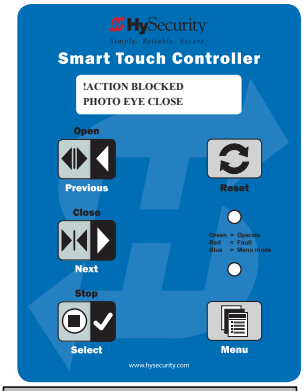
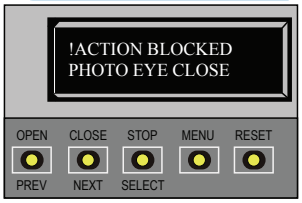
Troubleshooting

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.

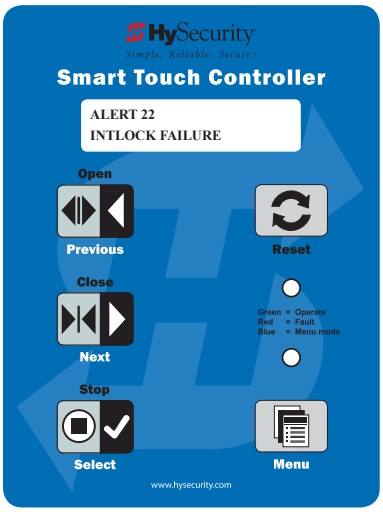
Contents

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.

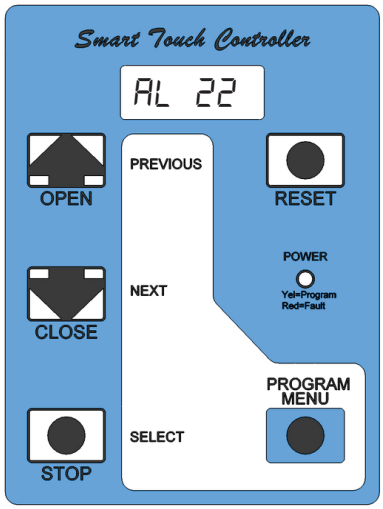
For ease of use, this section's Table of Contents provides both the 7-segment codes and OLED display readouts.

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

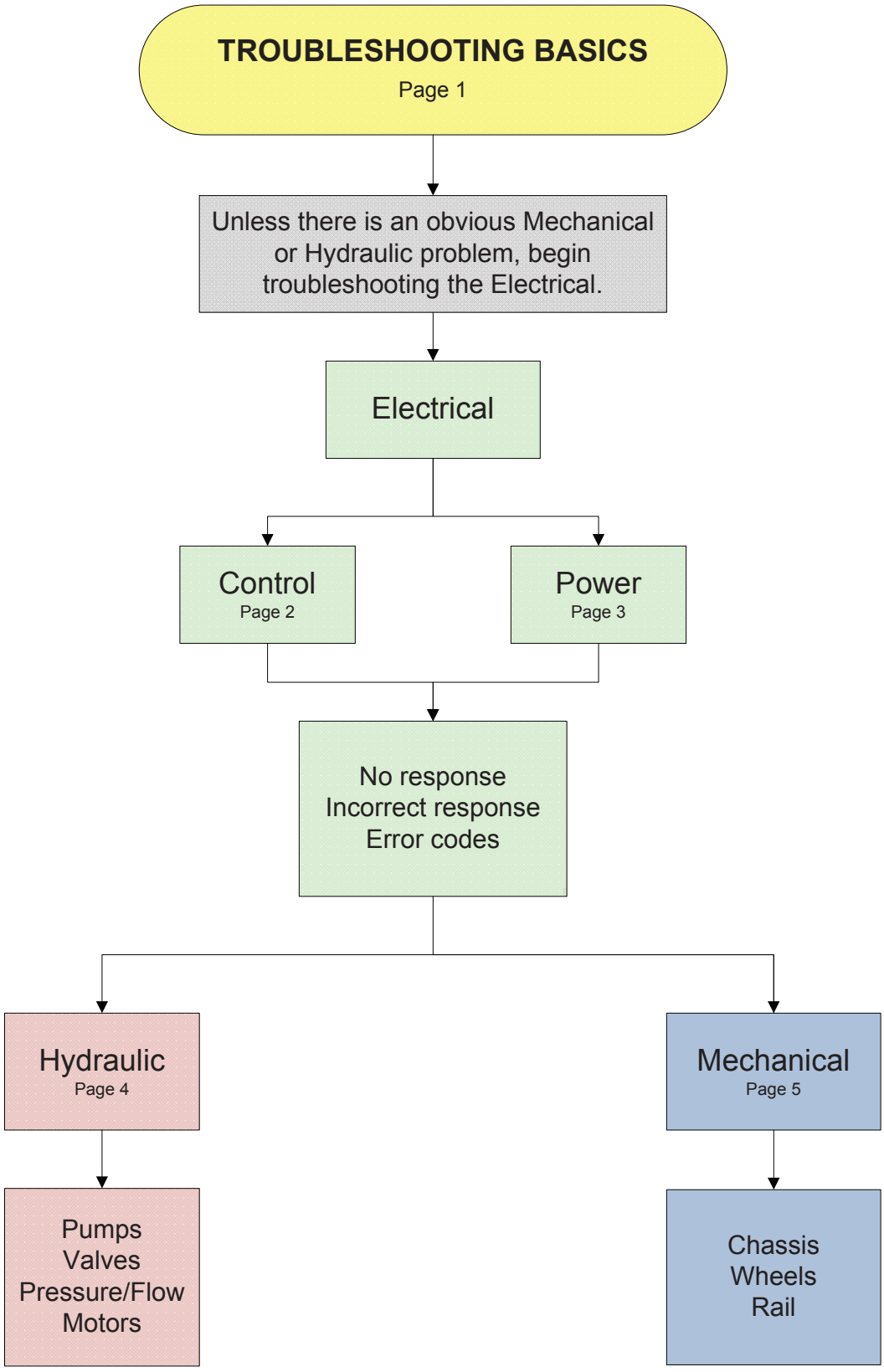


HySecurity 7 segment display

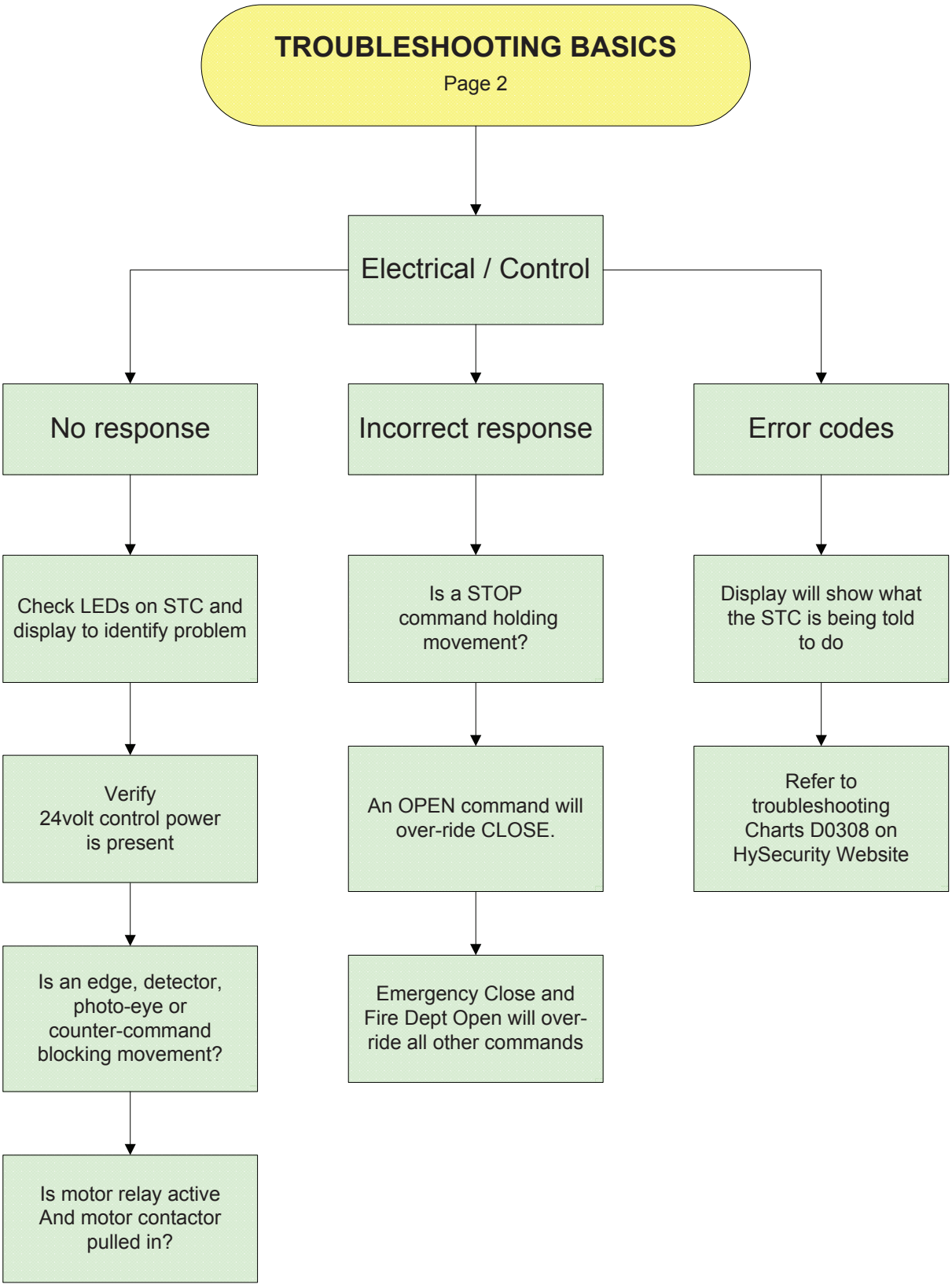
HySecurity Smart DC display

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.

