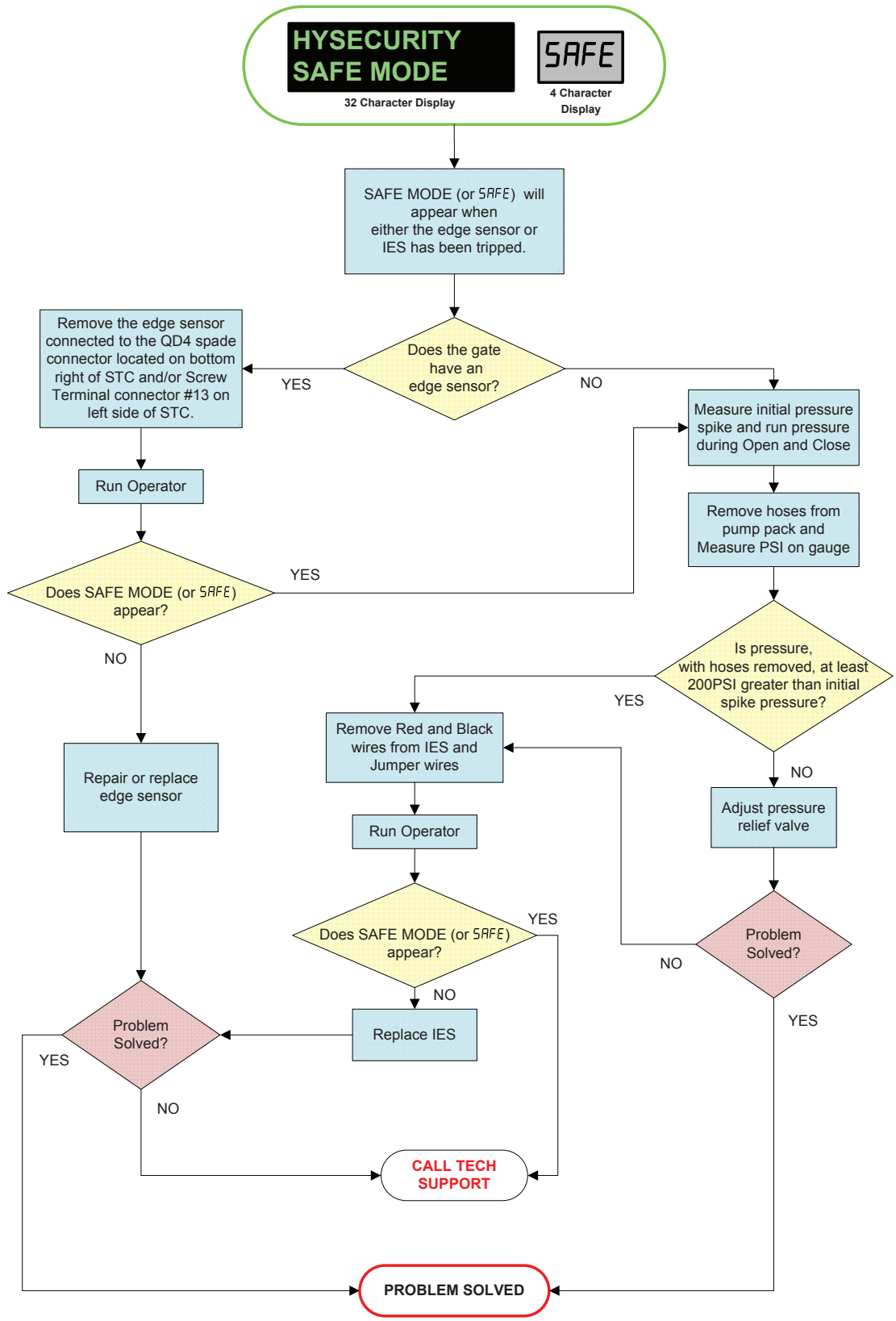
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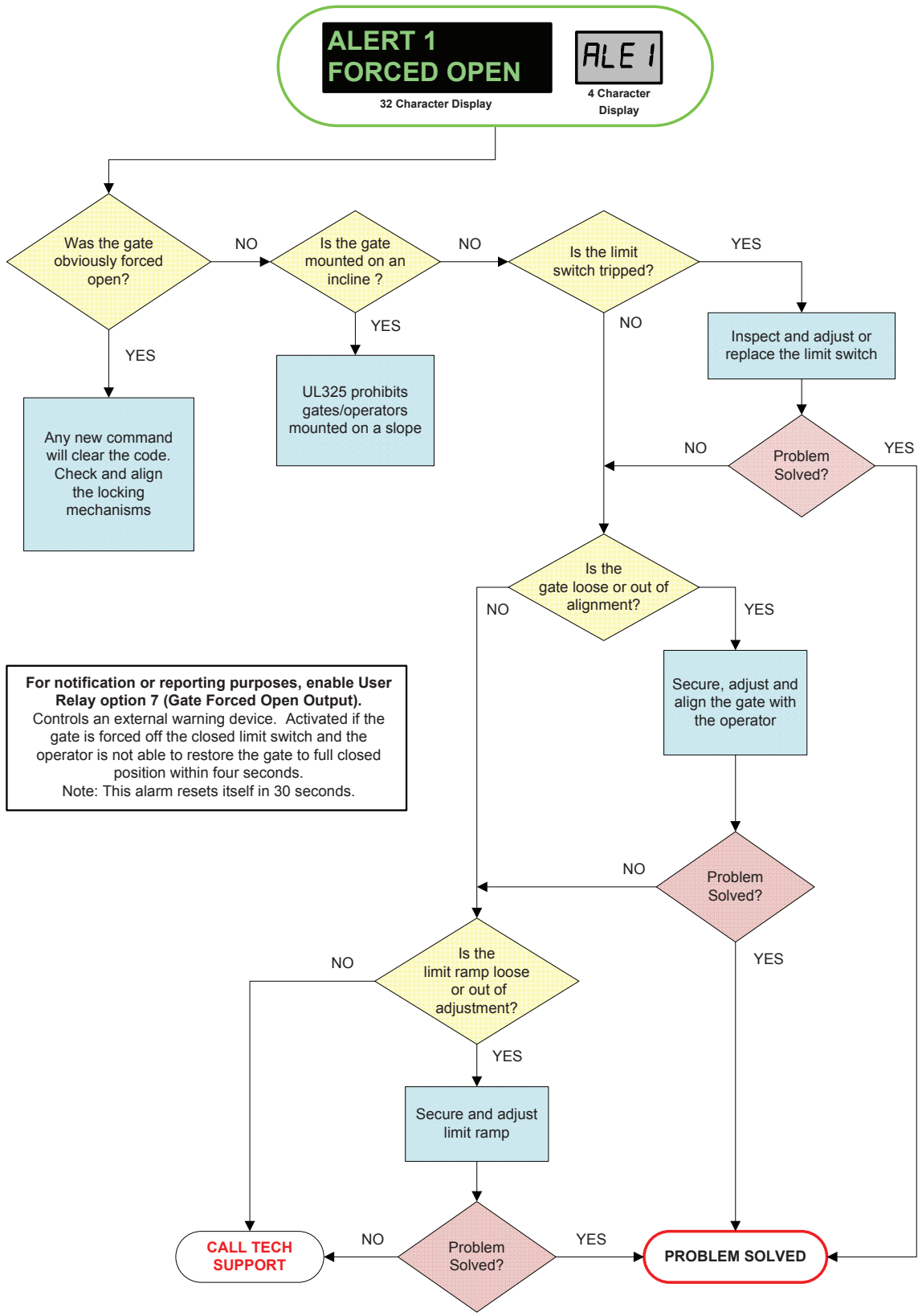
(bAdP) ALERT: CRITICAL LOW POWER



(SAFE) ALERT: SAFE MODE

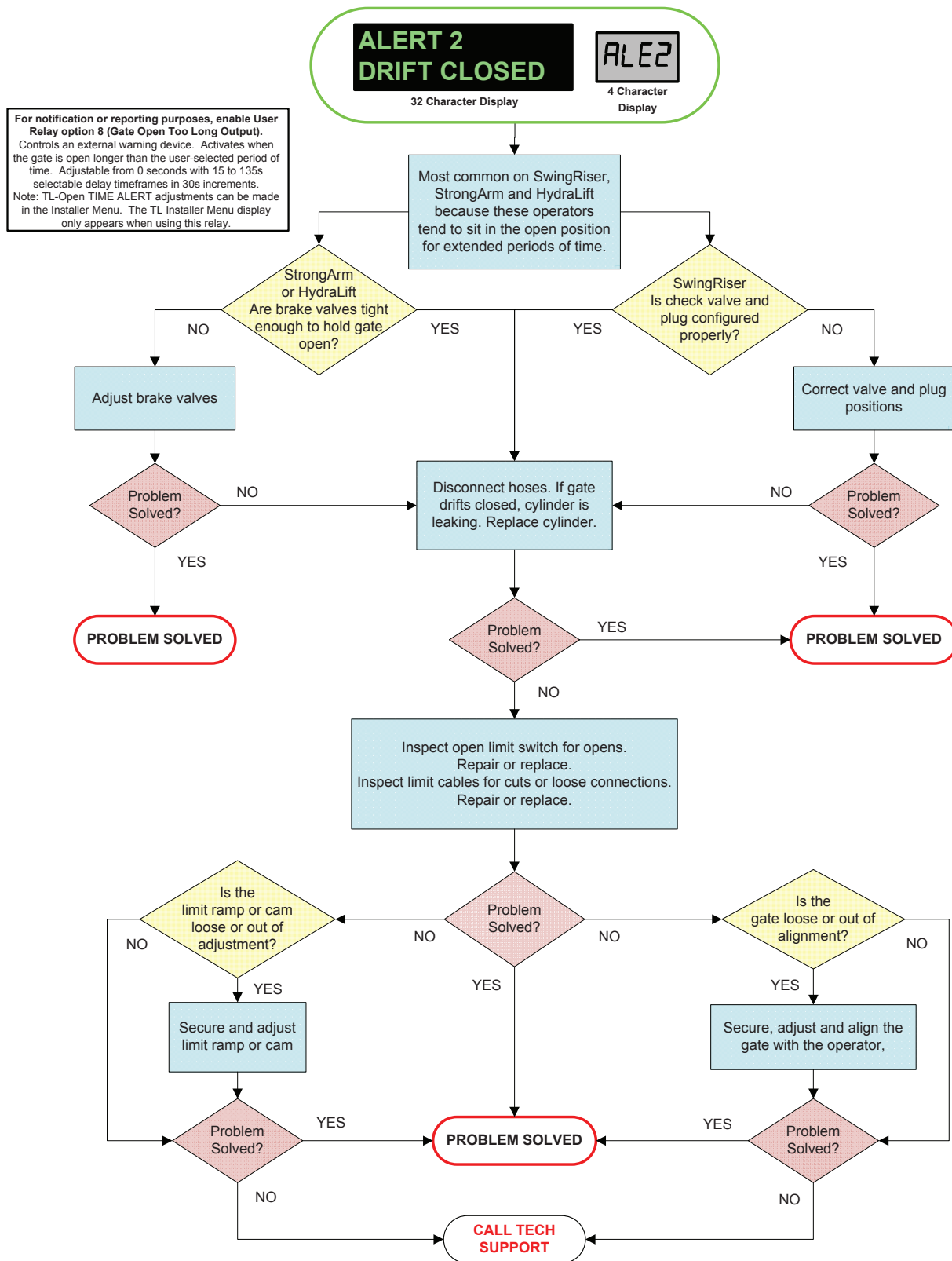


(ALE 1) ALERT 1: GATE FORCED OPEN

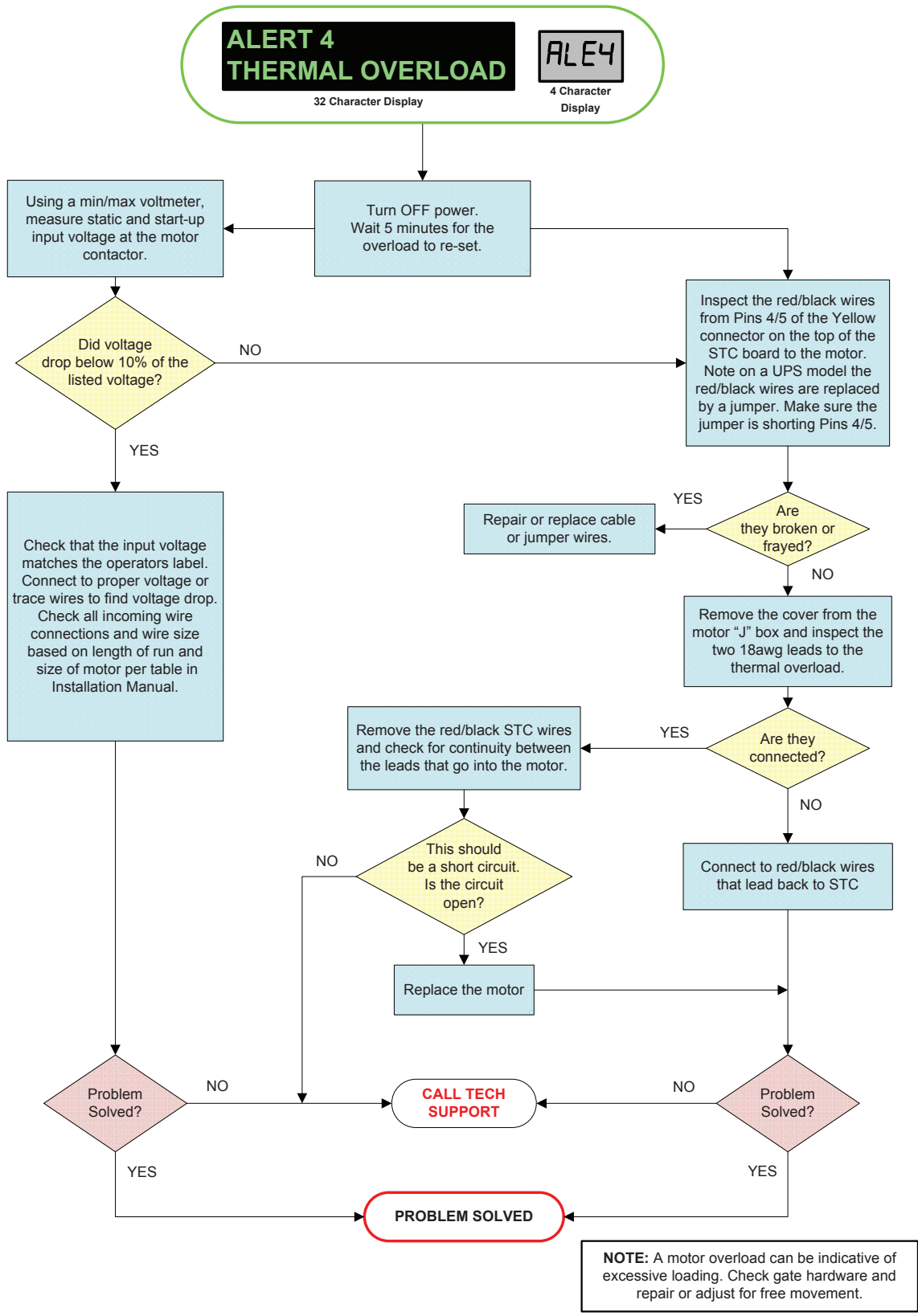


For notification or reporting purposes, enable User Relay option 7 (Gate Forced Open Output).
 Controls an external warning device. Activated if the gate is forced off the closed limit switch and the operator is not able to restore the gate to full closed position within four seconds.
 Note: This alarm resets itself in 30 seconds.

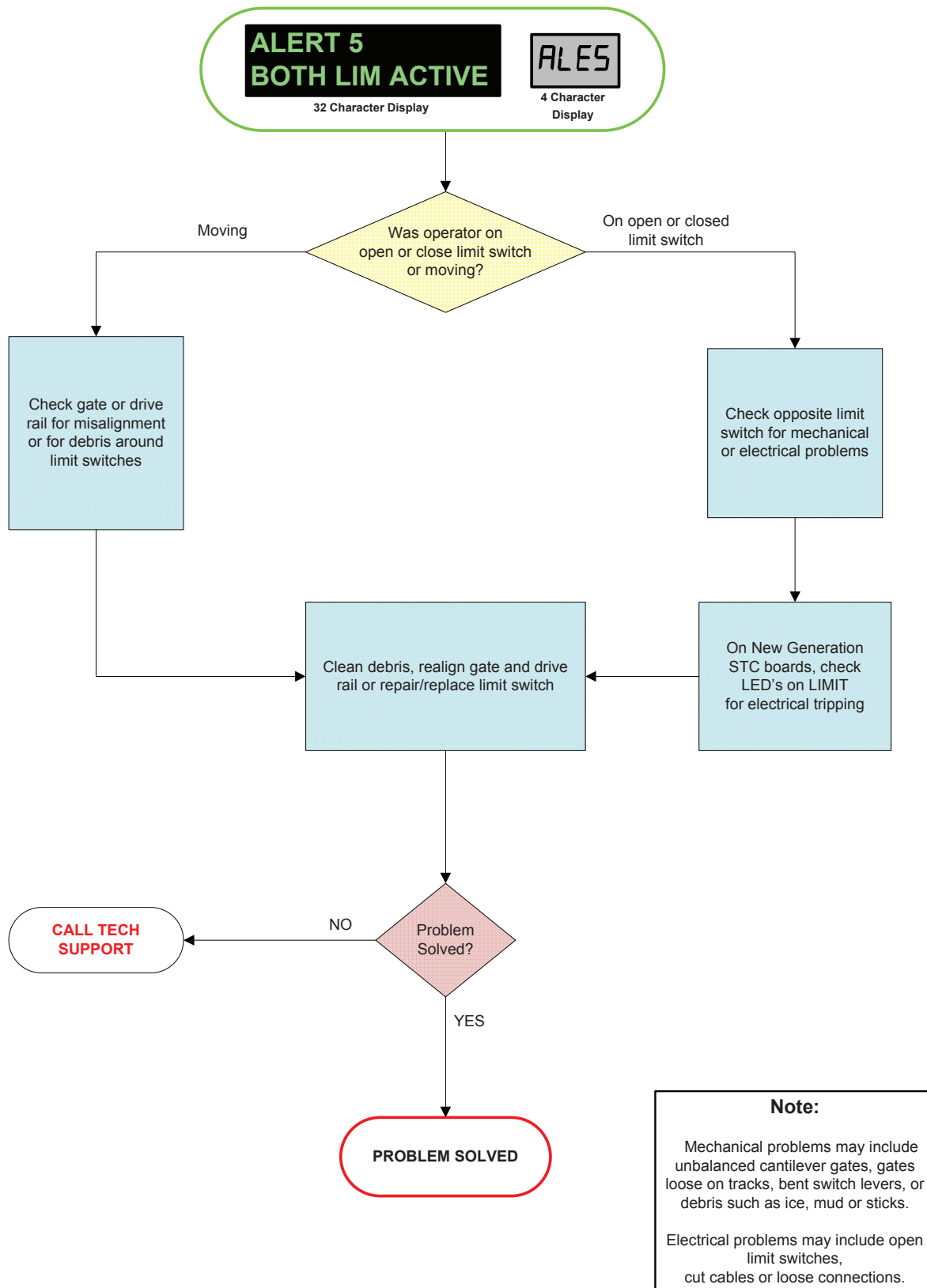
(ALE2) ALERT 2: GATE DRIFT CLOSE



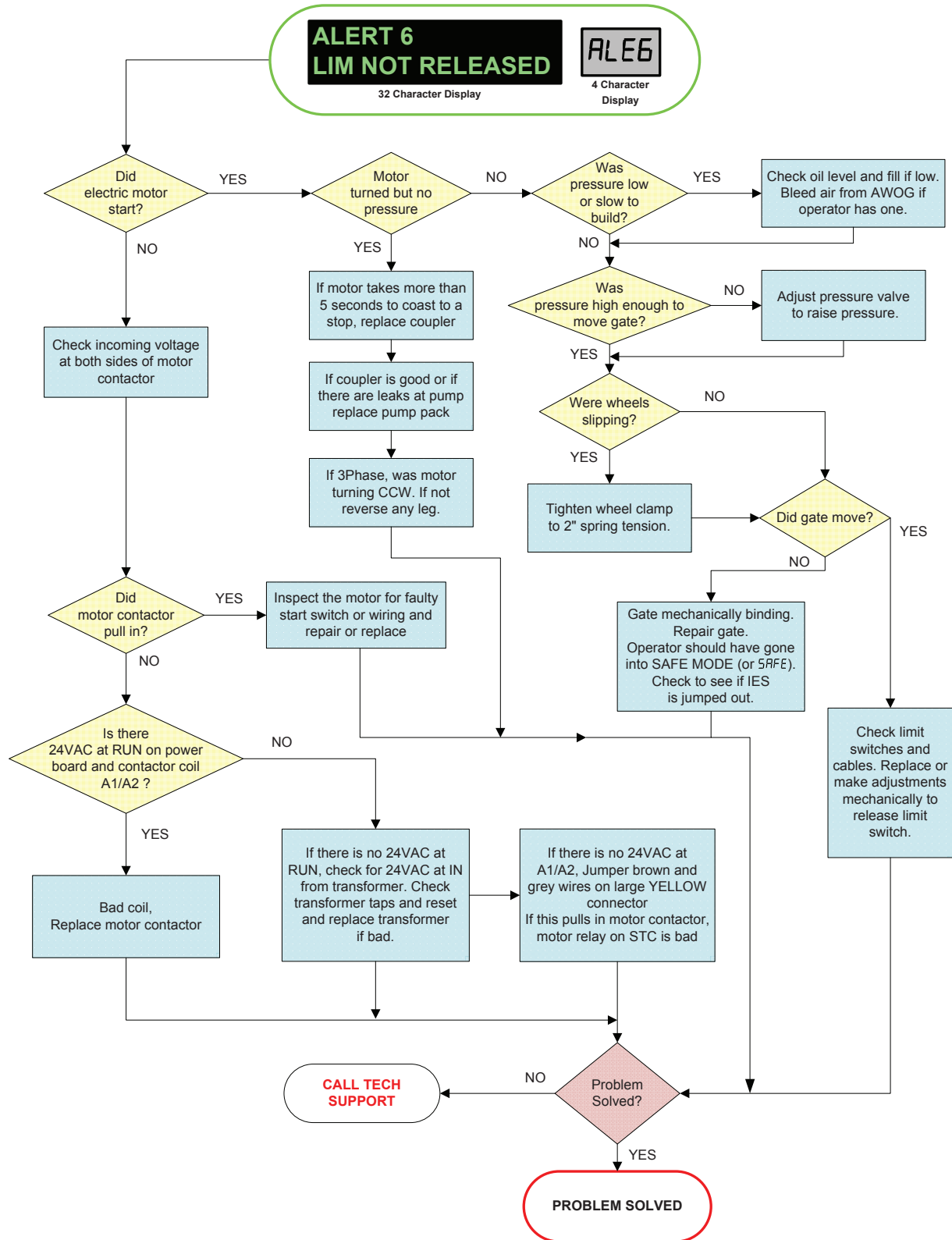
(ALE4) ALERT 4: THERMAL OVERLOAD



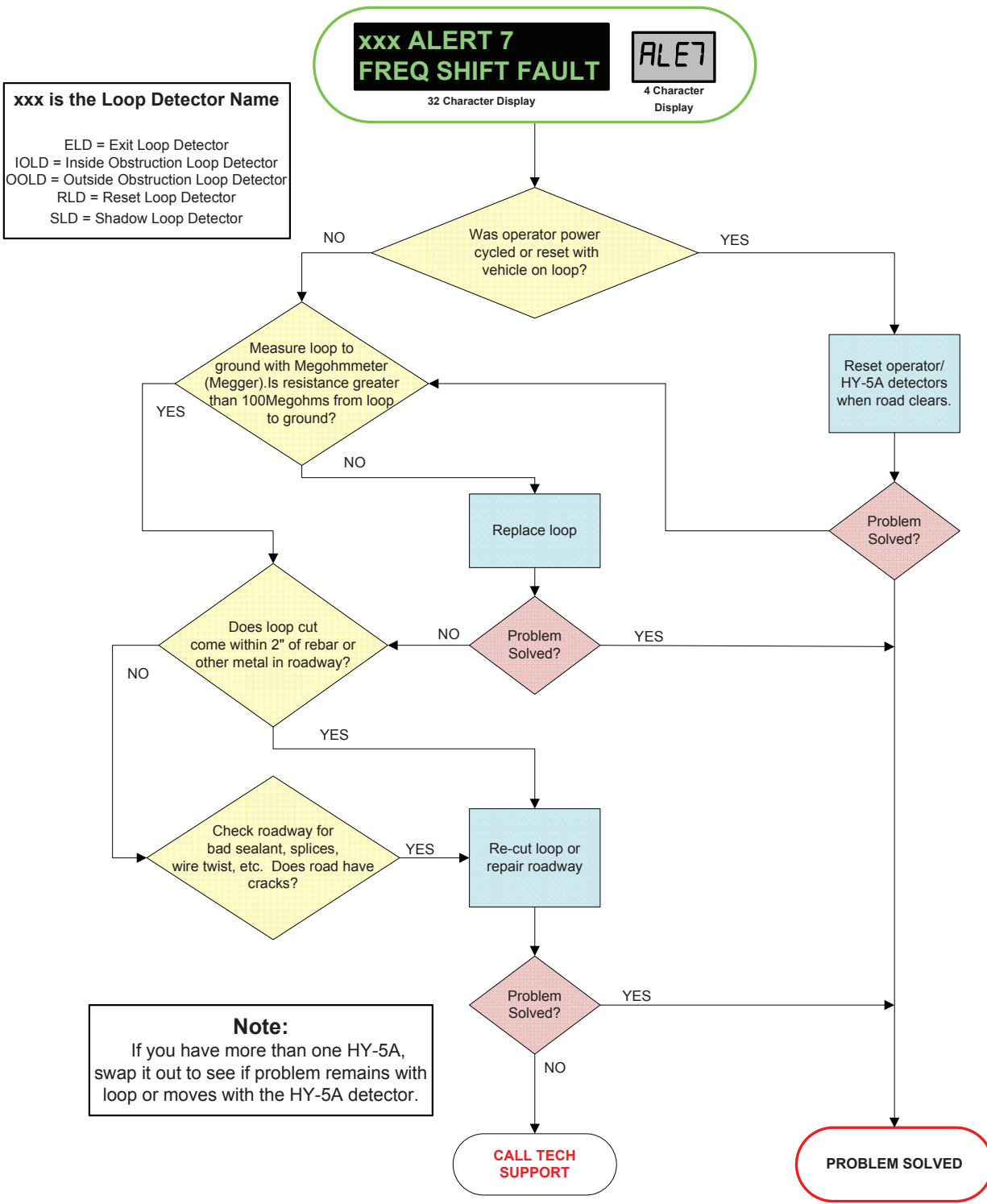
(ALE5) ALERT 5: BOTH LIMIT ACTIVE



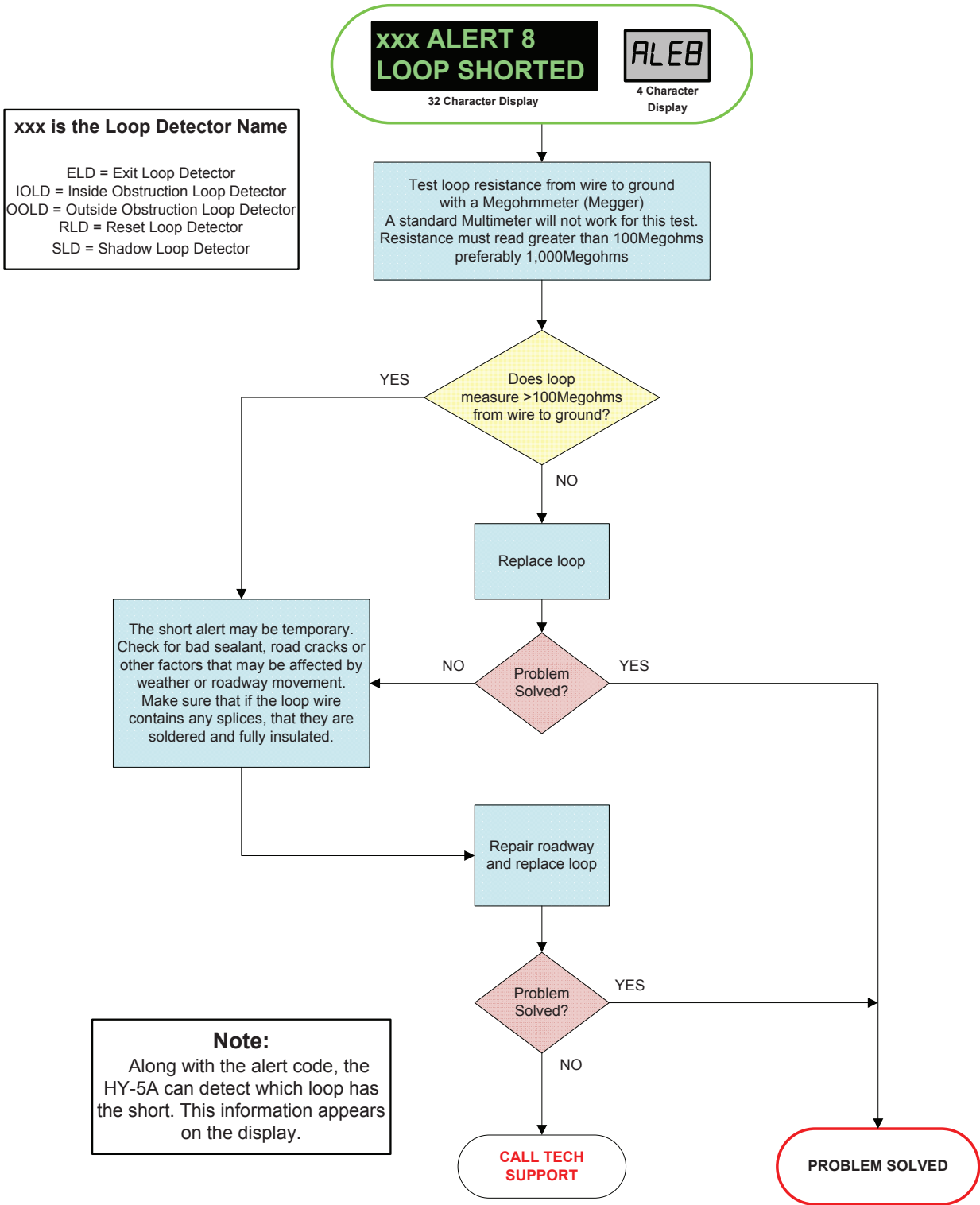
(ALEG) ALERT 6: LIMIT NOT RELEASED



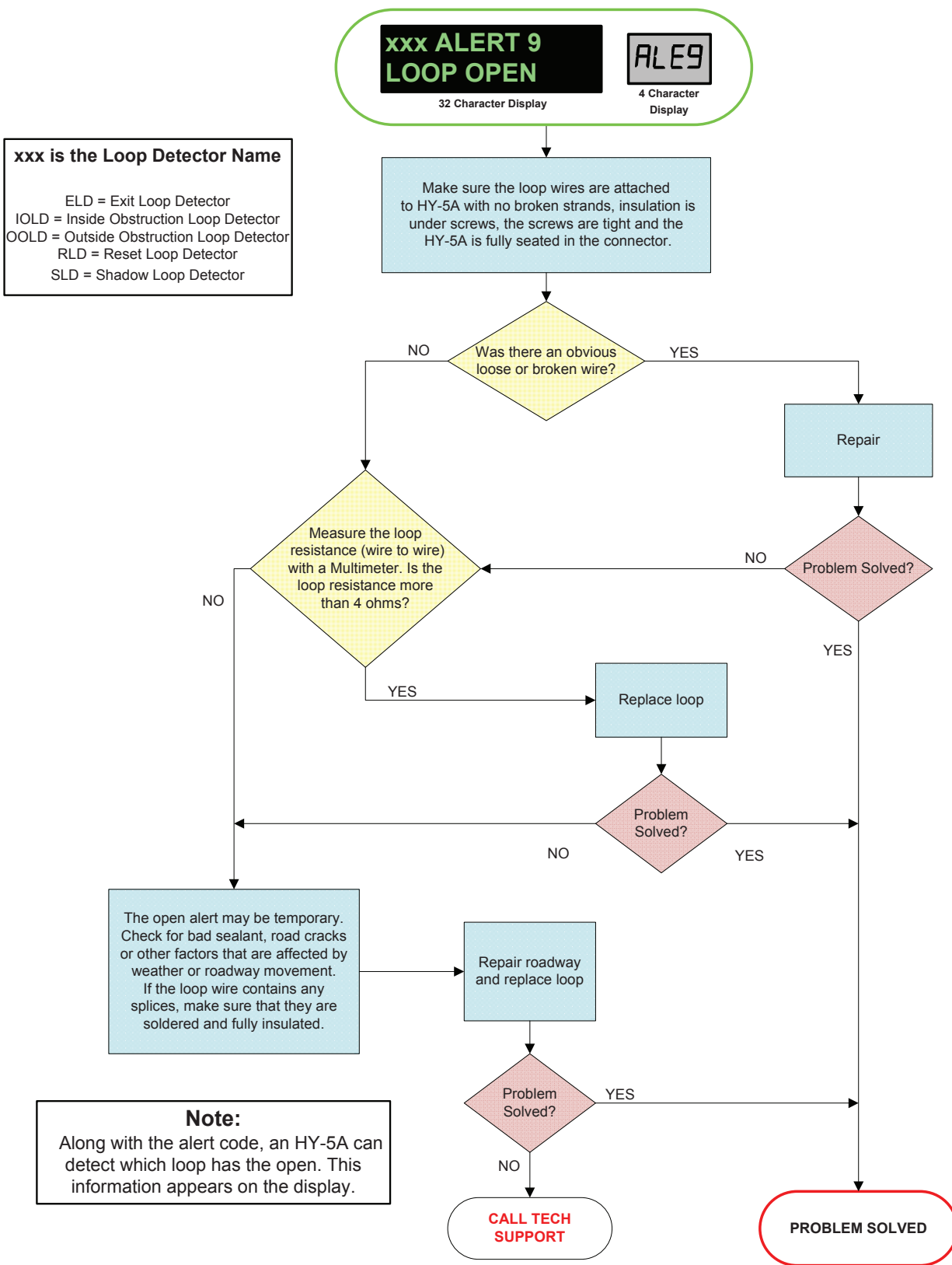
(ALE7) ALERT 7: FREQUENCY SHIFT FAULT



(ALEB) ALERT 8: LOOP SHORTED



(ALE9) ALERT 9: LOOP OPEN

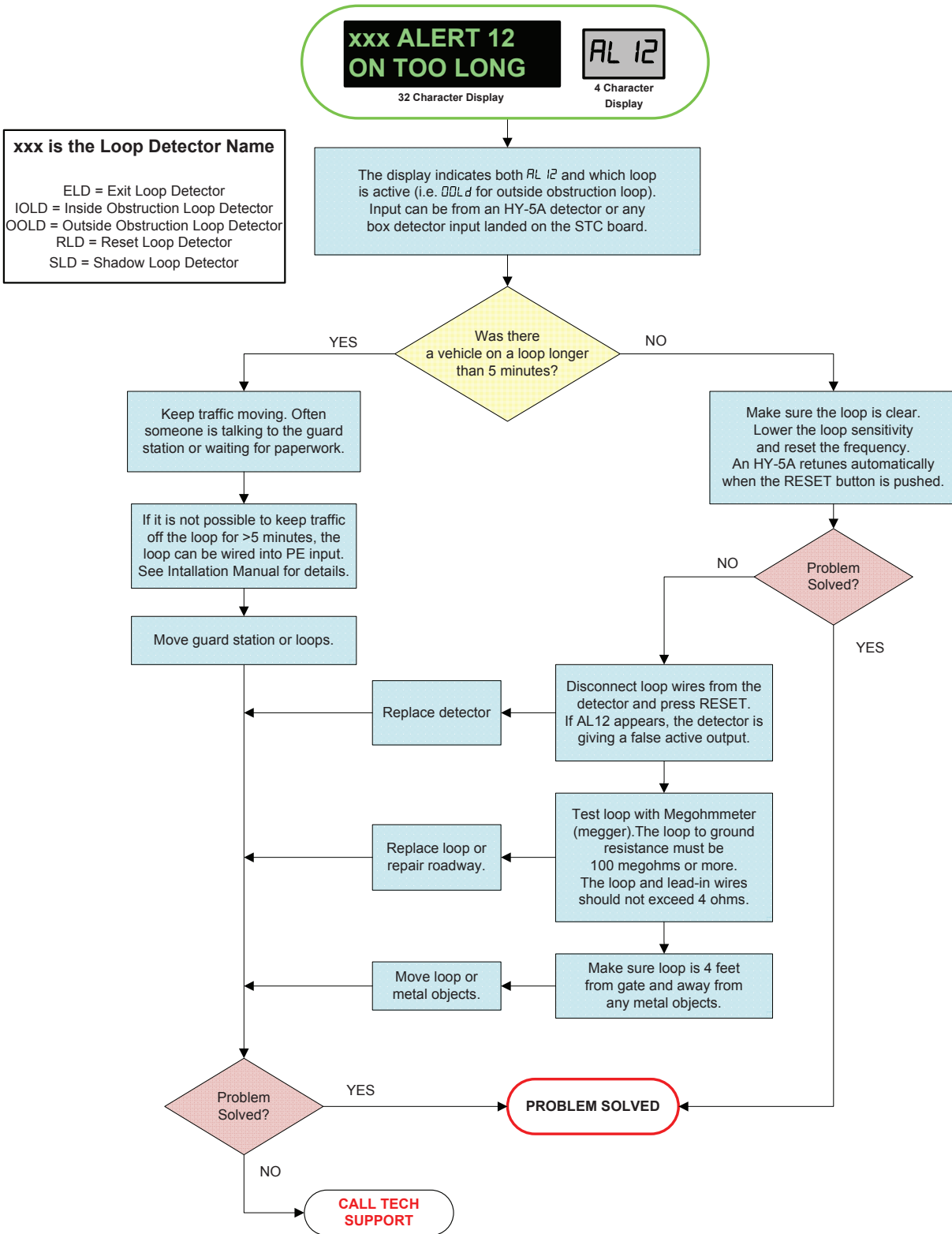