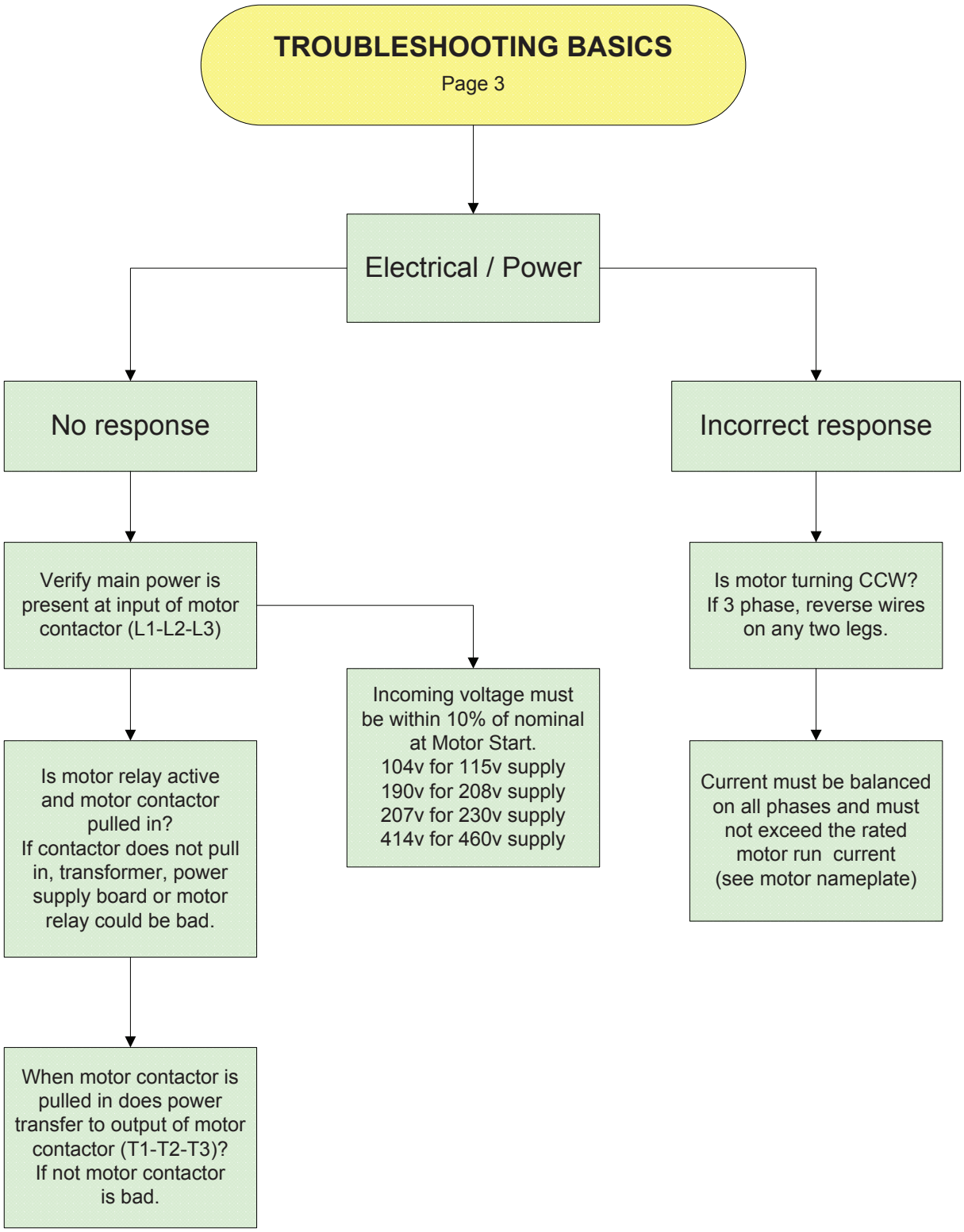
Troubleshooting Basics: Electrical 1



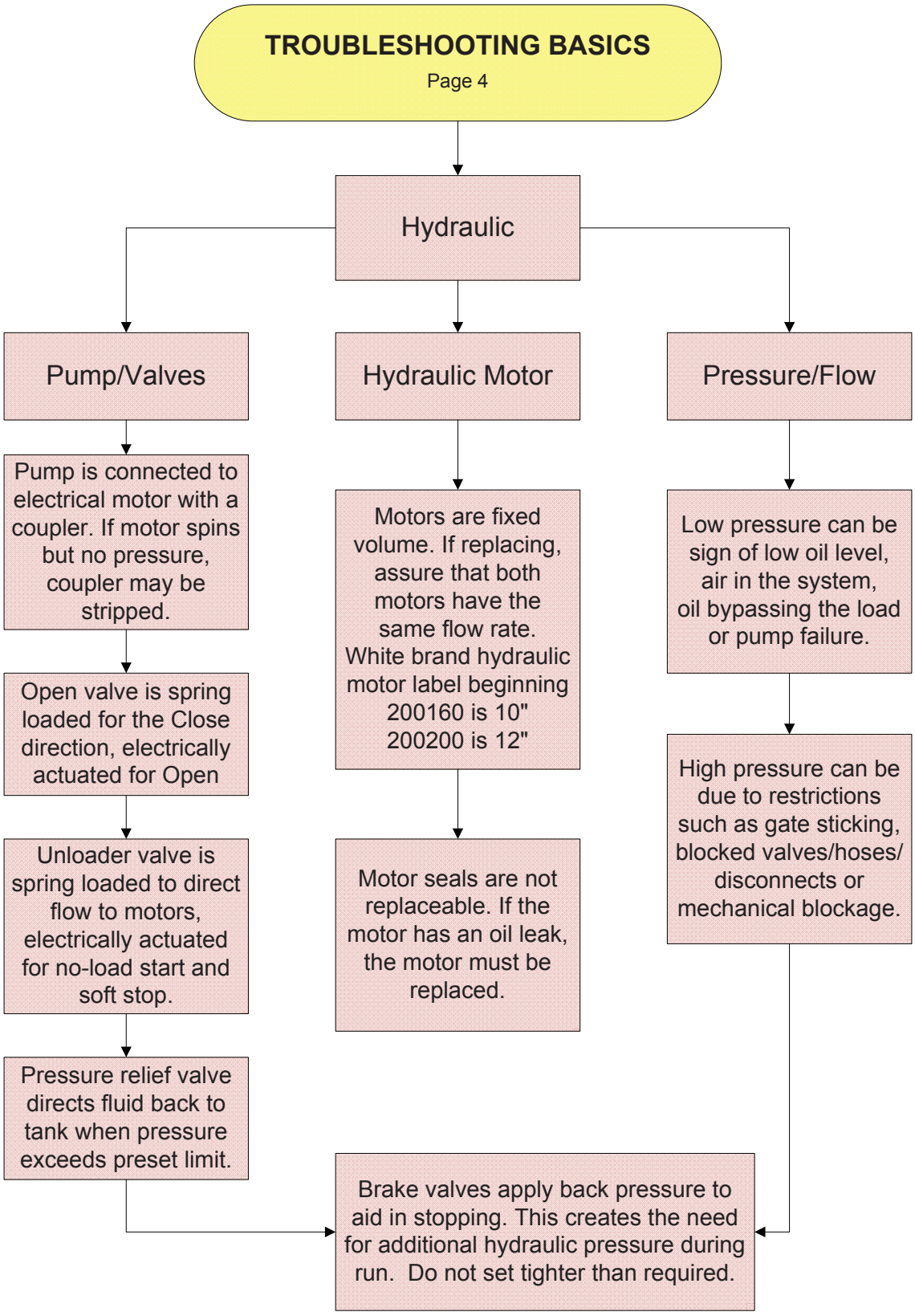
Troubleshooting Basics: Electrical Control



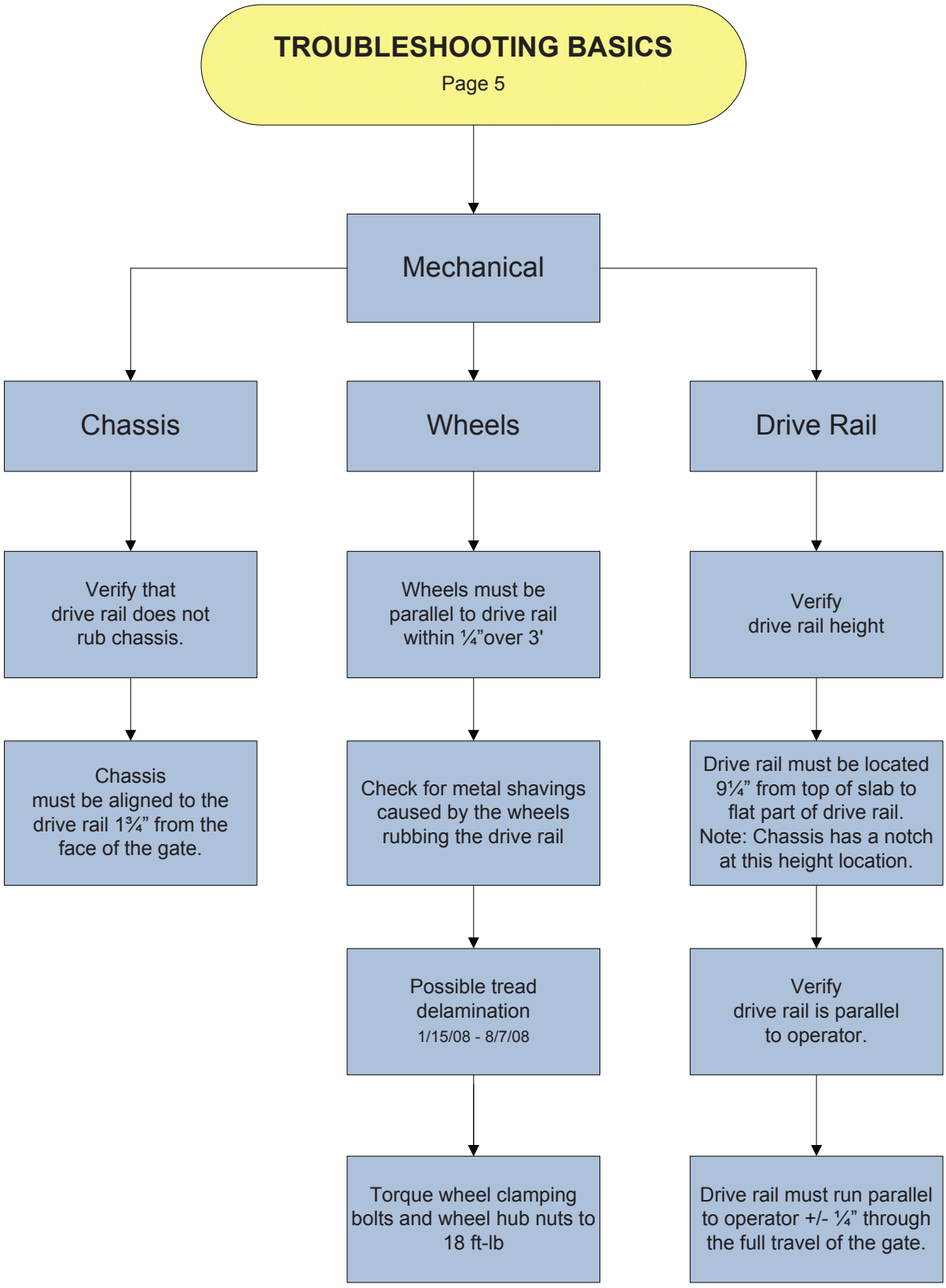
Troubleshooting Basics: Electrical Power



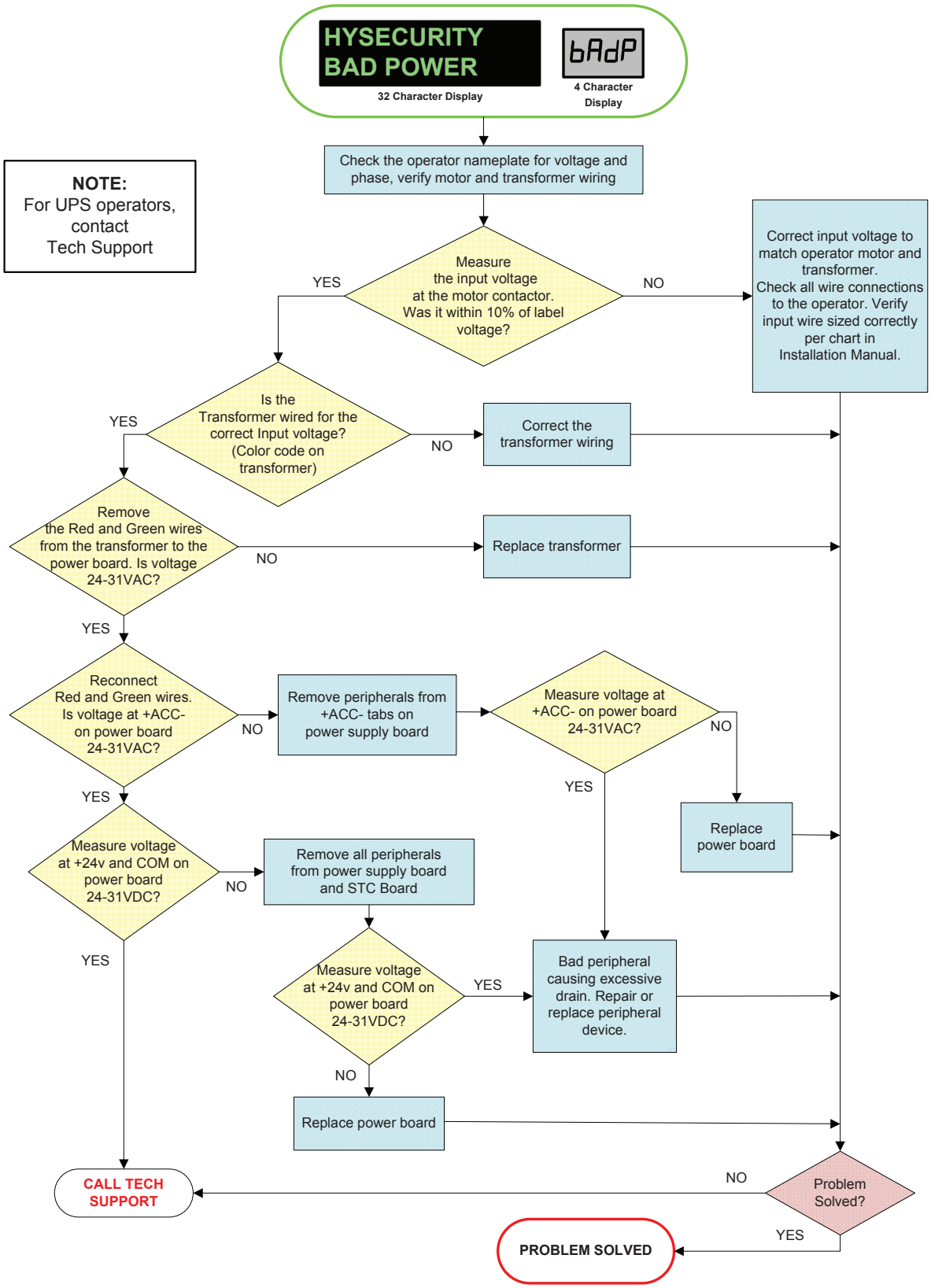
Troubleshooting Basics: Hydraulic



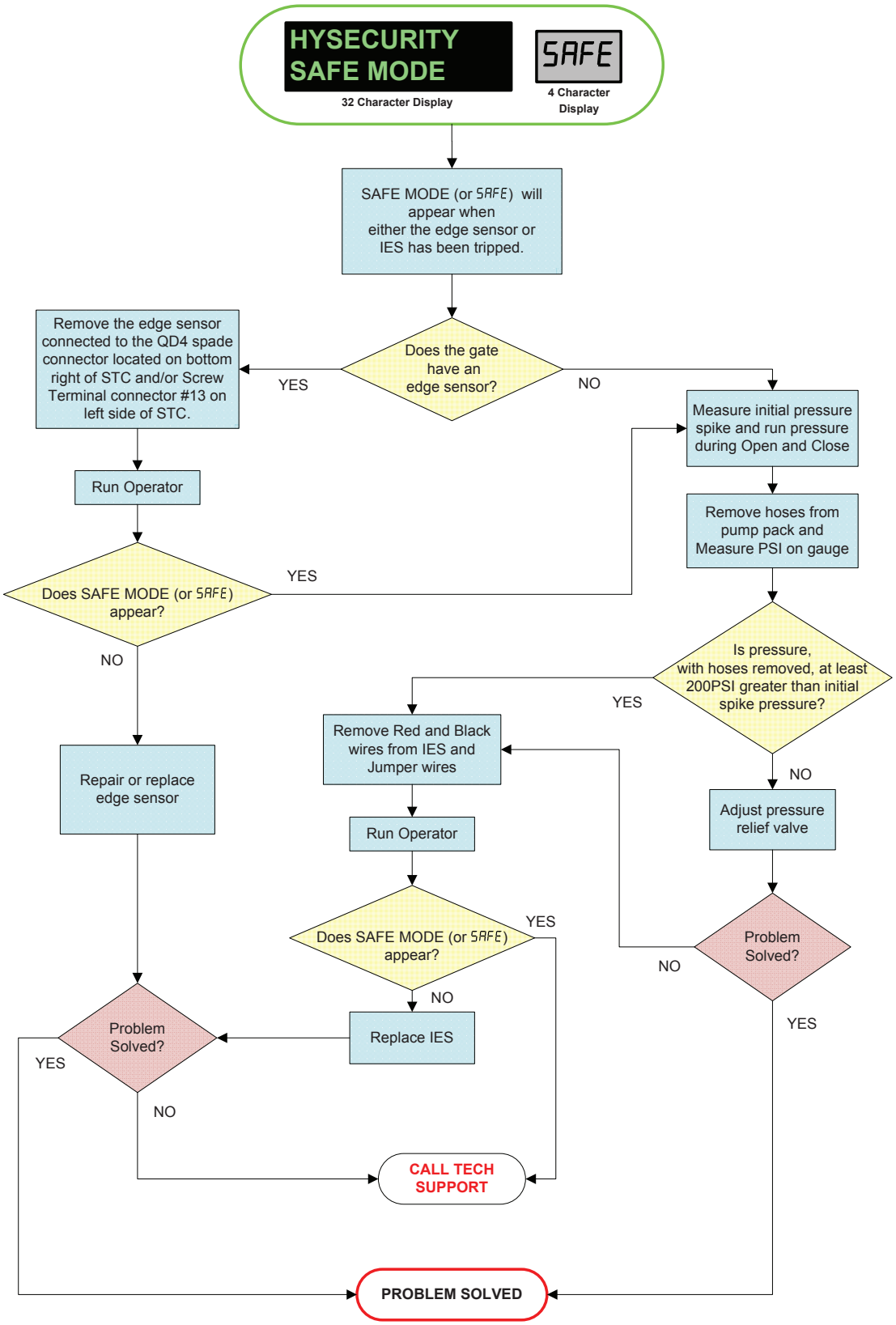
Troubleshooting Basics: Mechanical



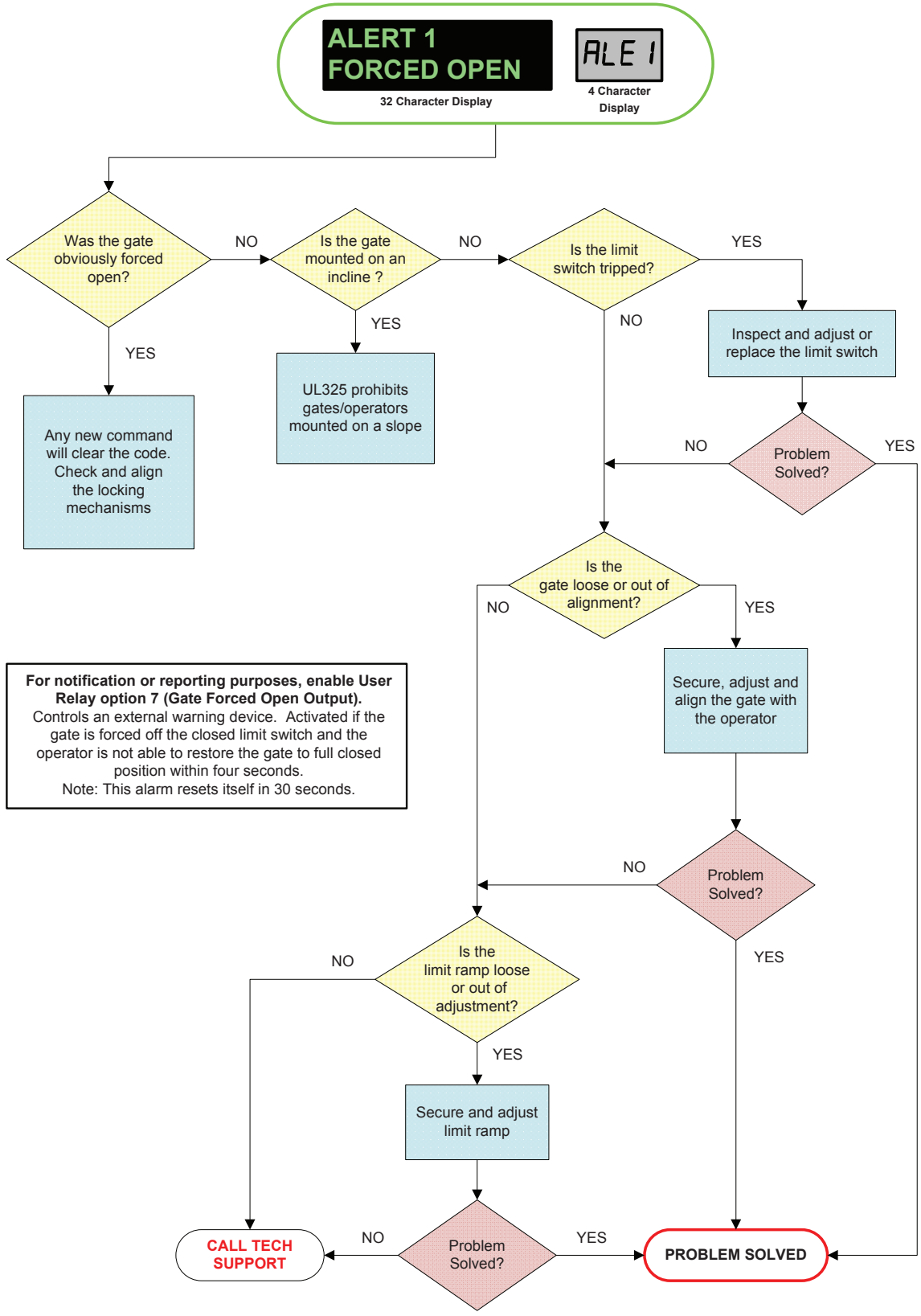
(bAdP) ALERT: CRITICAL LOW POWER



(SAFE) Alert: Safe Mode

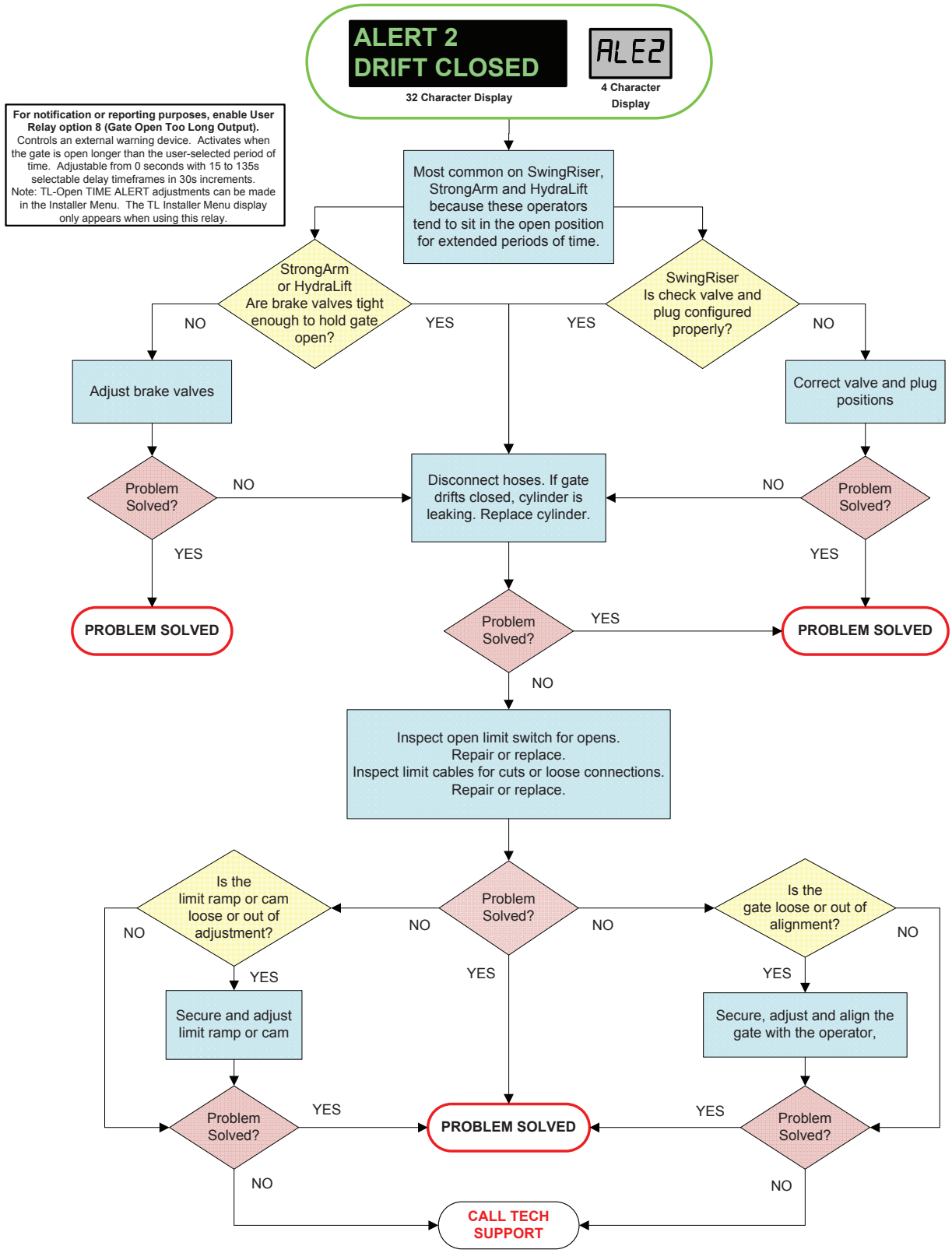


(ALE 1) Alert 1: Gate Forced Open

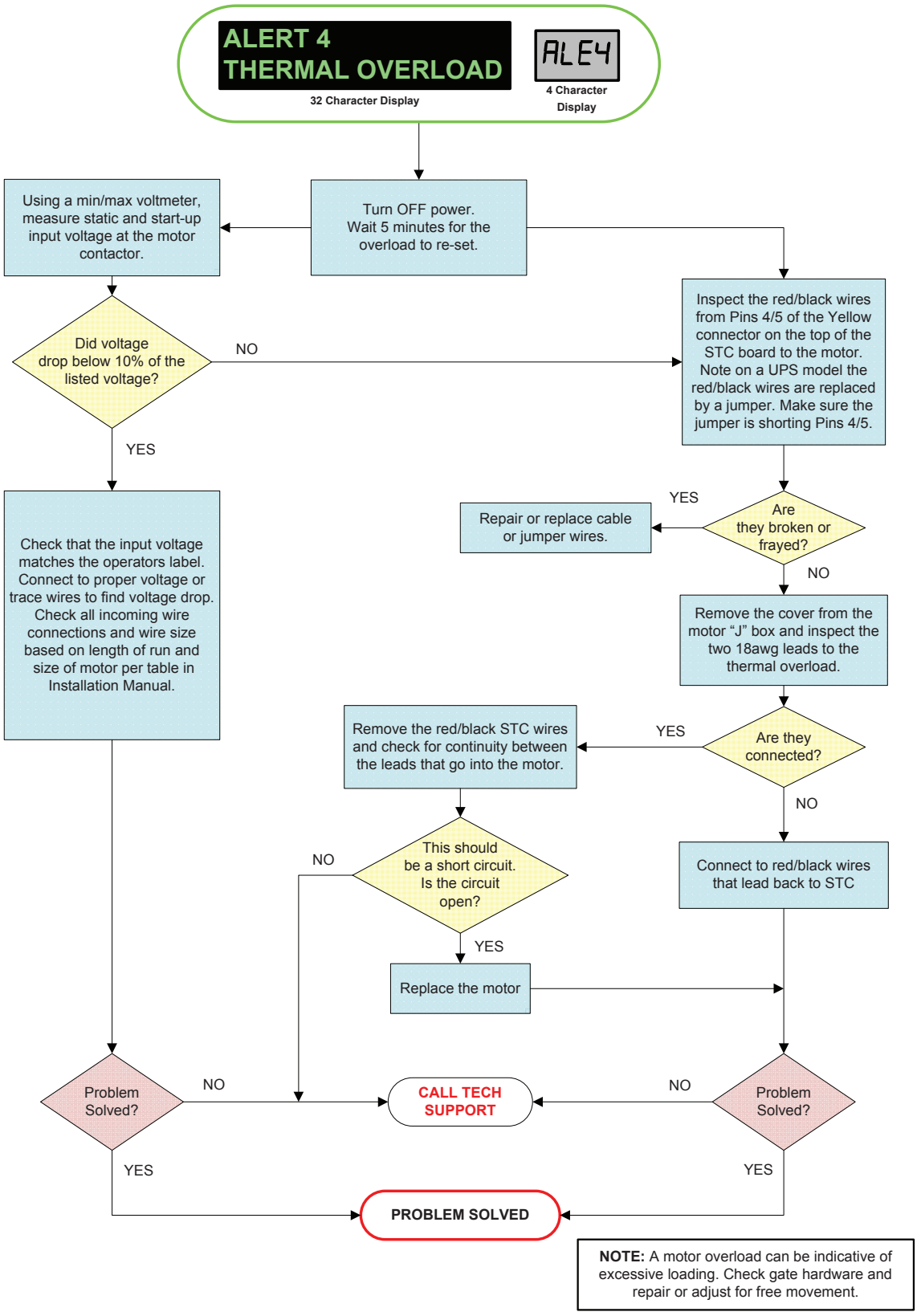


For notification or reporting purposes, enable User Relay option 7 (Gate Forced Open Output).