xxx is the Loop Detector Name

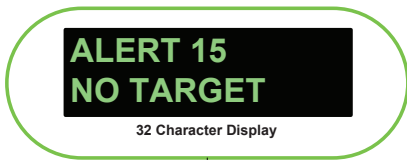
ELD = Exit Loop Detector
 IOLD = Inside Obstruction Loop Detector
 OOLD = Outside Obstruction Loop Detector
 RLD = Reset Loop Detector
 SLD = Shadow Loop Detector

Note:
 Along with the alert code, an HY-5A can detect which loop has the open. This information appears on the display.

(AL 12) ALERT 12: ON TOO LONG

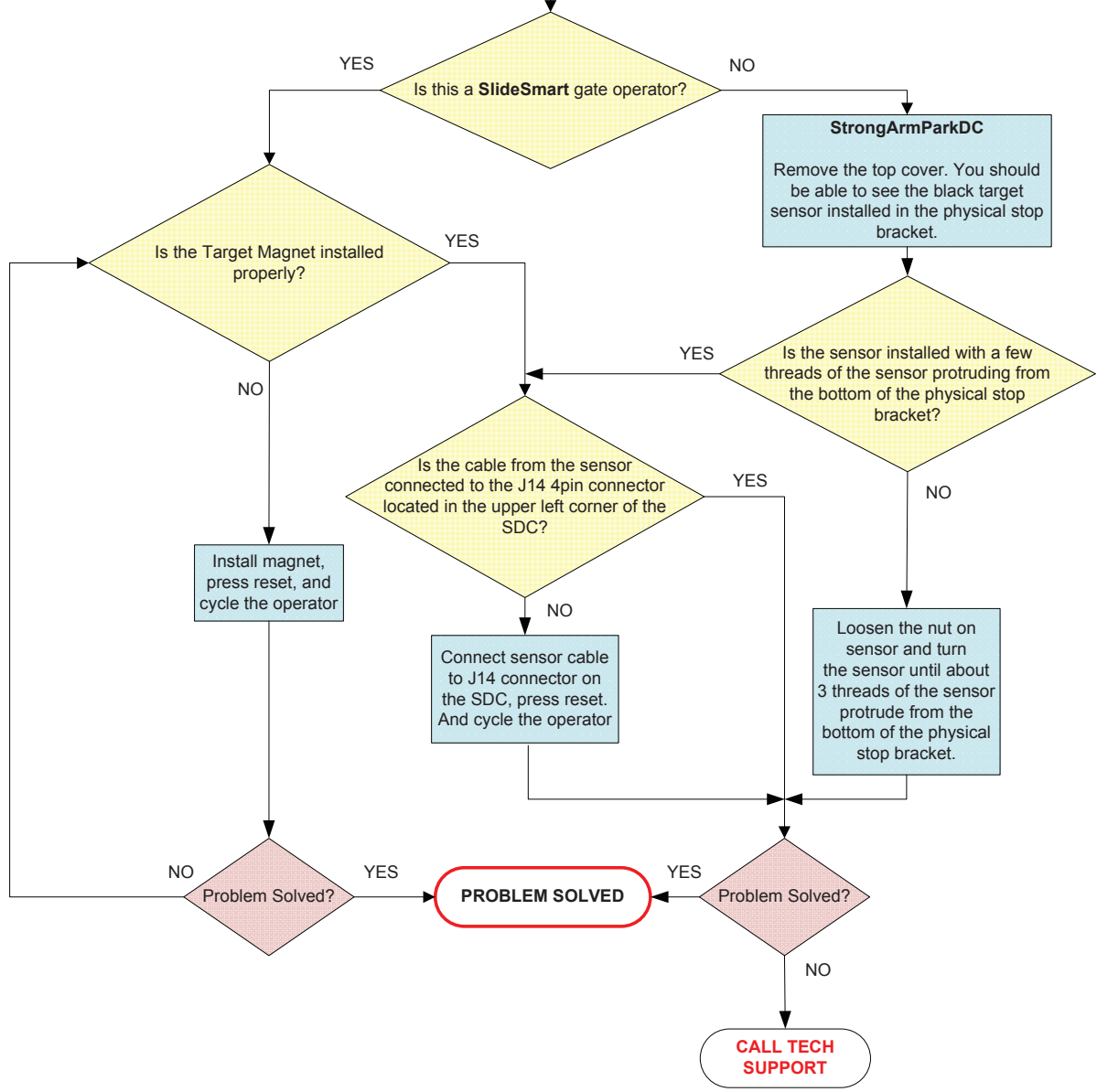


ALERT 15: No Target (SLIDE SMART & SAPARK DC)