Controls an external warning device. Activated if the gate is forced off the closed limit switch and the operator is not able to restore the gate to full closed position within four seconds.
Note: This alarm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

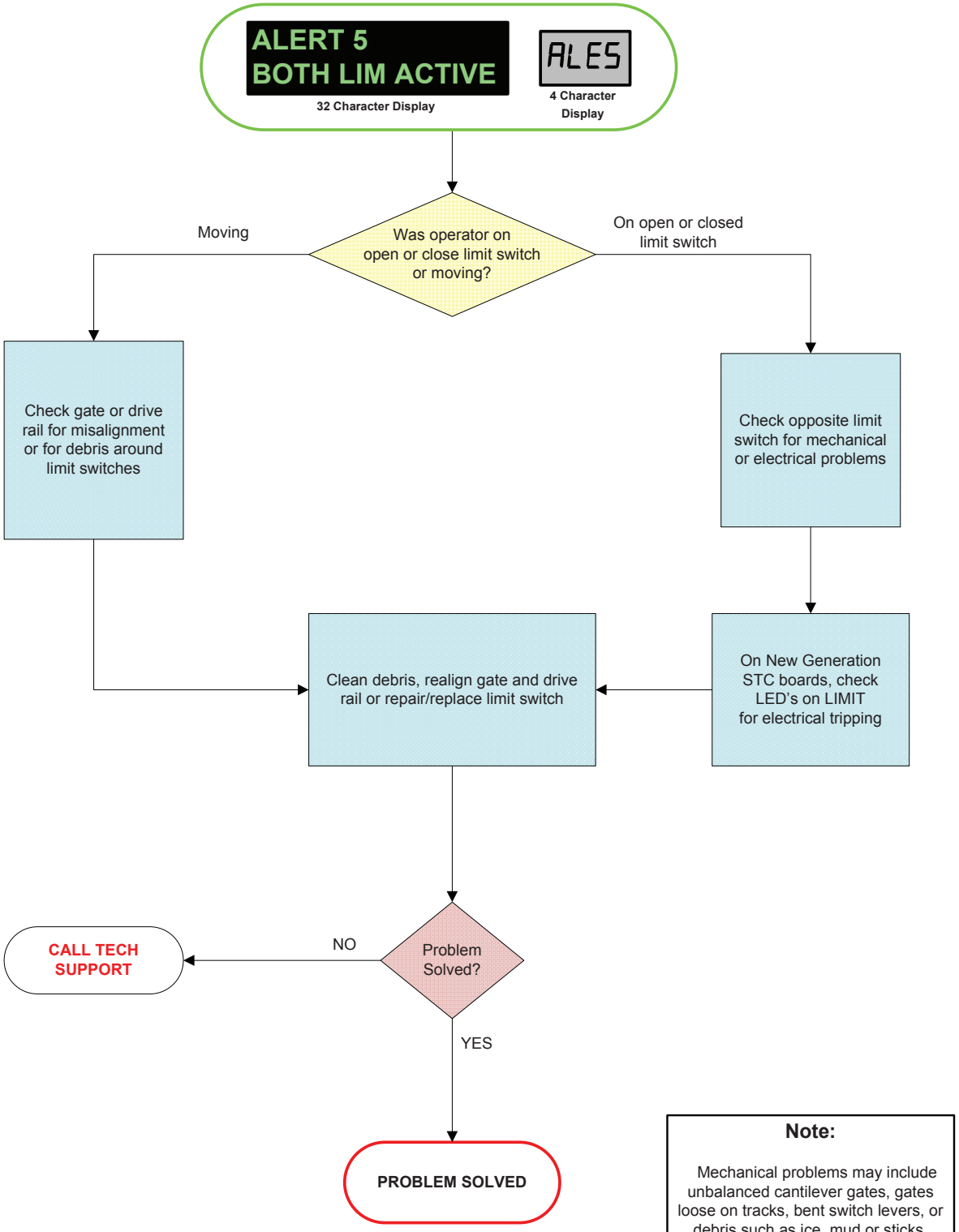
(ALE2) Alert 2: Gate Drift Close



(ALE4) ALERT 4: THERMAL OVERLOAD



(ALES) Alert 5: Both Limit Active

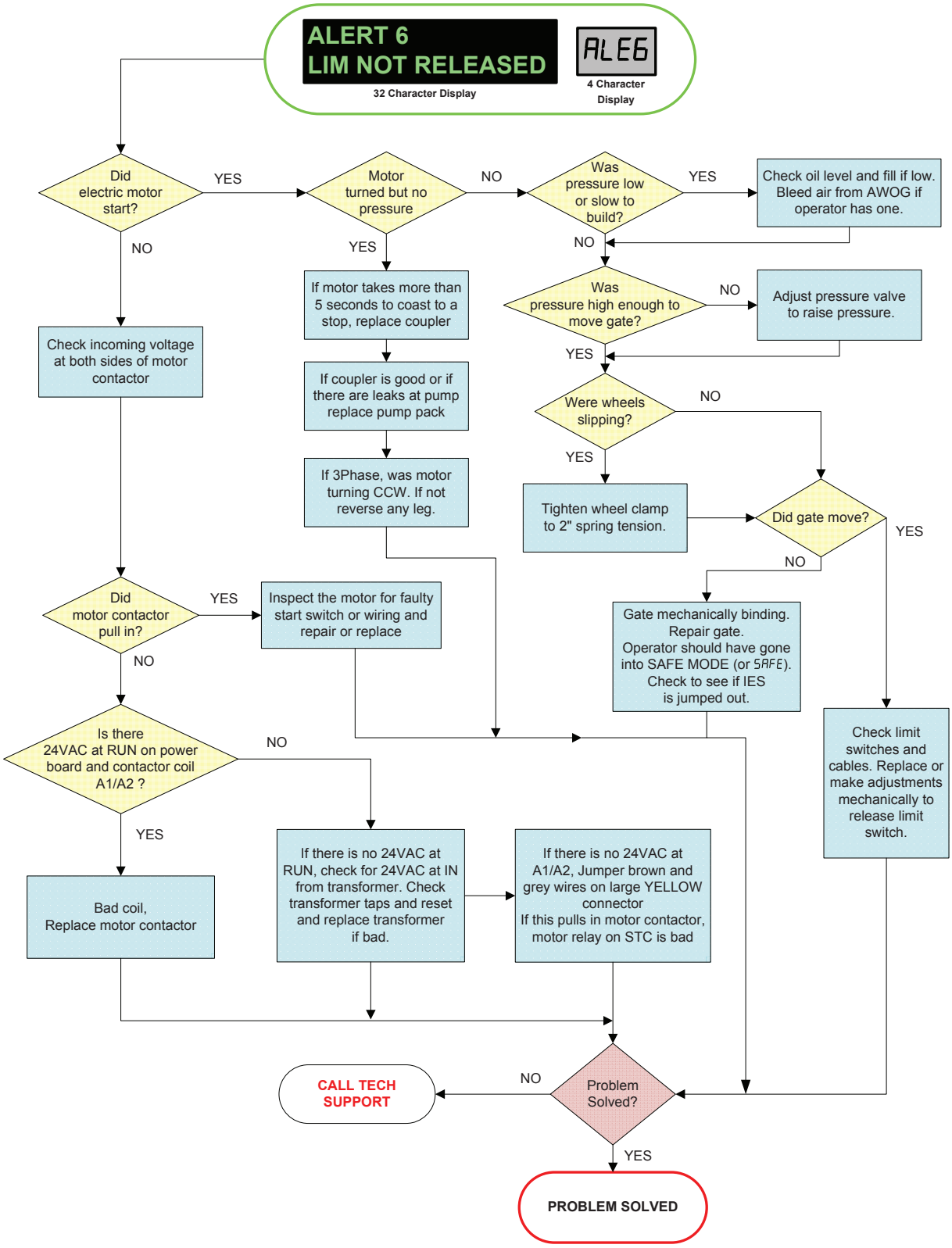


Note:

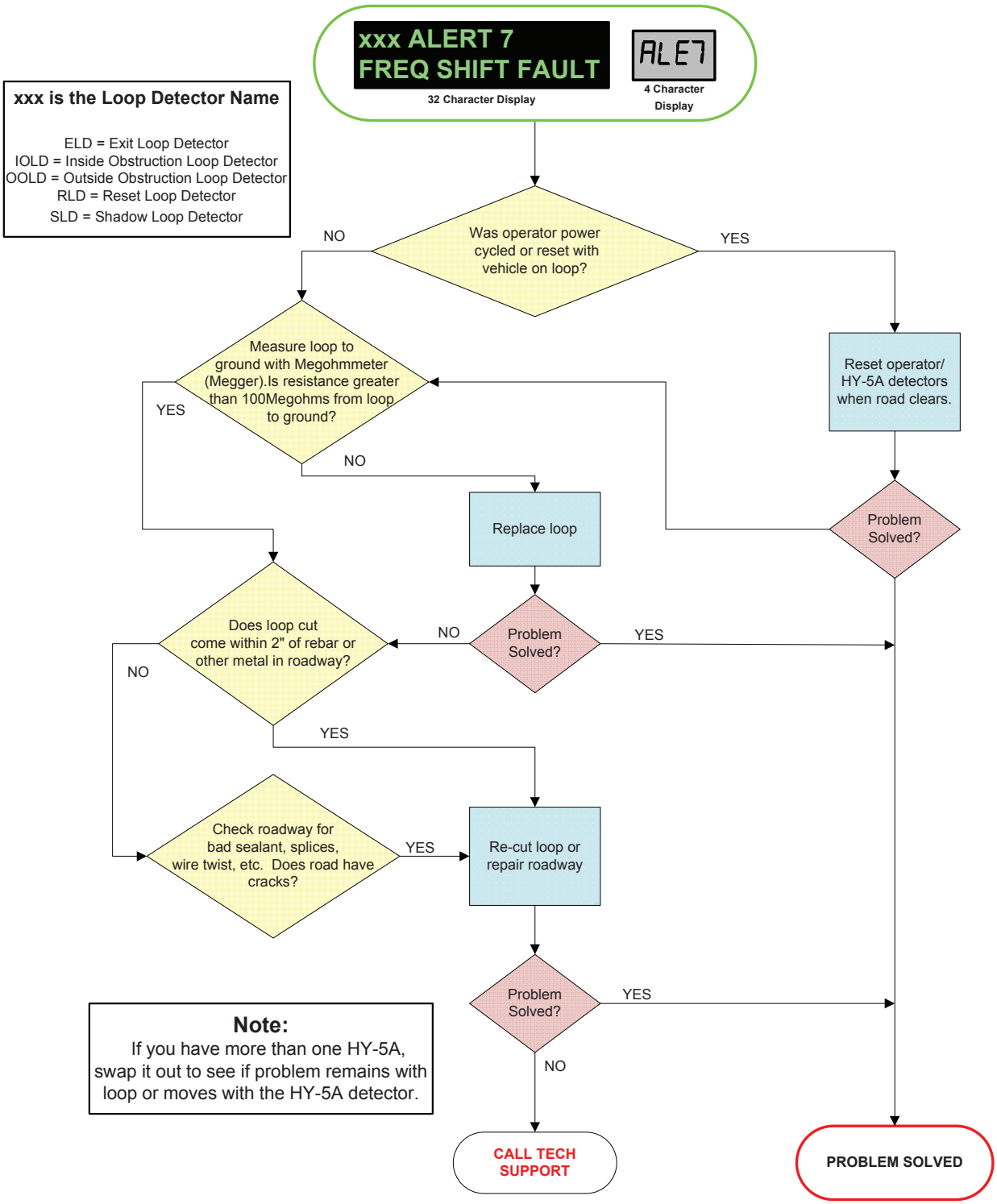
Mechanical problems may include unbalanced cantilever gates, gates loose on tracks, bent switch levers, or debris such as ice, mud or sticks.

Electrical problems may include open limit switches, cut cables or loose connections.