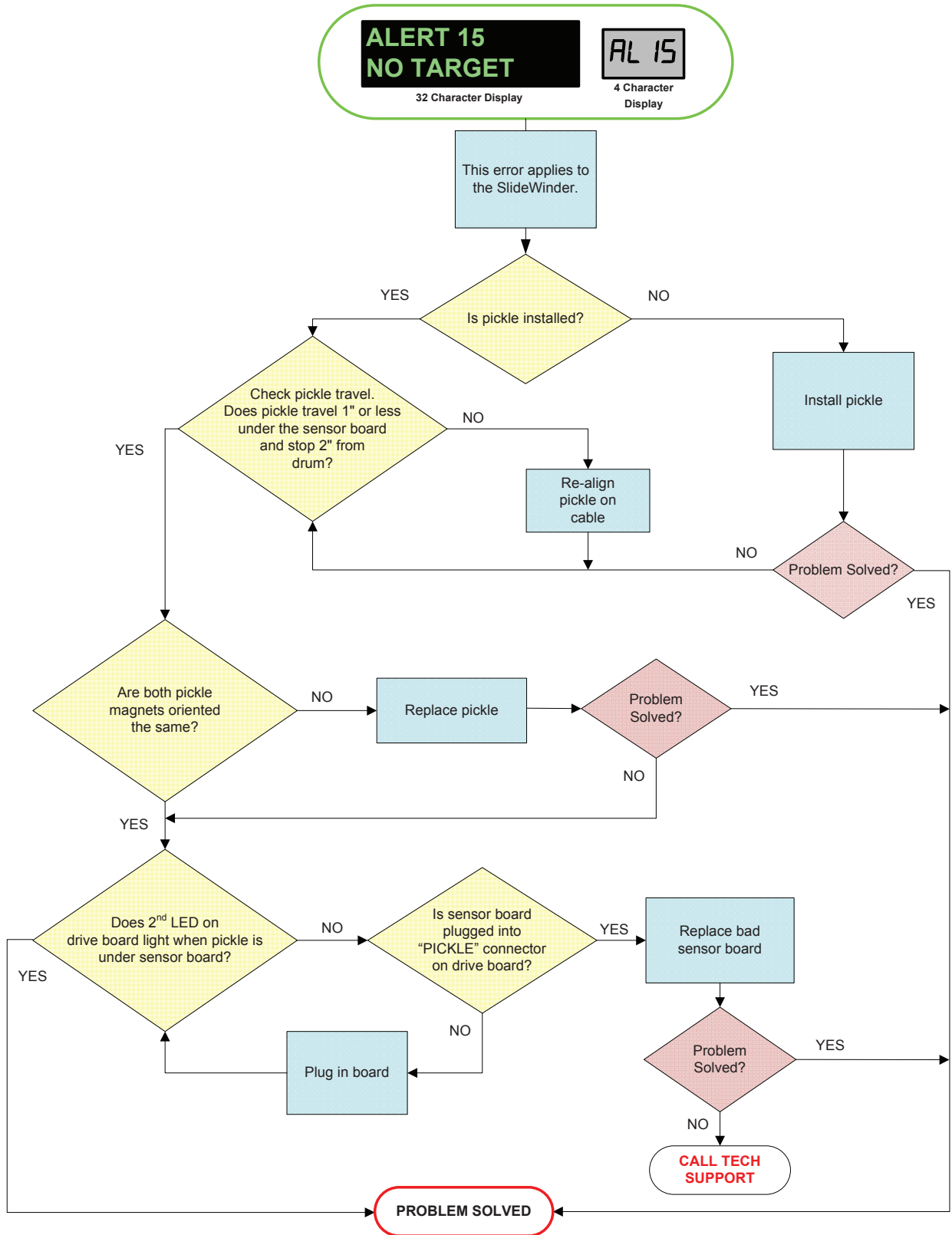


The **SlideSmartDC** and **StrongArmParkDC** use an encoder on the motor to determine gate position. The limit settings are stored in the SDC and are retained even when both AC and DC power are turned off. Under normal conditions, you should never have to reset the limits after they are set during initial installation. A magnet and sensor are used to determine the starting or reference point used for the stored limit settings.

The target magnet for the SlideSmartDC is installed on the chain during initial setup – reference the **SlideSmartDC Quick Start Steps or SlideSmartDC Installation & Reference Manual**.
The magnet for the StrongArmParkDC is pre-installed.



(AL 15) ALERT 15: MISSING LIMIT (SLIDEWINDER)

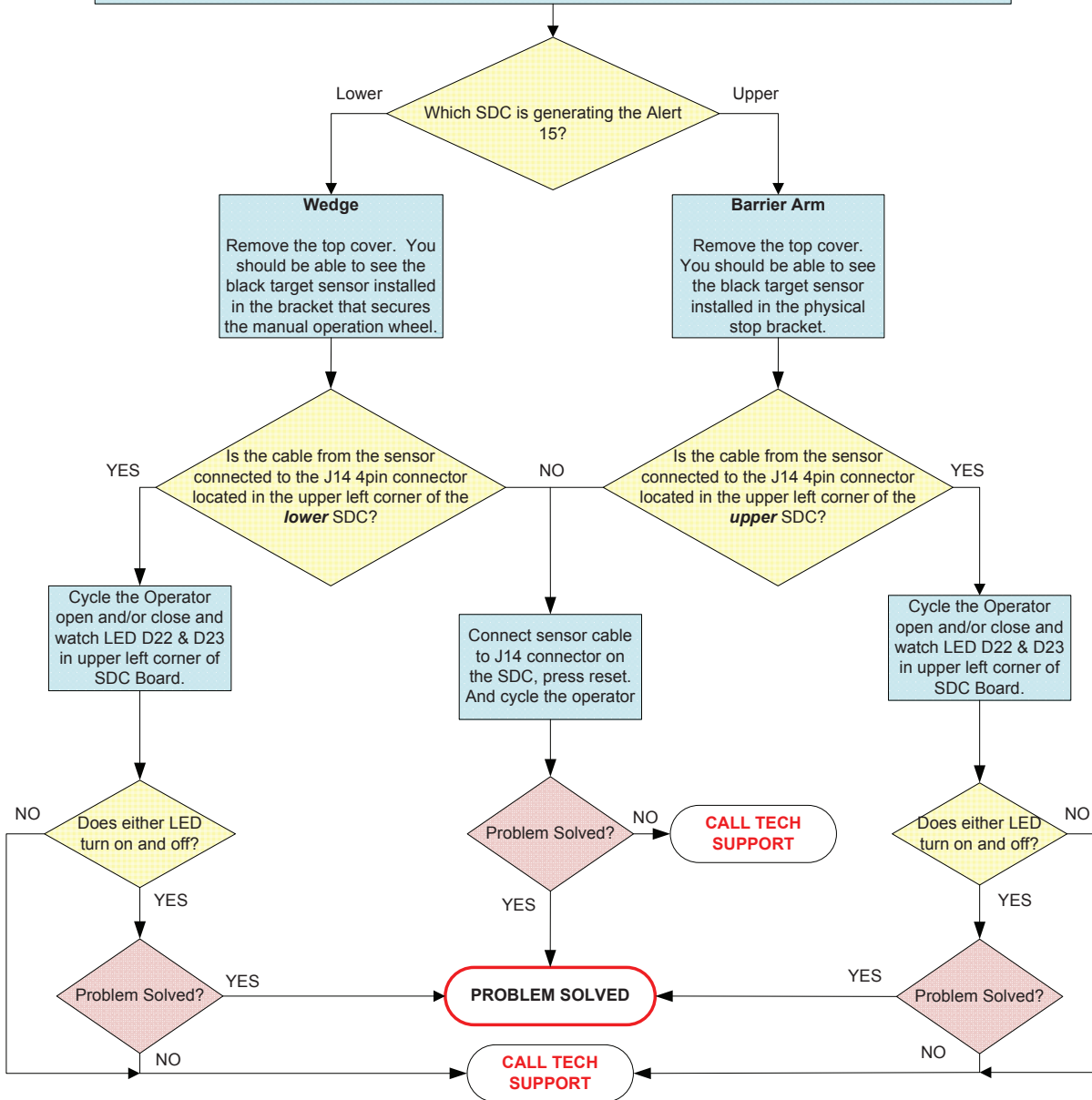


ALERT 15: No Target (WEDGE SMART DC)

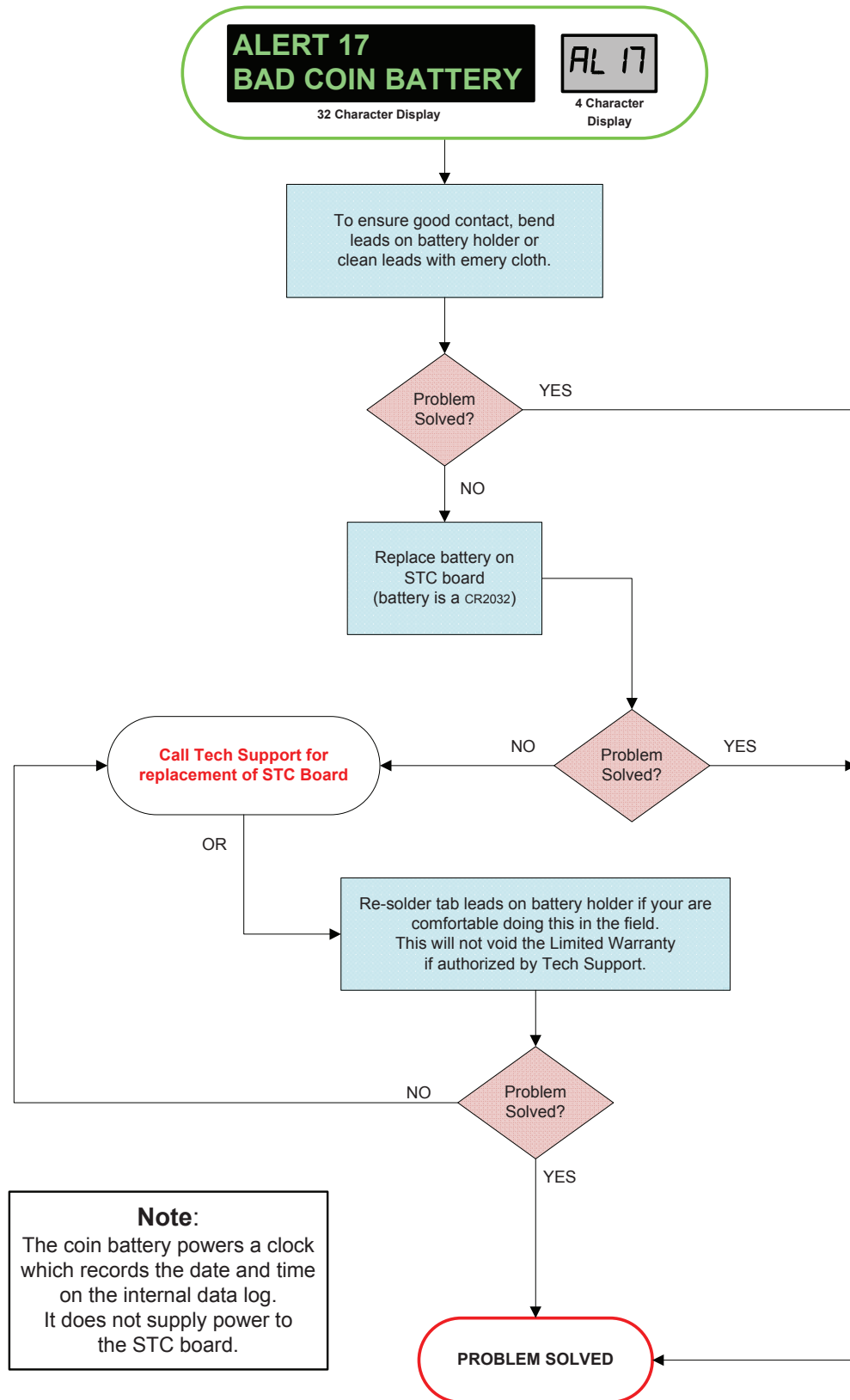


The **WedgeSmartDC** integrates a barrier arm and a surface mounted wedge into a single unit. There are two SmartDCController (SDC) boards housed within the chassis. The upper SDC controls the barrier arm and the lower SDC controls the wedge plate. For the barrier arm, there is a magnet and sensor to determine the position of the arm and a similar magnet and sensor are used for the wedge plate for position sensing. Both the barrier arm and wedge plate motors utilize an encoder on the motor to set and maintain open/close limit positions. These settings are stored in non-volatile EEPROM on the SDC and are retained even when both AC and DC power are turned off. Under normal conditions, you should never have to reset the limits after they are set during initial installation. A magnet and sensor are used to determine the starting or "home" position used with the stored limit settings.