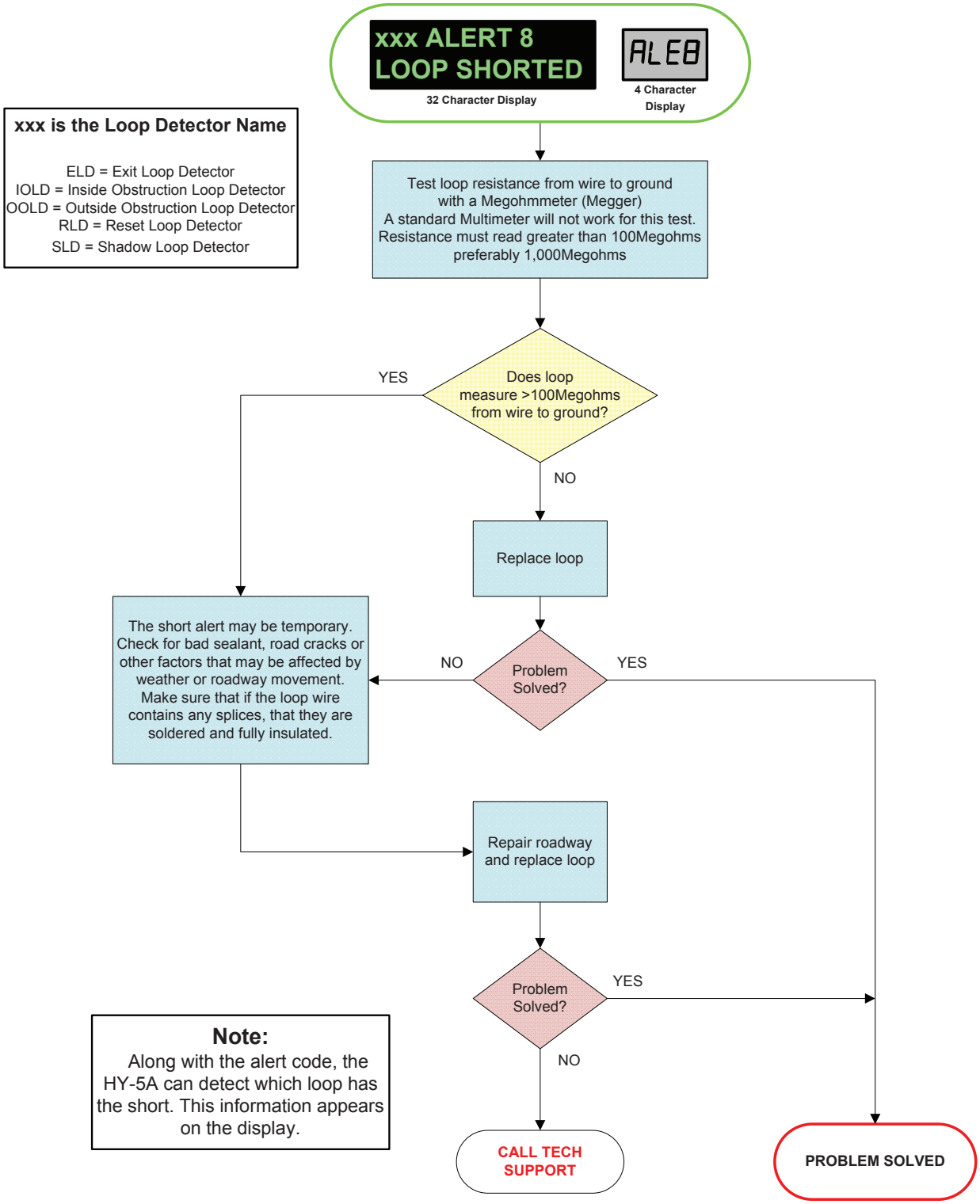
(ALE6) Alert 6: Limit Not Released



(ALE7) Alert 7: Frequency Shift Fault

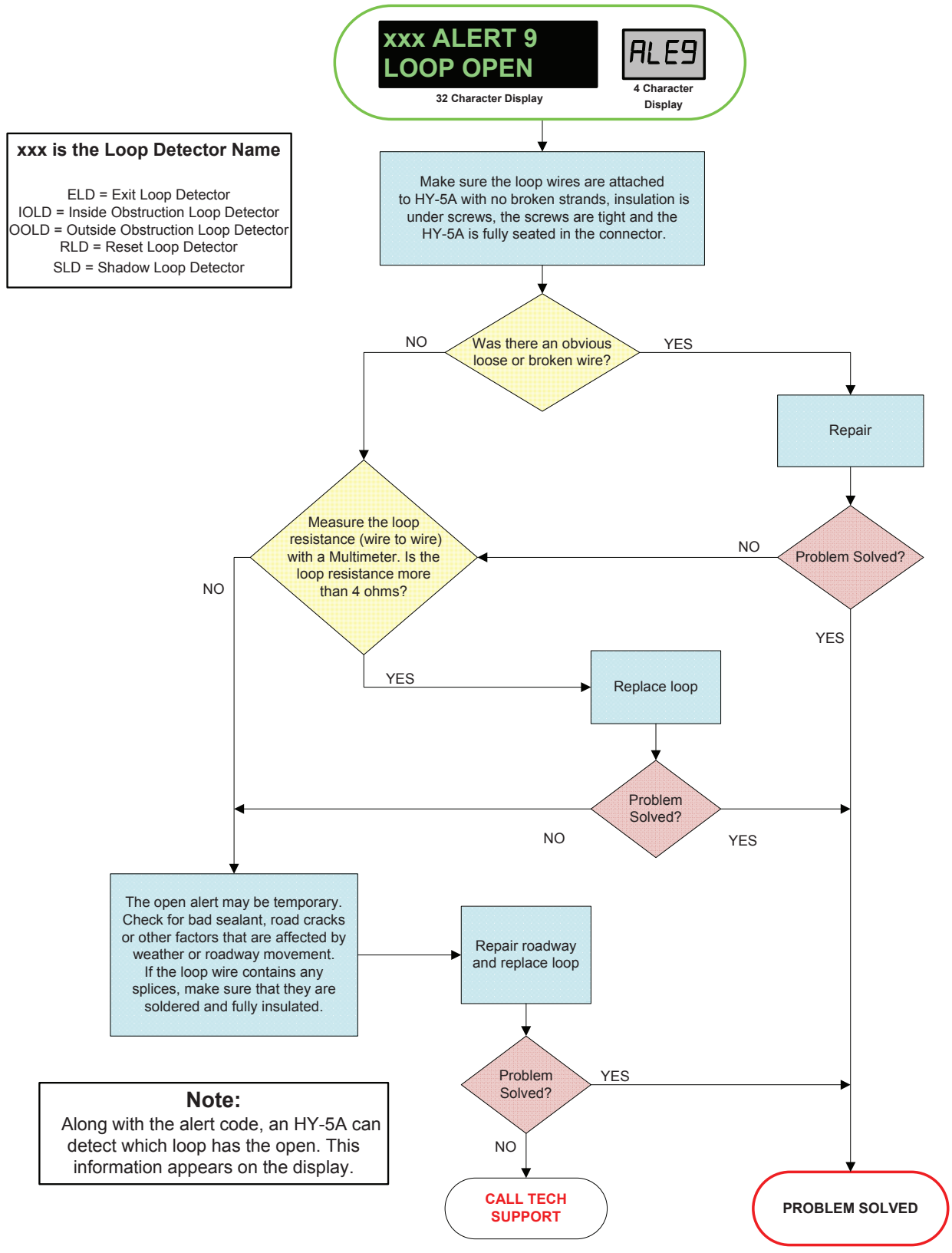


(ALE8) Alert 8: Loop Shorted

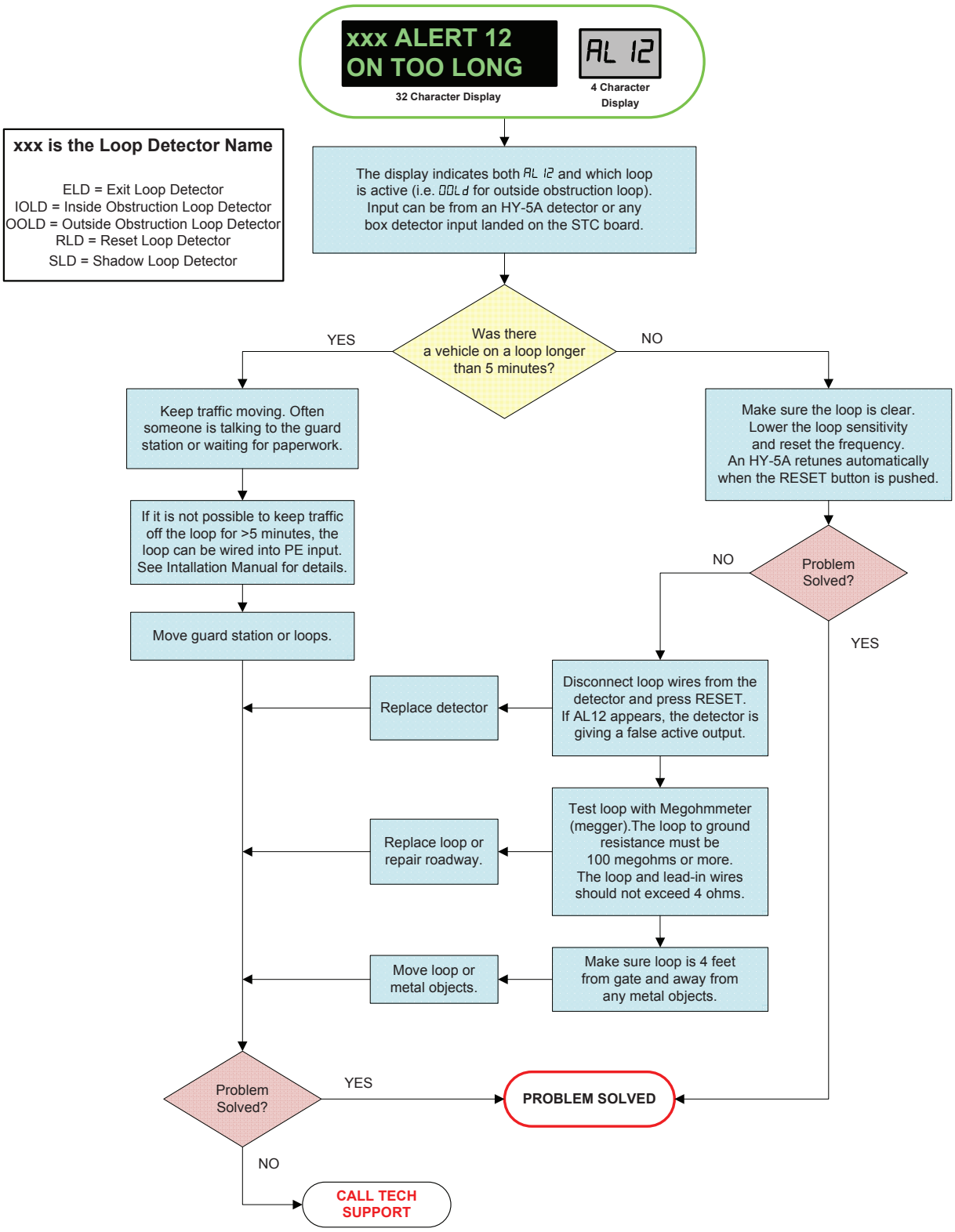


Note:
Along with the alert code, the HY-5A can detect which loop has the short. This information appears on the display.

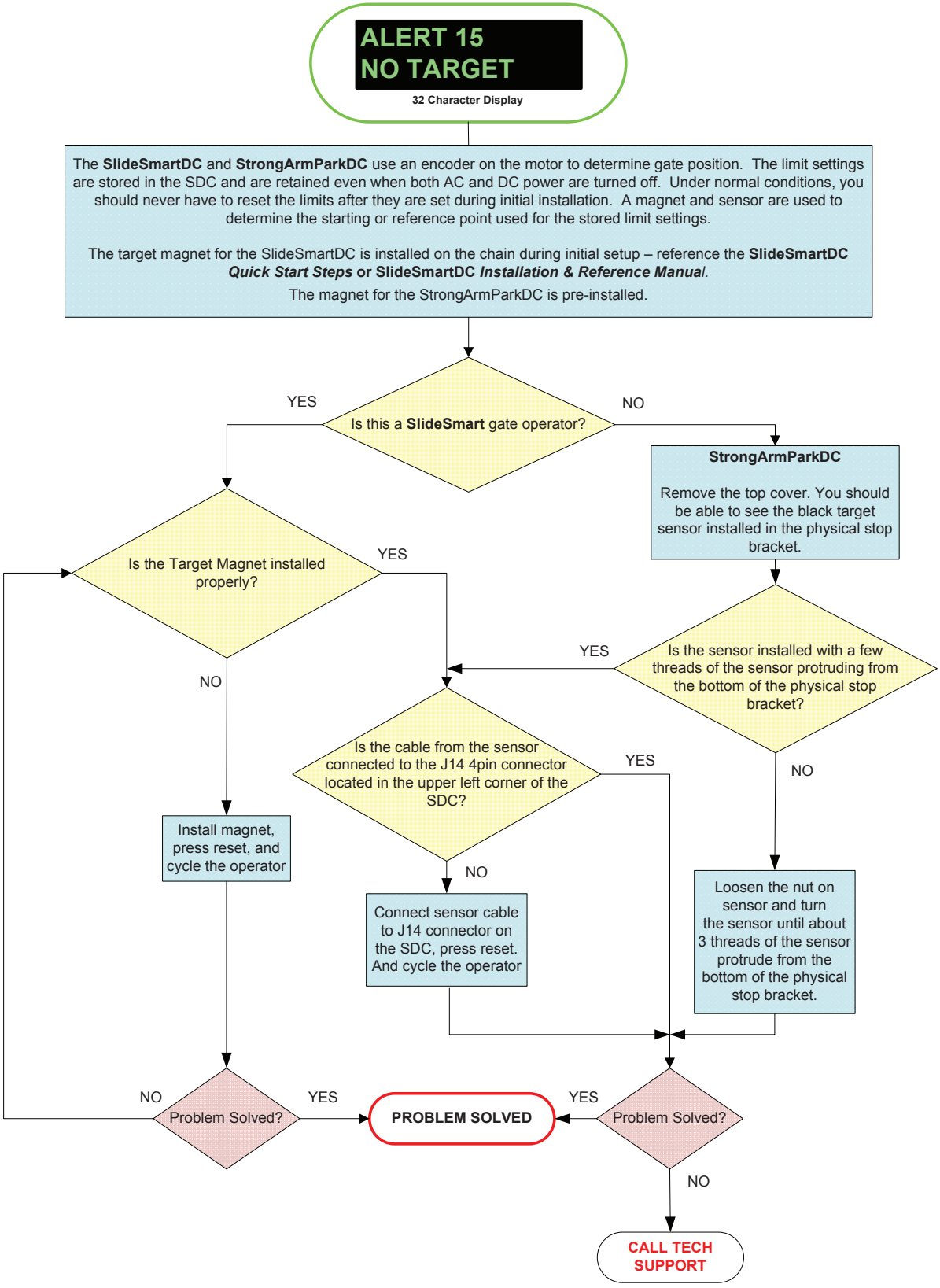
(ALE9) Alert 9: Loop Open



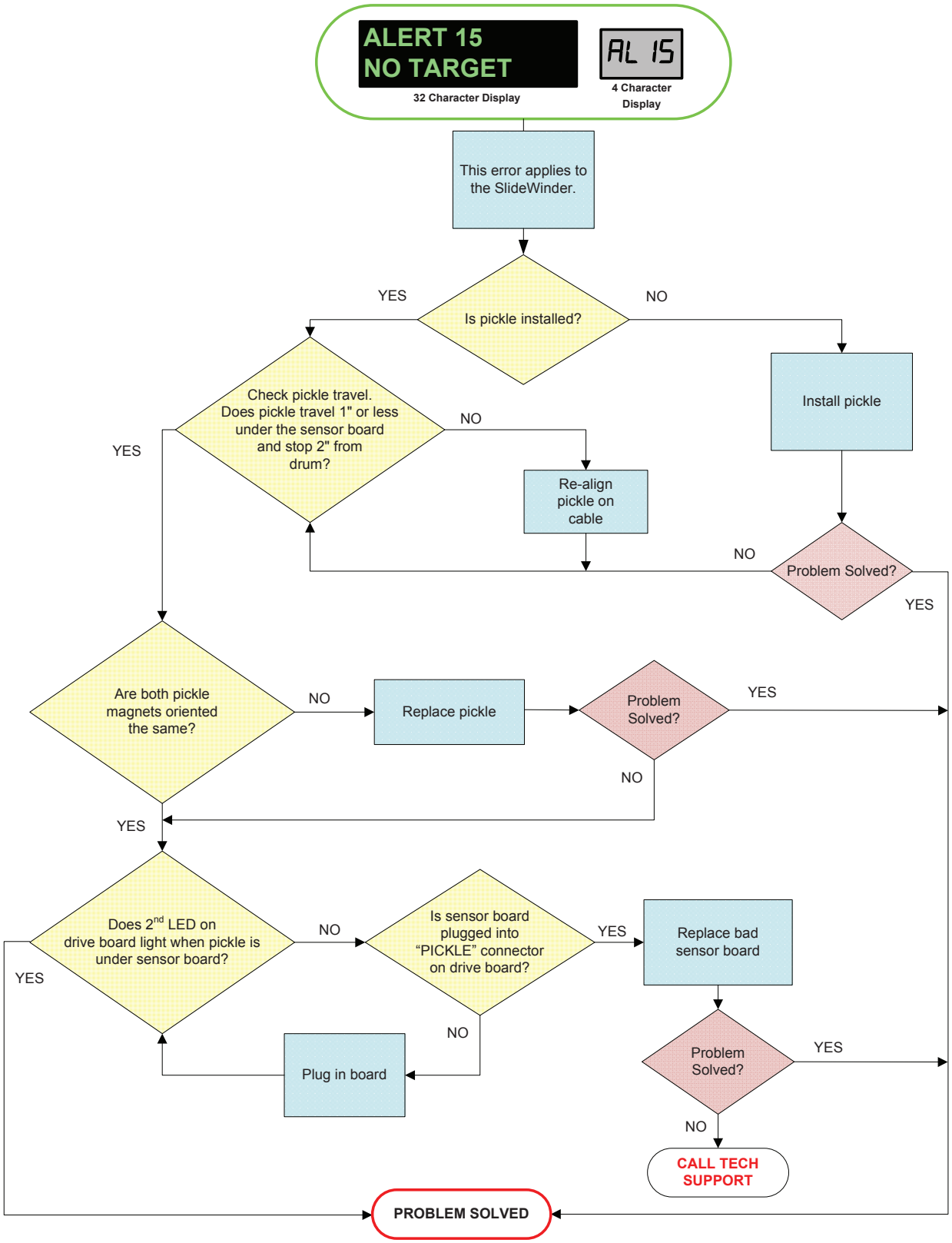
(AL 12) ALERT 12: ON TOO LONG



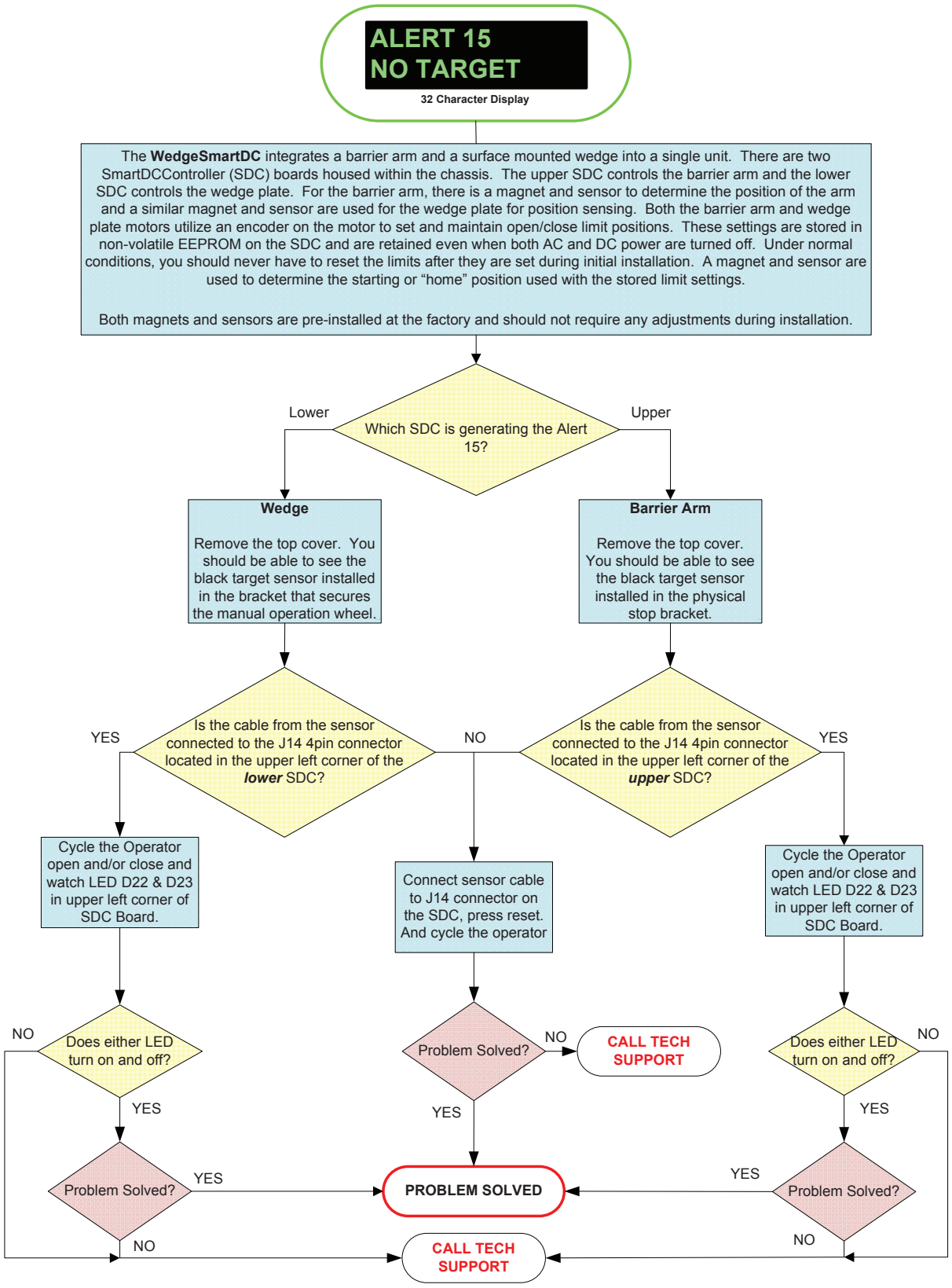
ALERT 15: NO TARGET (SLIDESMART & SAPARK DC)



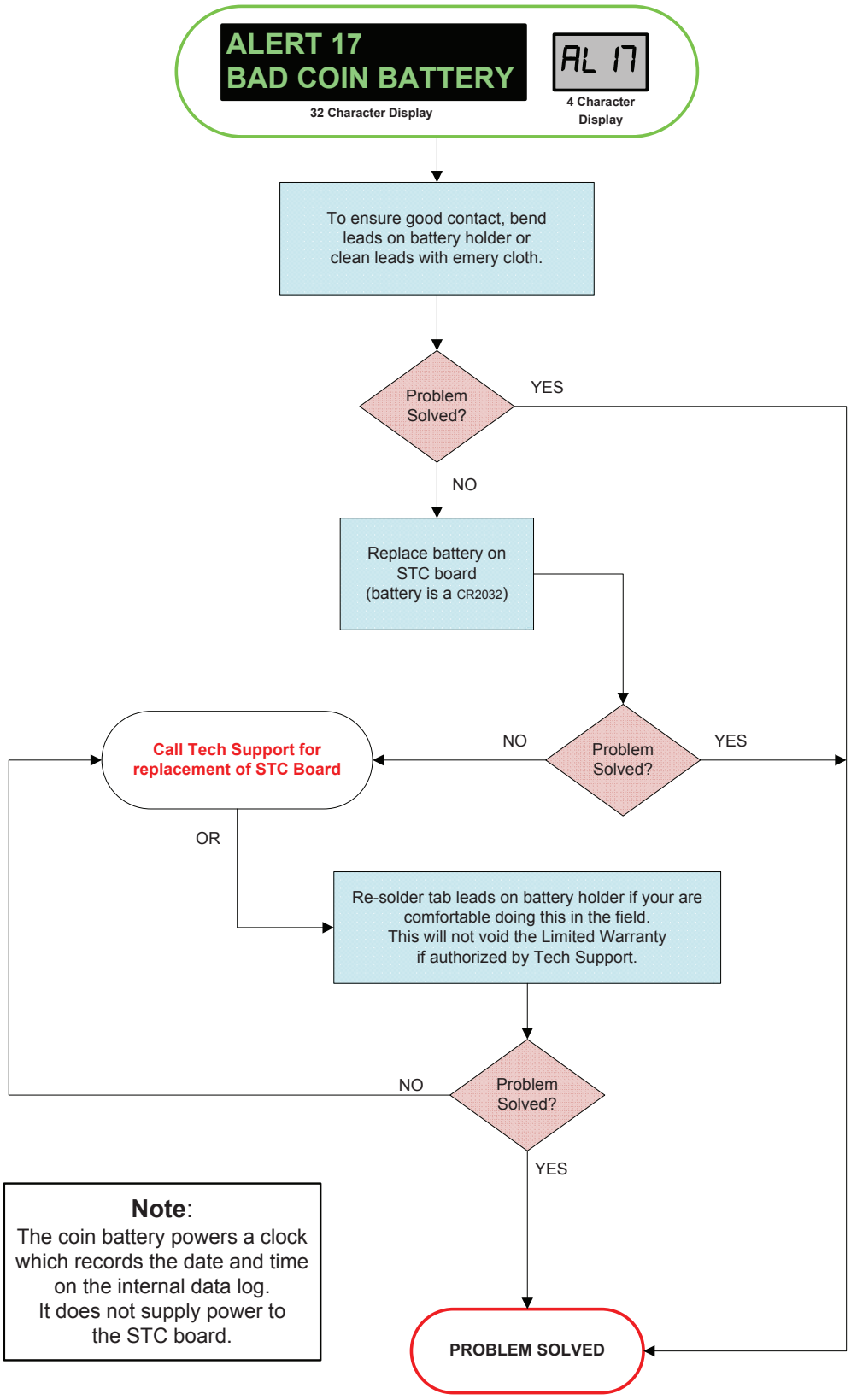
(AL 15) Alert 15: Missing Limit (SlideWinder)



Alert 15: No Target (WedgeSmart DC)