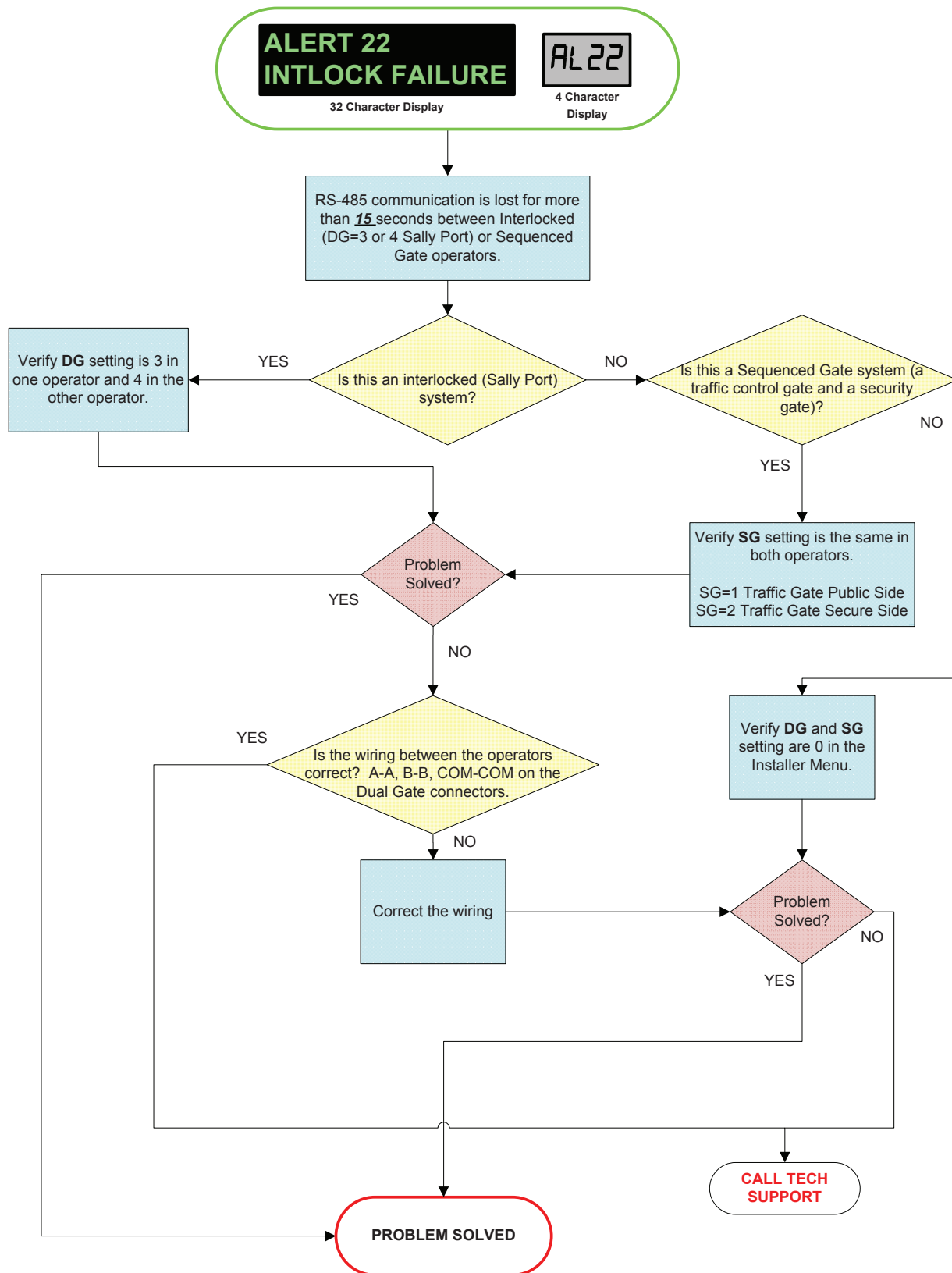
Both magnets and sensors are pre-installed at the factory and should not require any adjustments during installation.



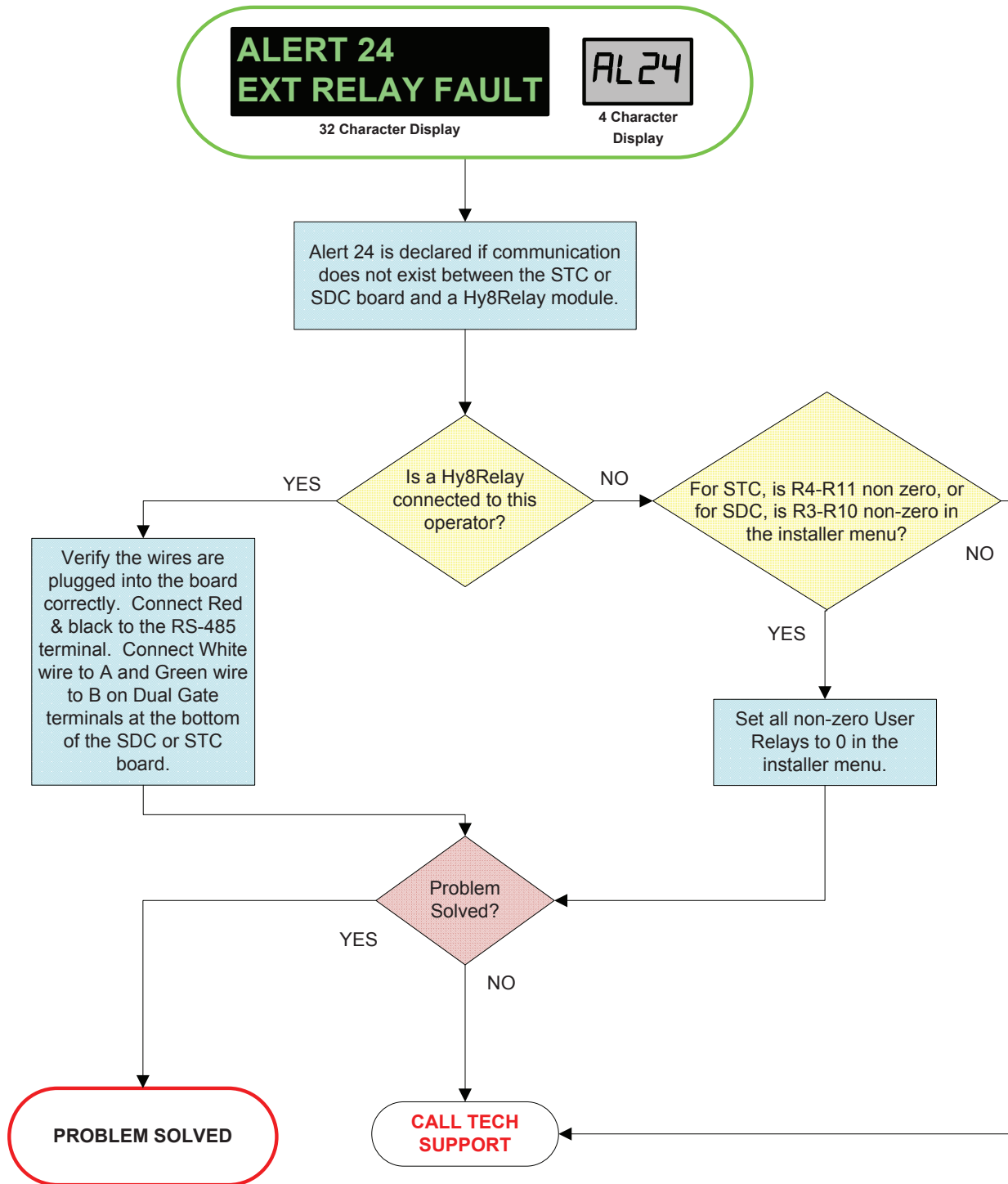
(AL 17) ALERT 17: BAD COIN BATTERY



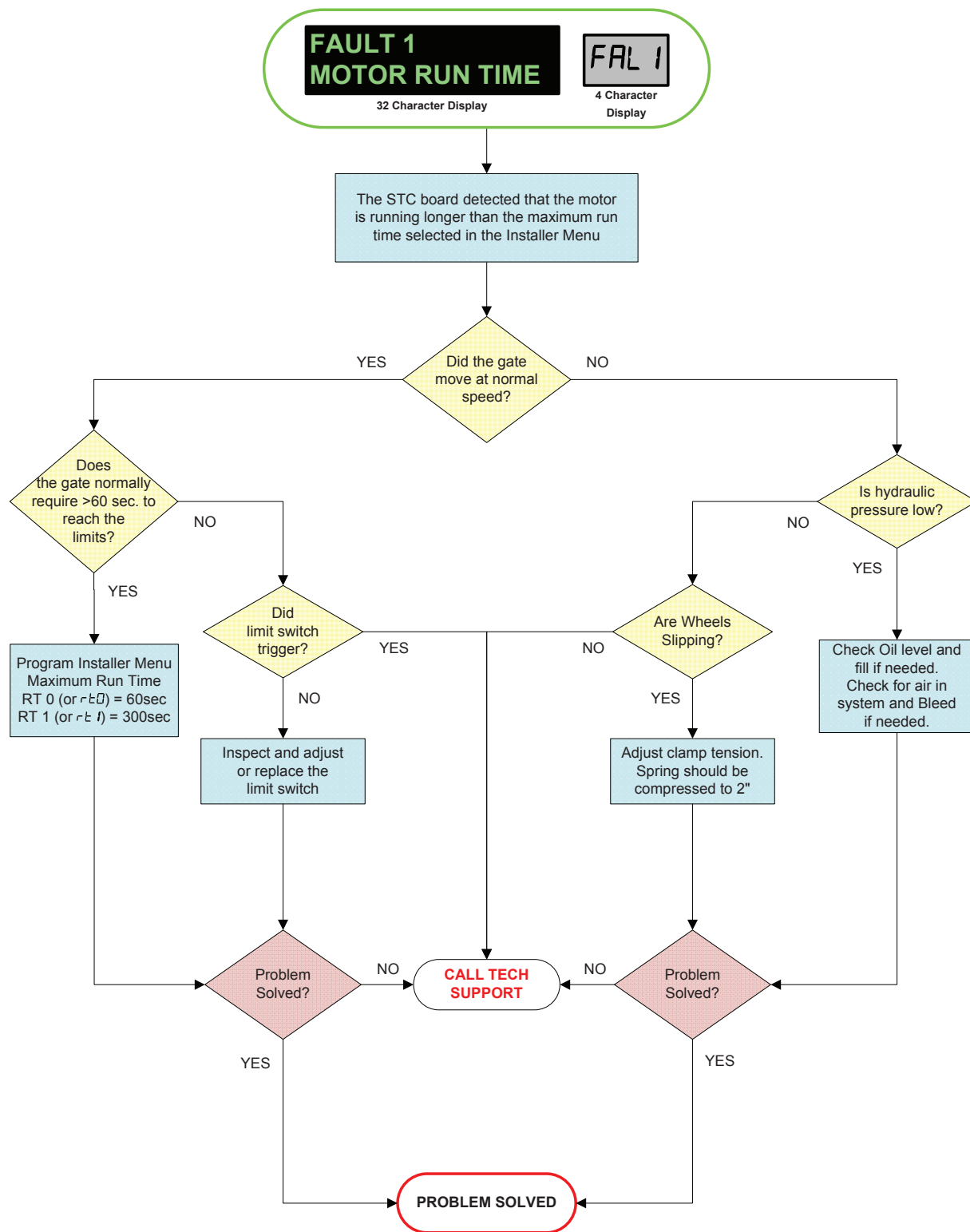
(AL22) ALERT 22: INTERLOCK FAILURE



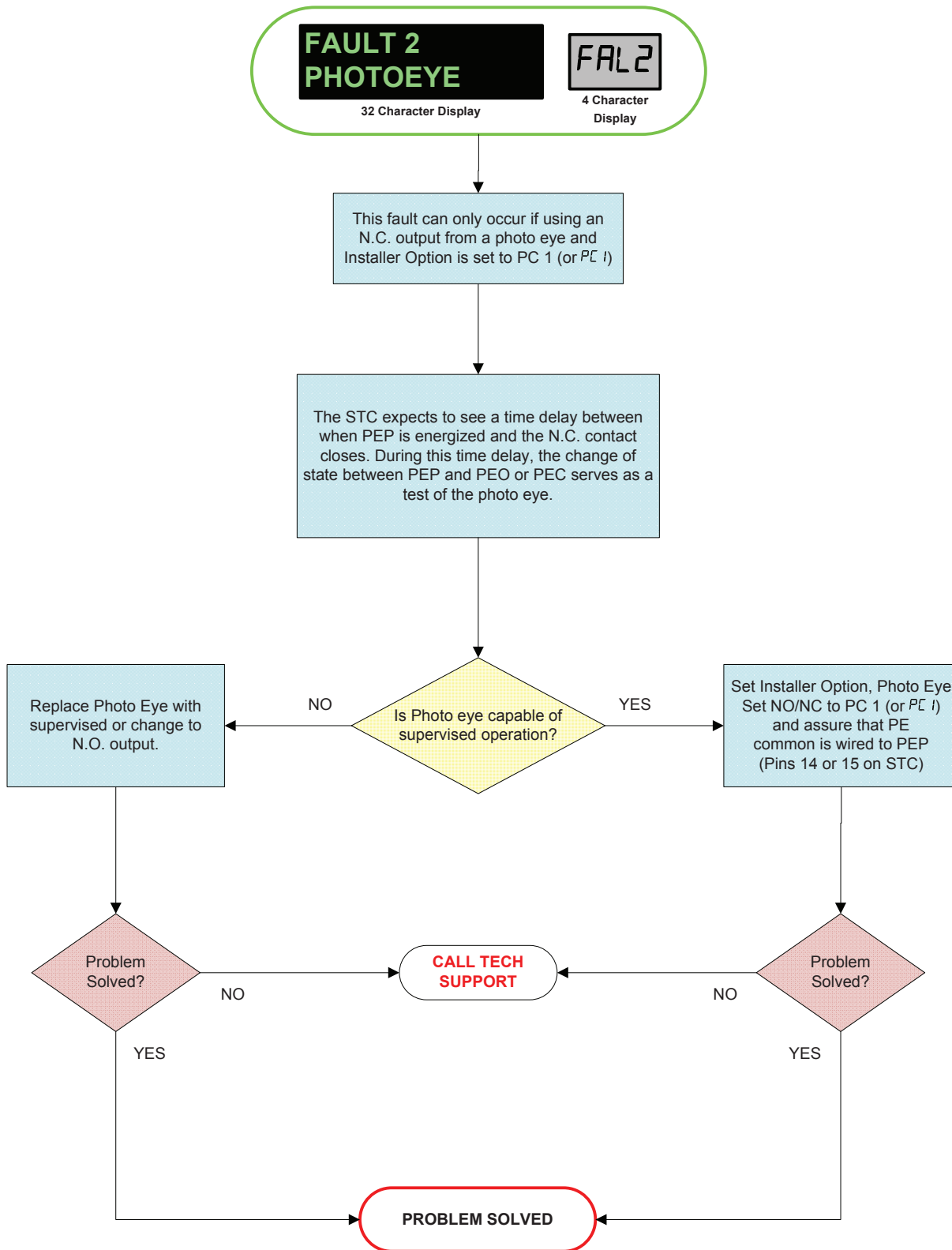
(AL24) ALERT 24: EXTERNAL RELAY FAULT



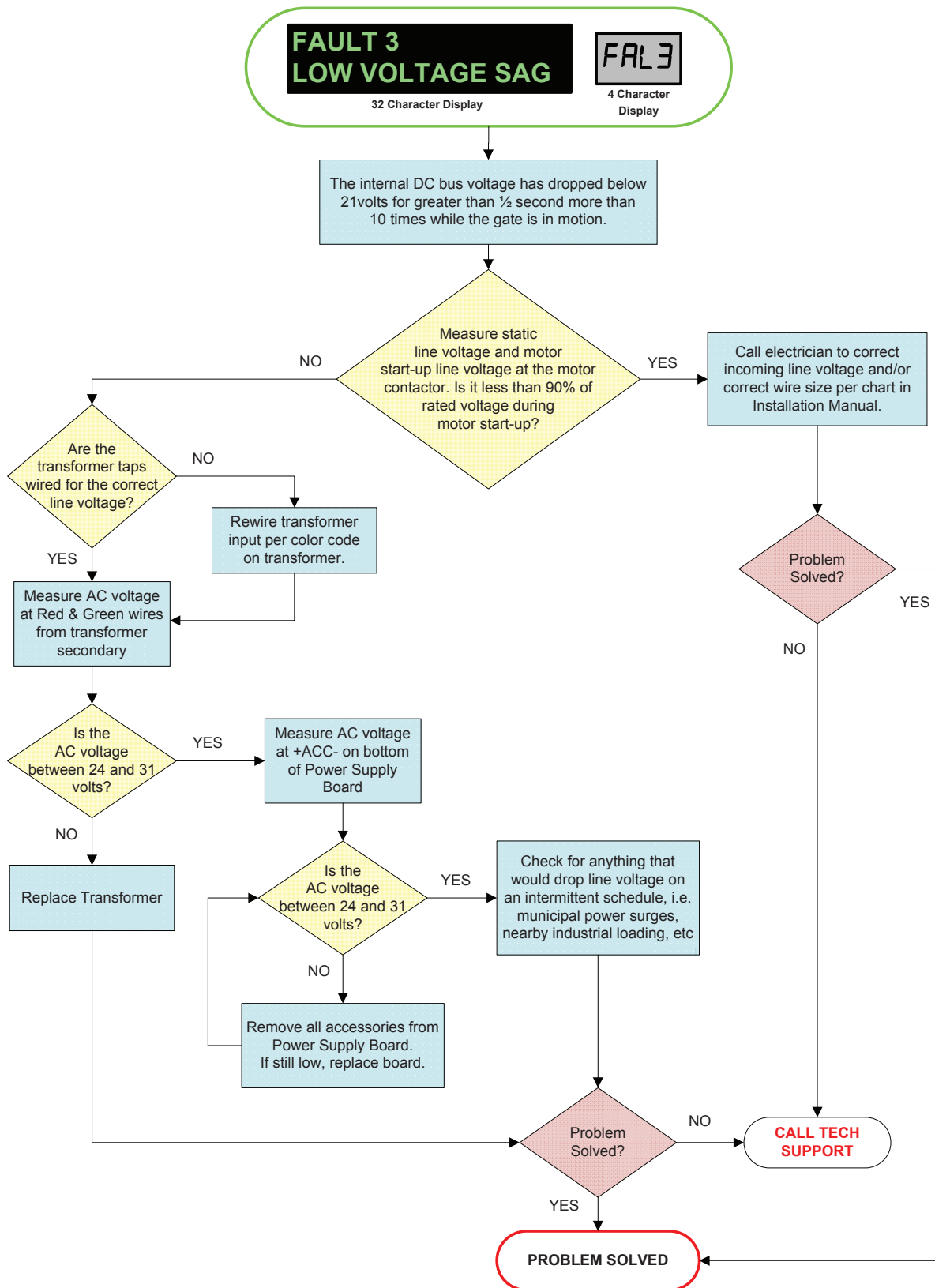
(FAL 1) FAULT 1: MOTOR RUN TIME



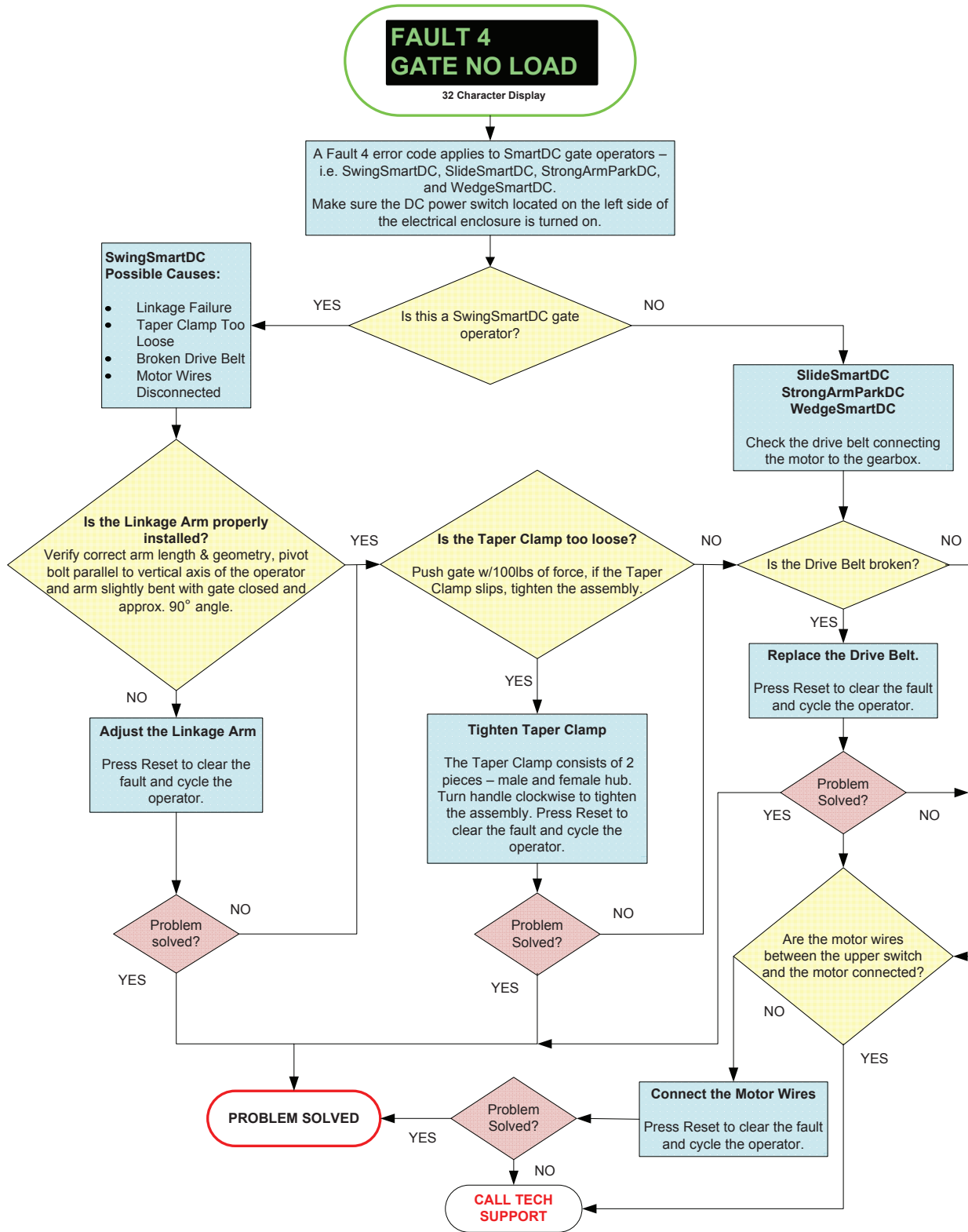
(FAL2) FAULT 2: PHOTO EYE



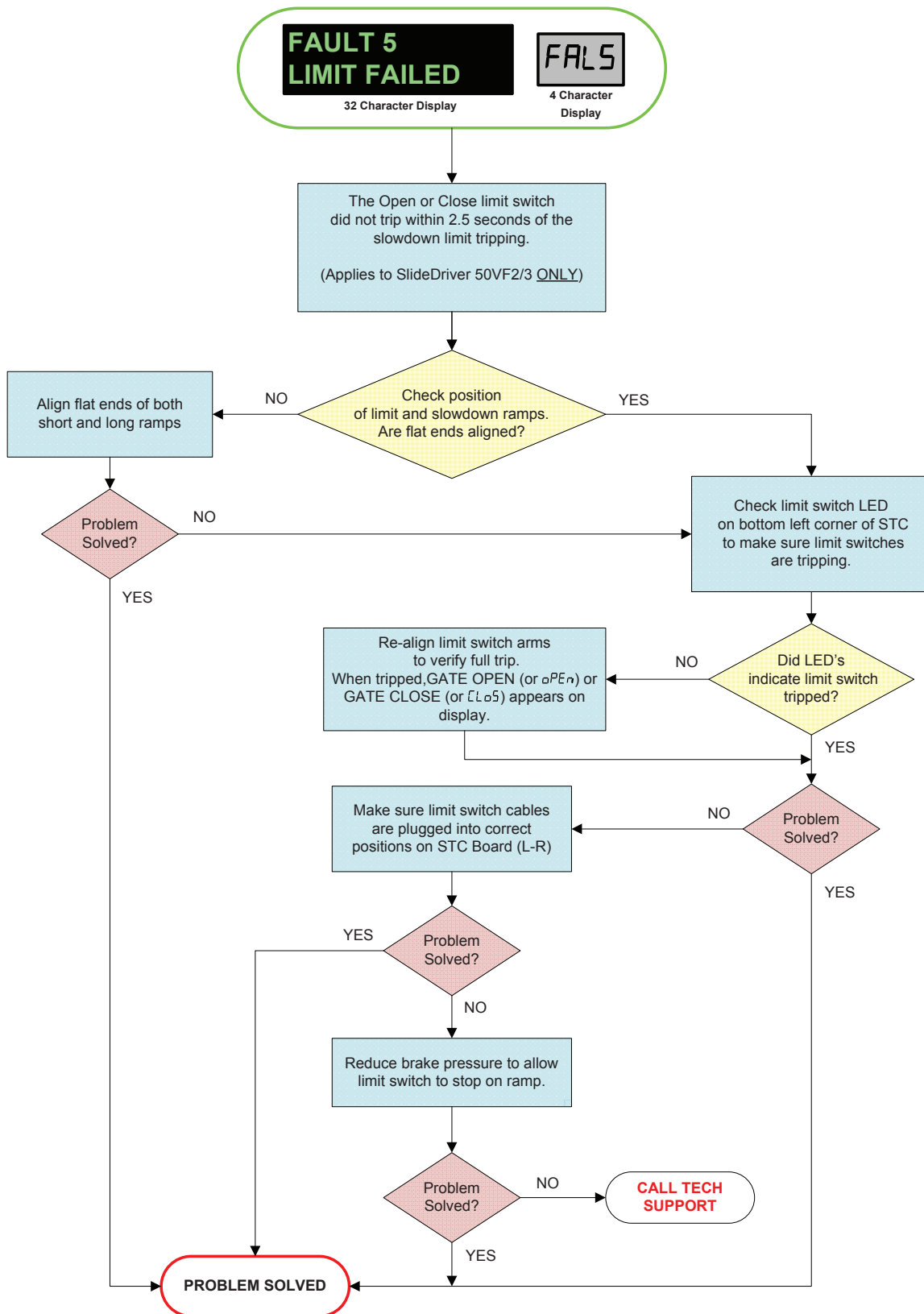
(FAL3) FAULT 3: LOW VOLTAGE SAG



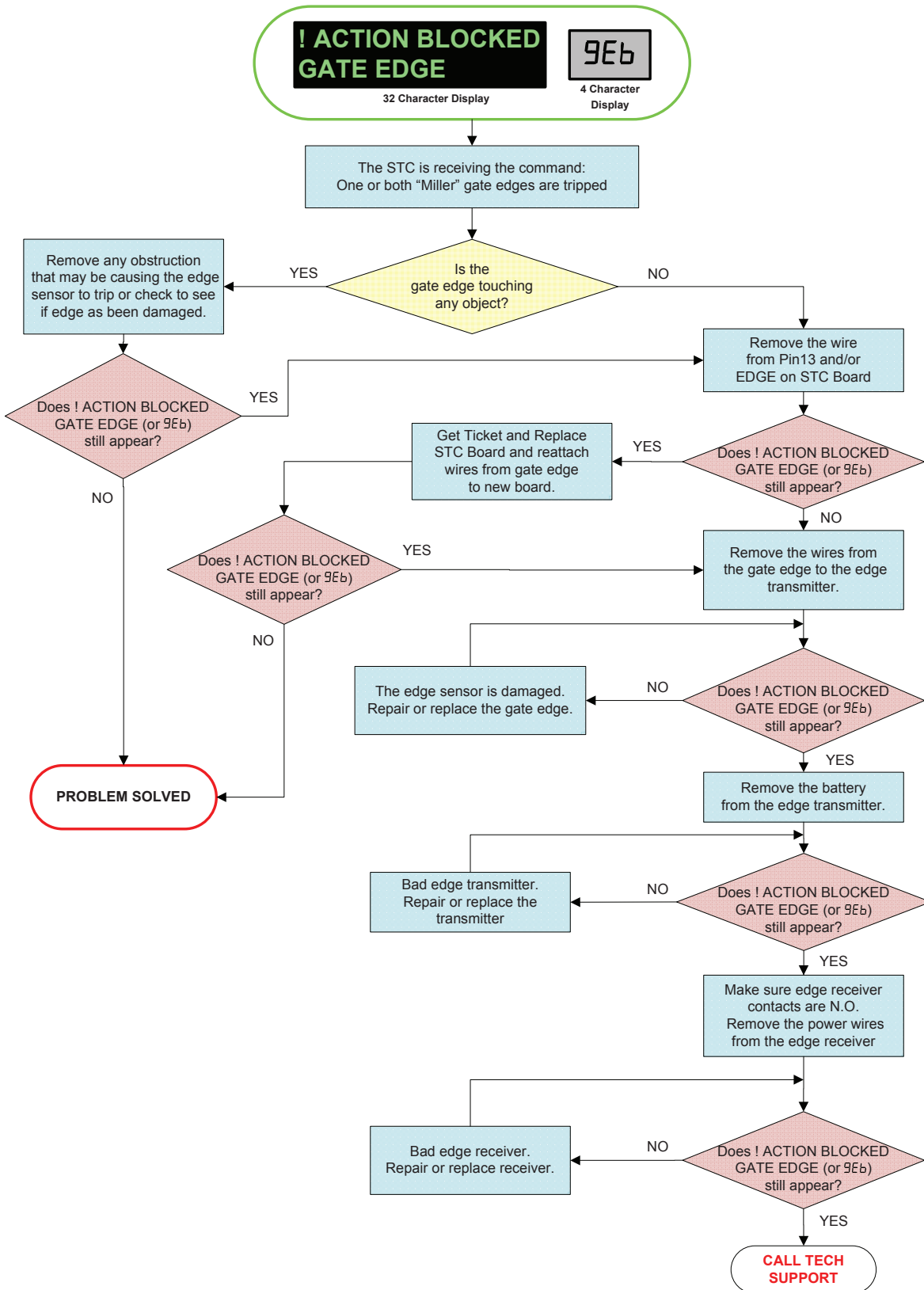
FAULT 4: GATE NO LOAD (SMART DC)



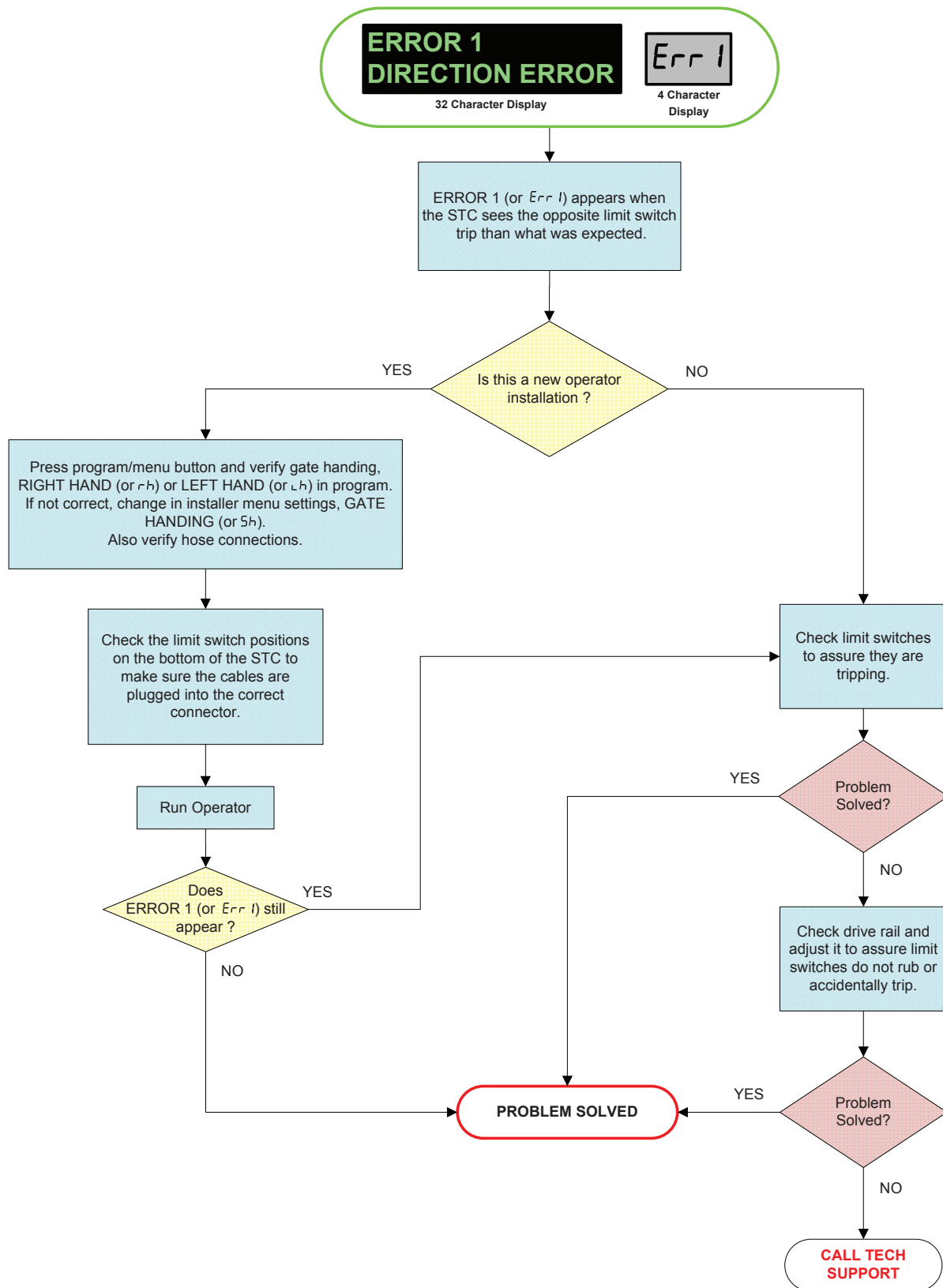
(FALS) FAULT 5: LIMIT FAILED



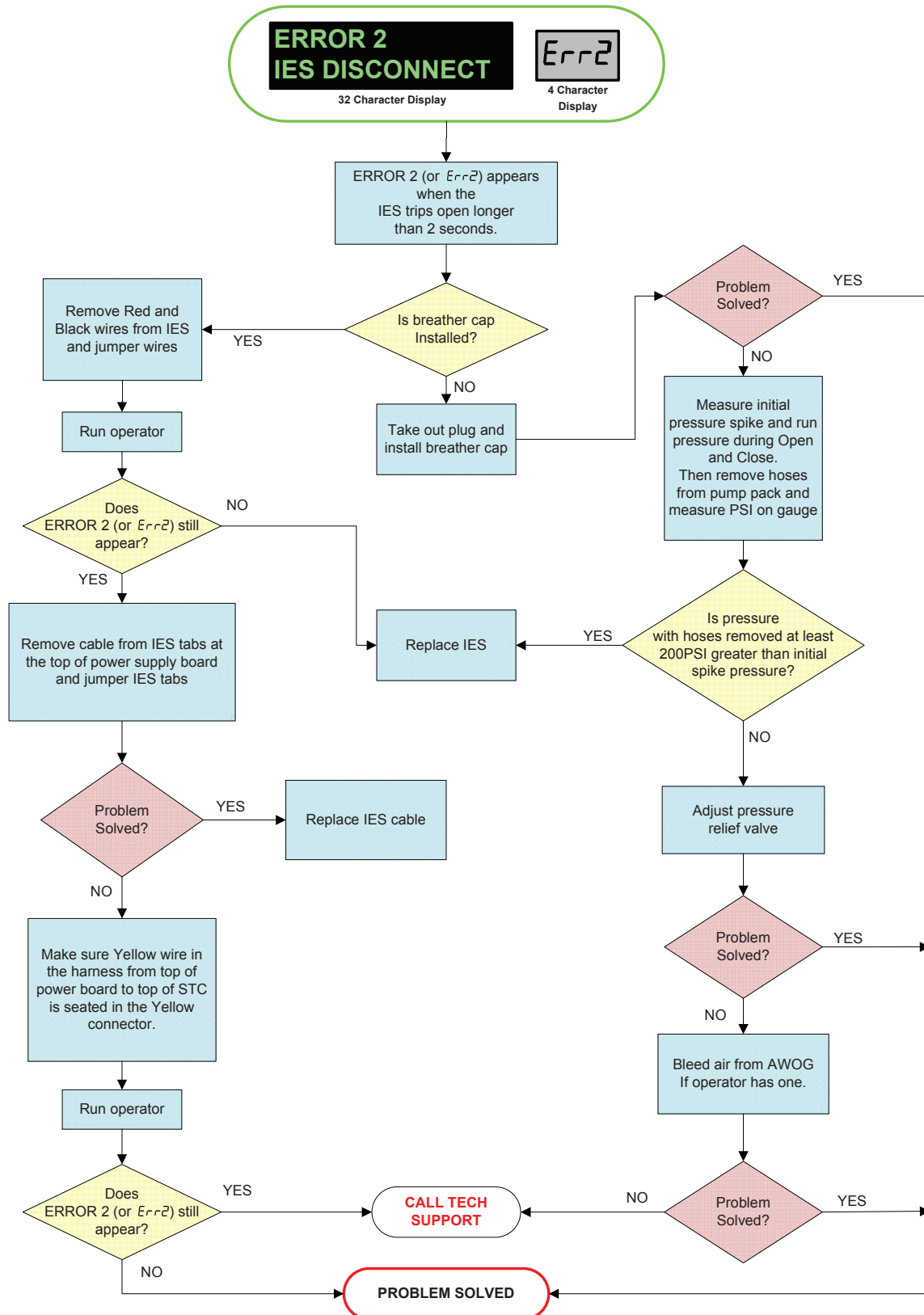
(9Eb) ERROR: !ACTION BLOCKED GATE EDGE



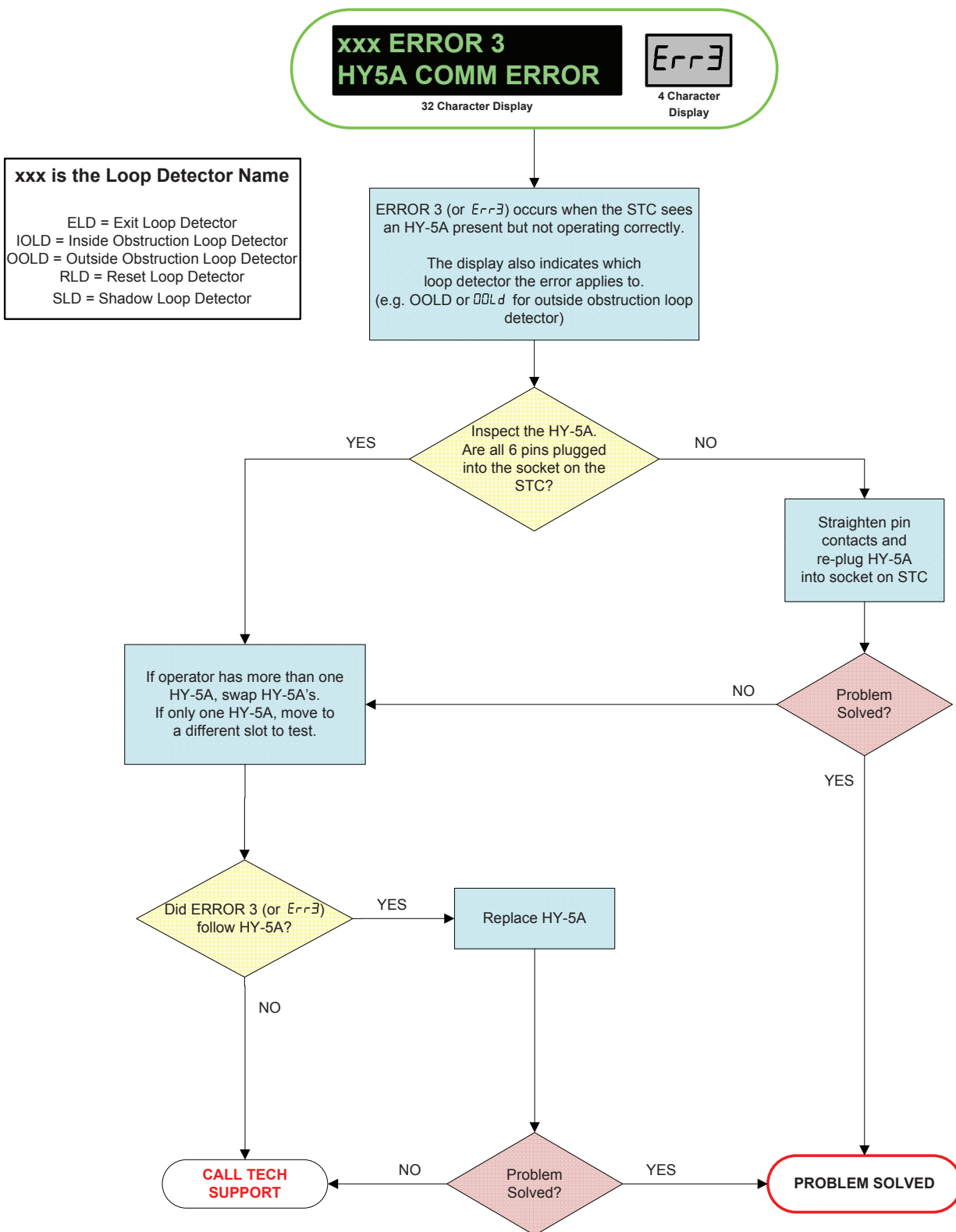
(Err 1) ERROR 1: DIRECTION ERROR



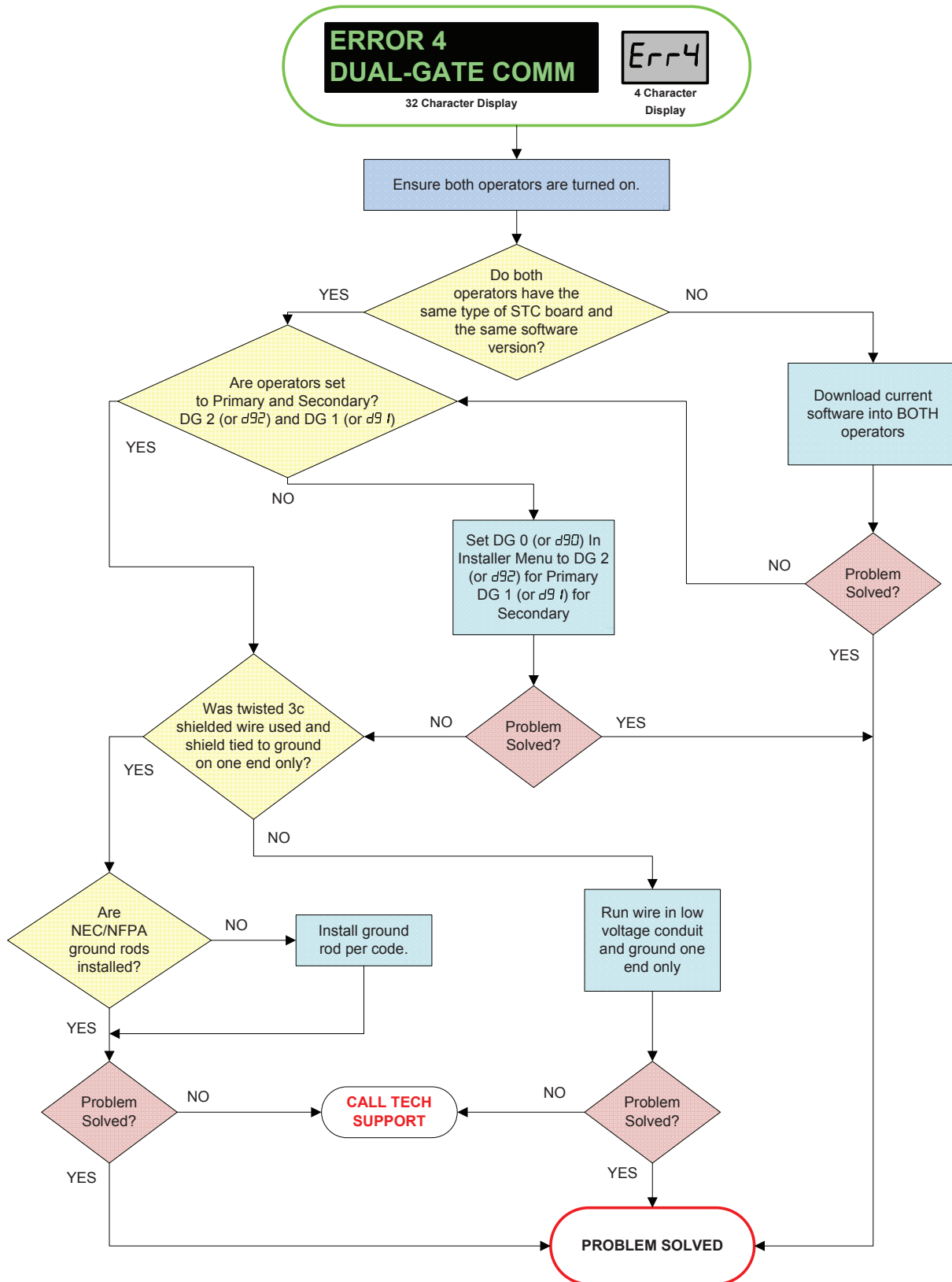
(Err2) ERROR 2: IES DISCONNECT



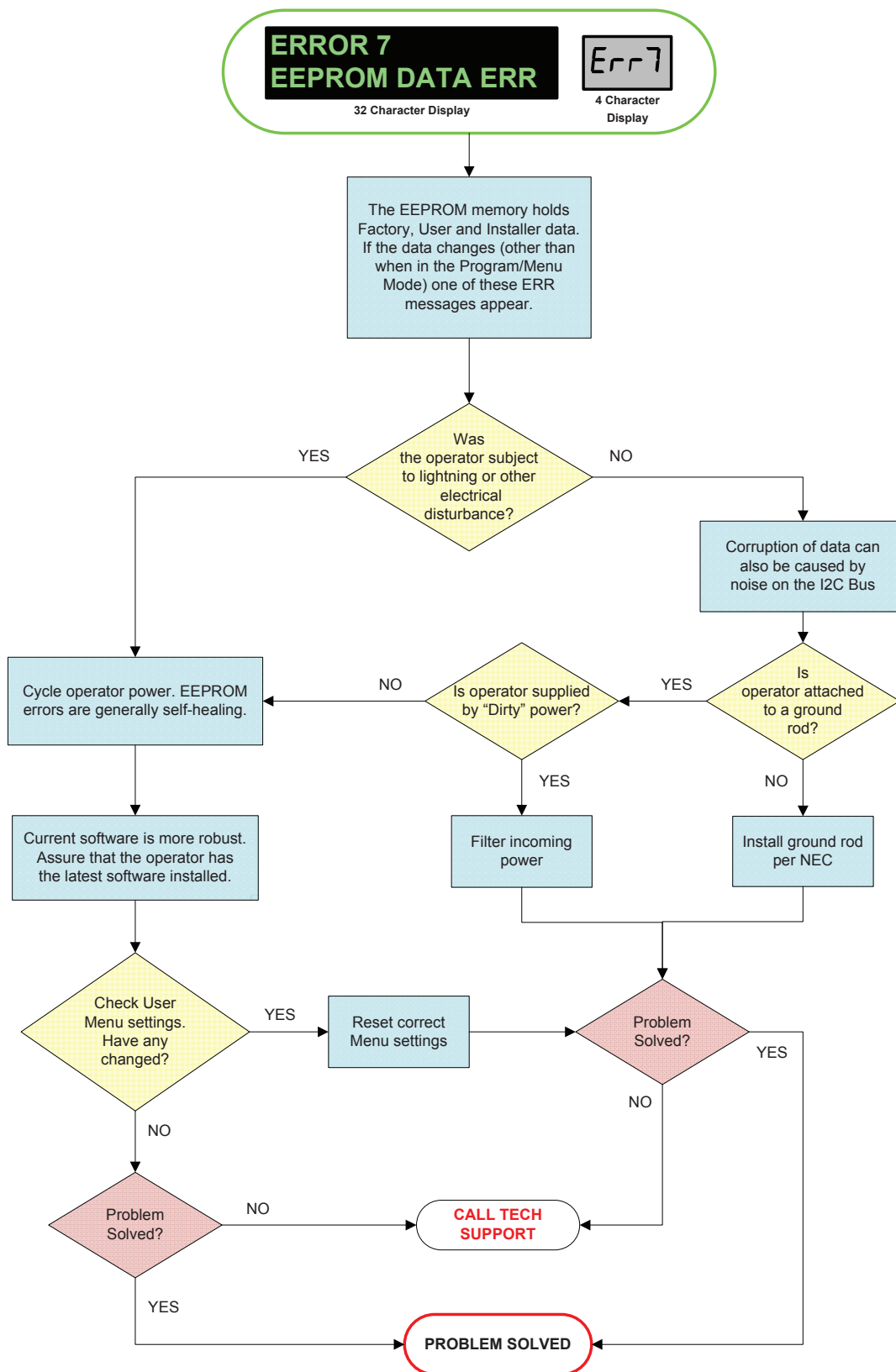
(Err3) ERROR 3: HY5A COMM ERROR



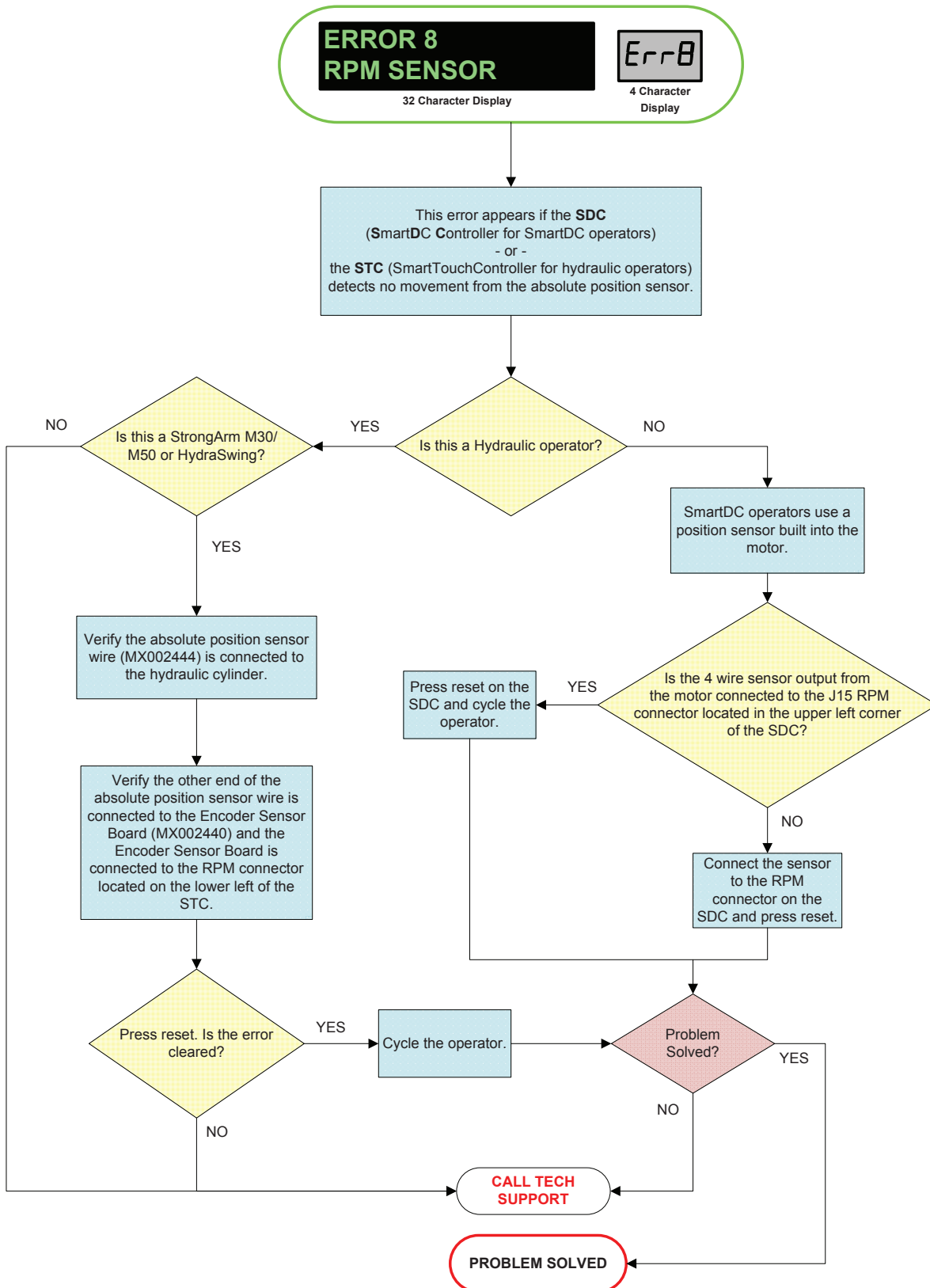
(Err4) ERROR 4: DUAL GATE



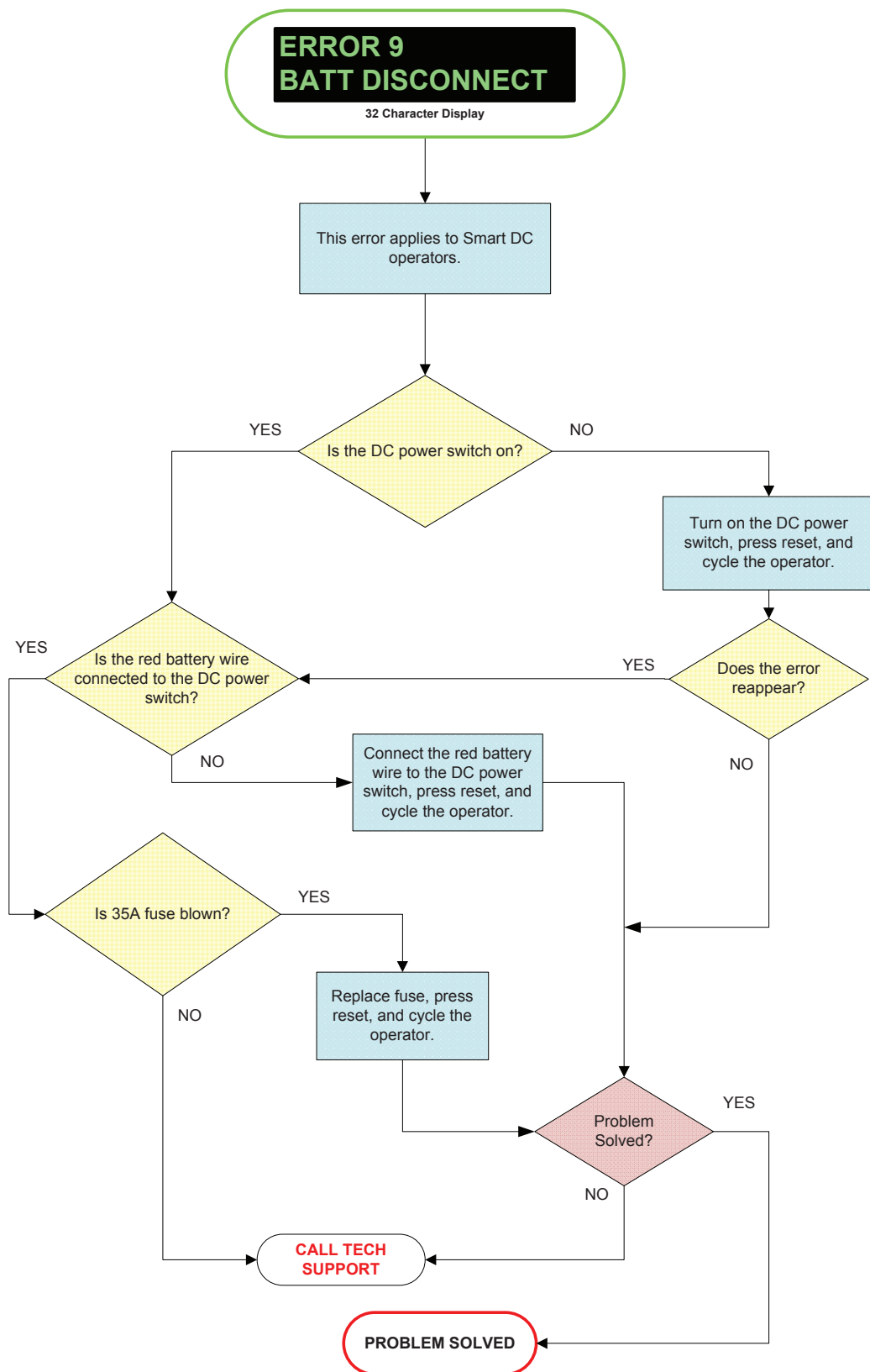
(Err7) ERROR 7: MENU CHECKSUM



(Err8) ERROR 8: RPM SENSOR



(Err9) ERROR 9: BATT DISCONNECT



(Er 10) ERROR 10: SLOWDOWN SWITCH