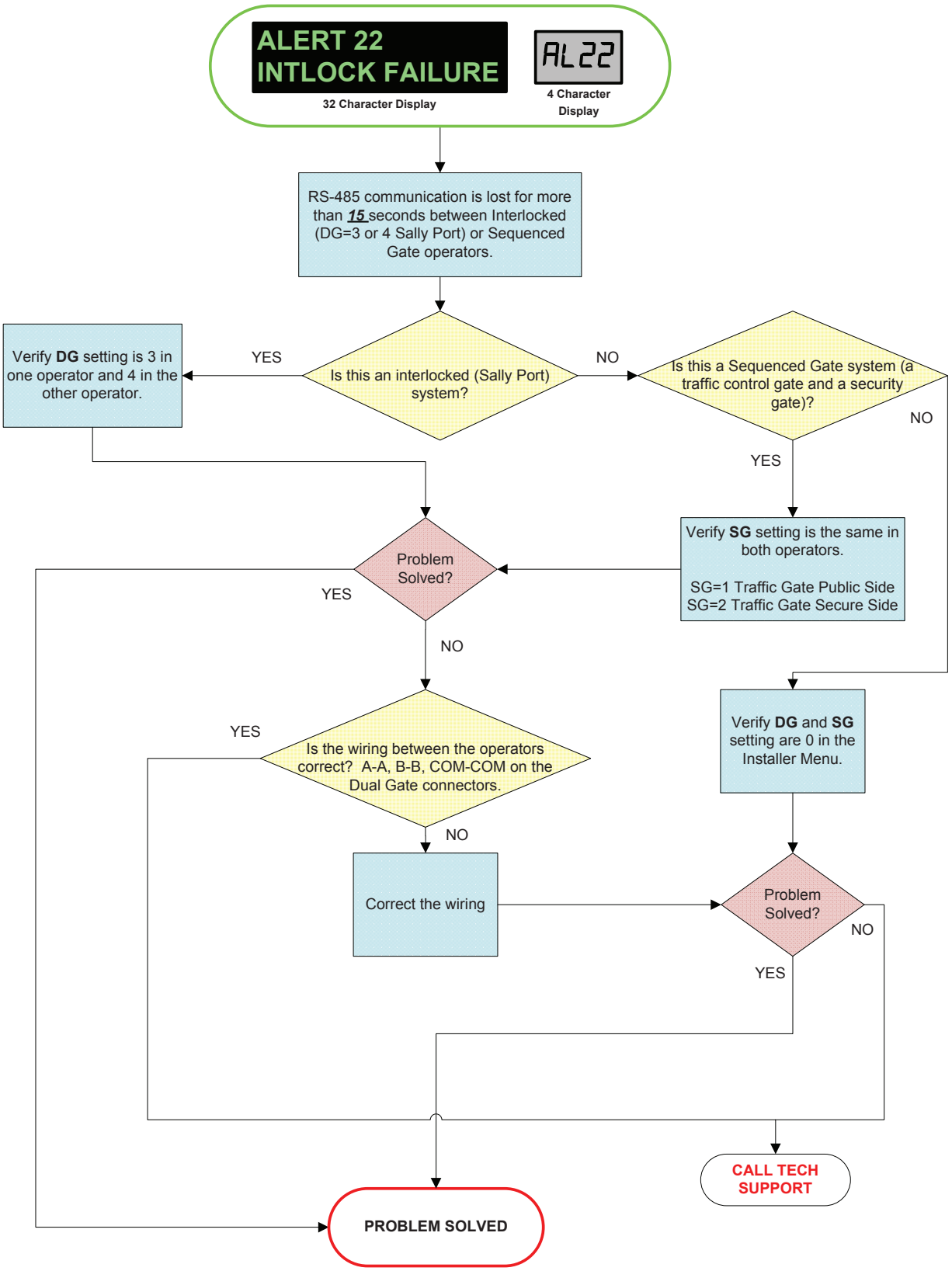


(AL 17) Alert 17: Bad Coin Battery

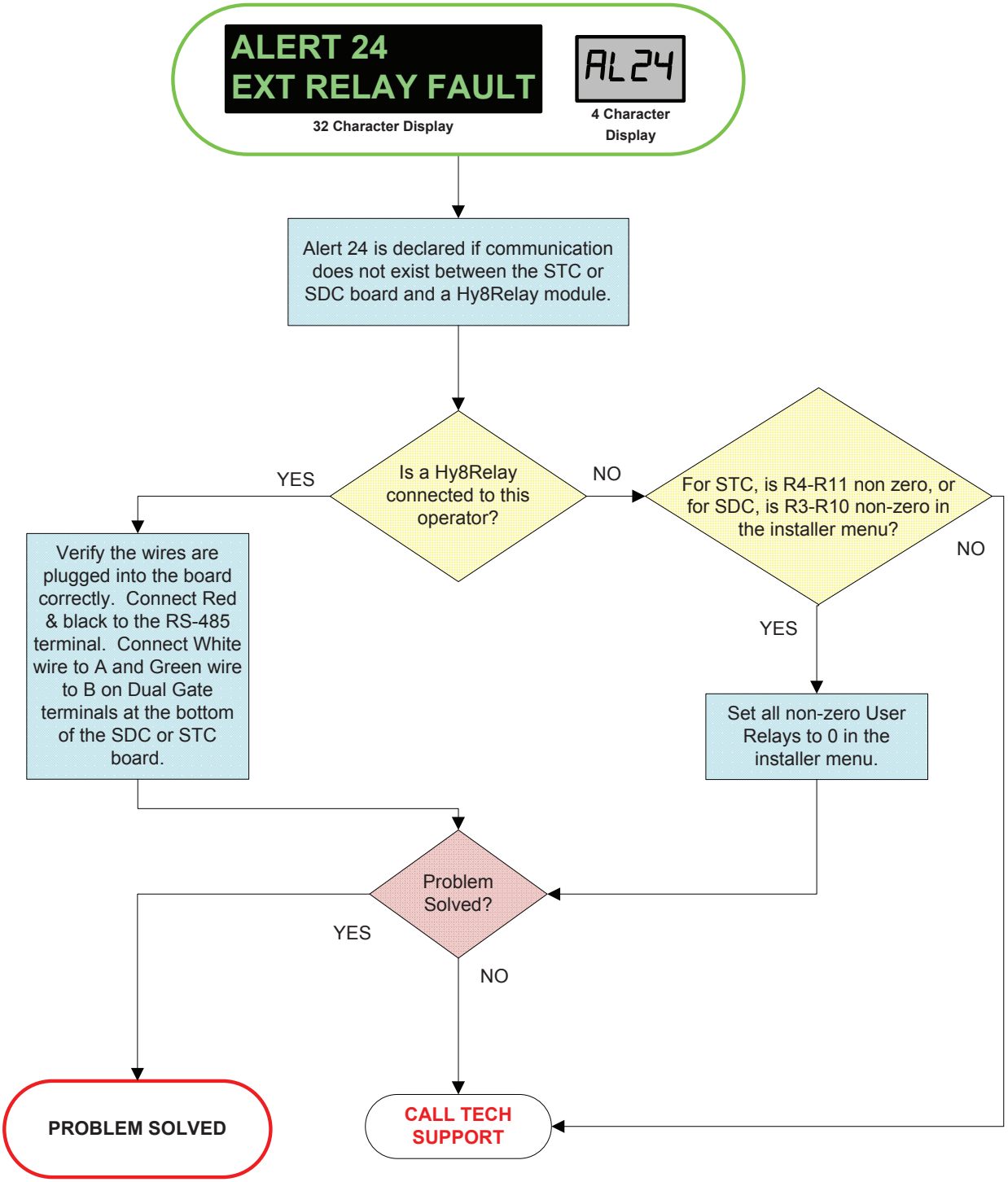


Note:
The coin battery powers a clock which records the date and time on the internal data log.
It does not supply power to the STC board.

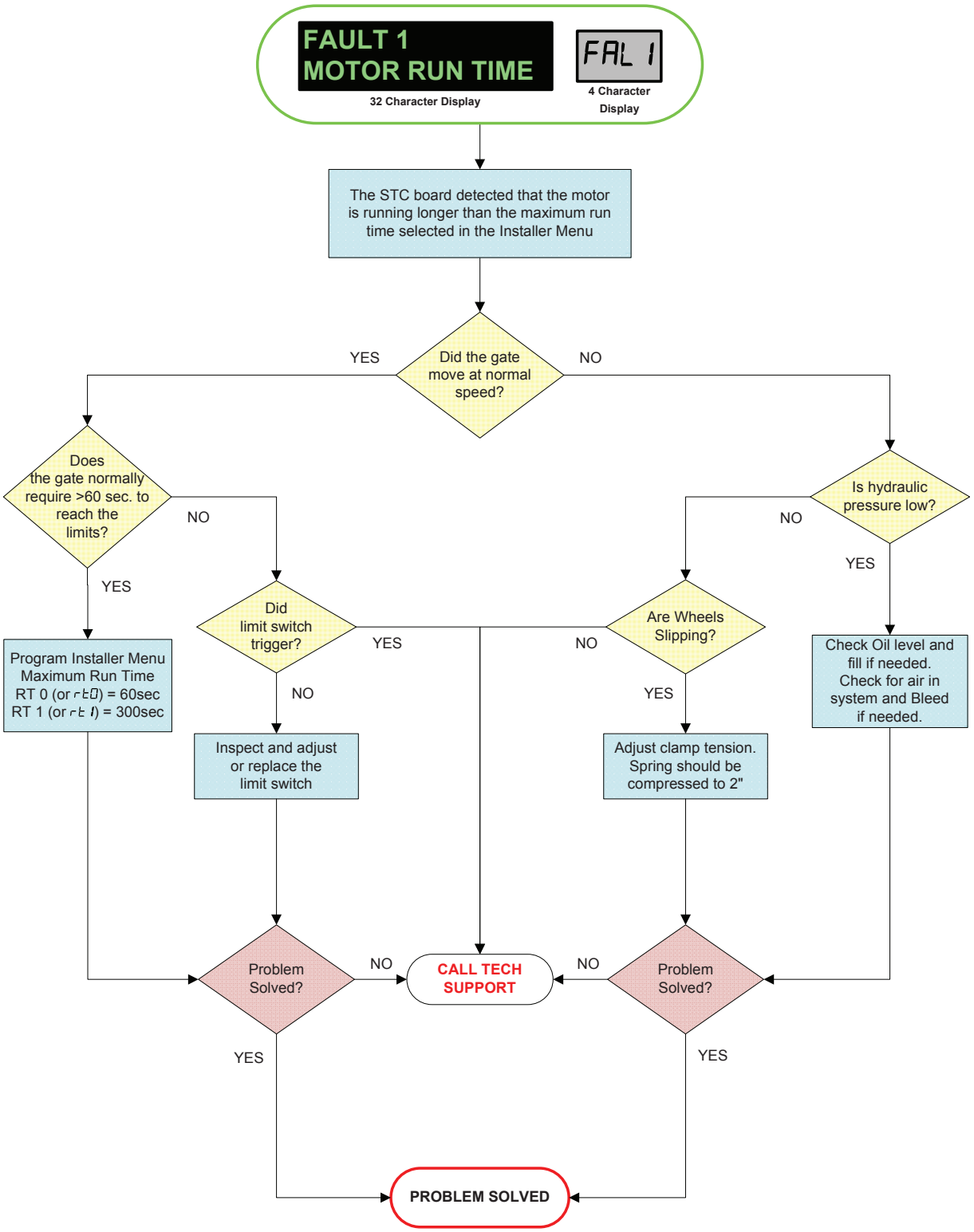
(AL22) Alert 22: Interlock Failure



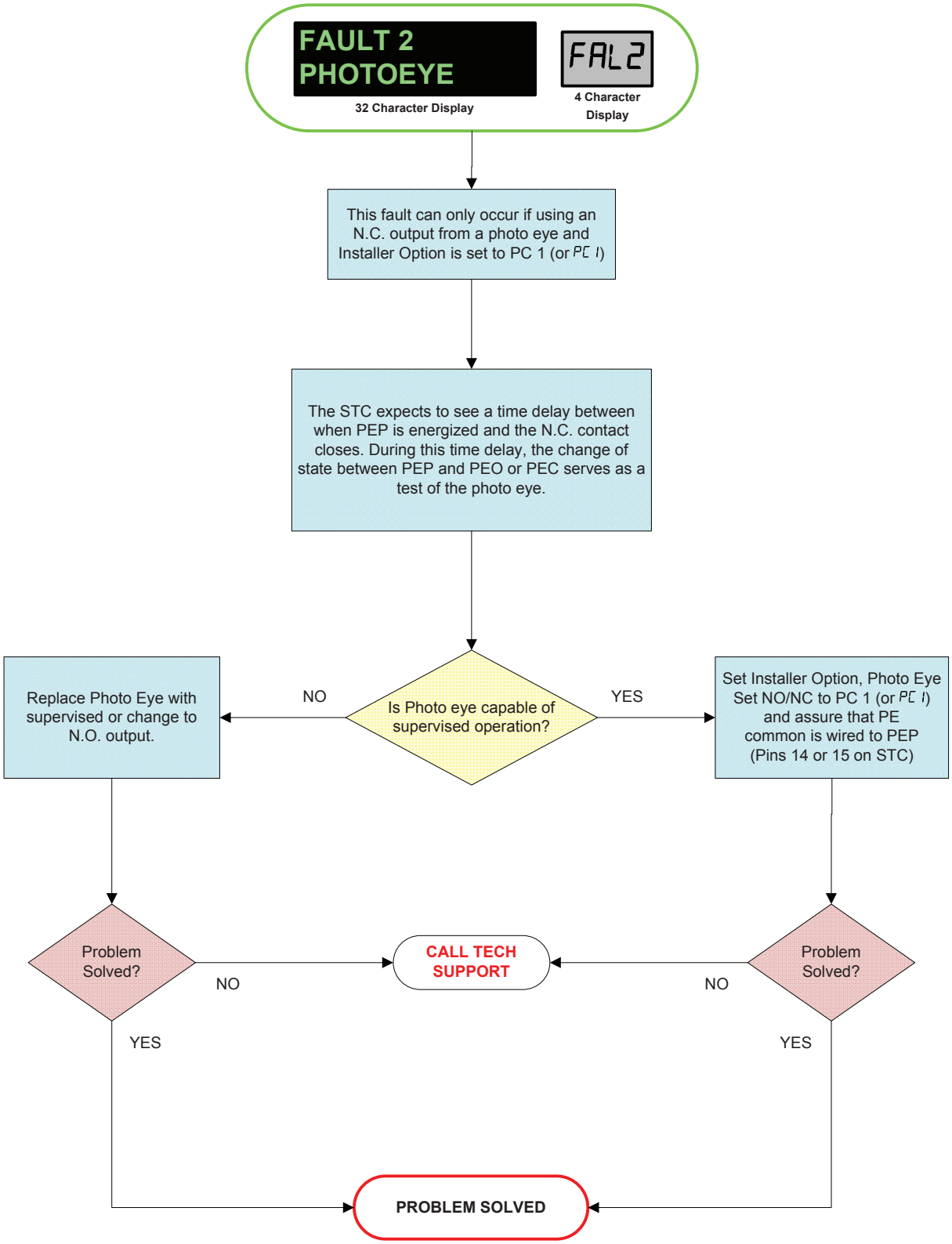
(AL24) Alert 24: External Relay Fault



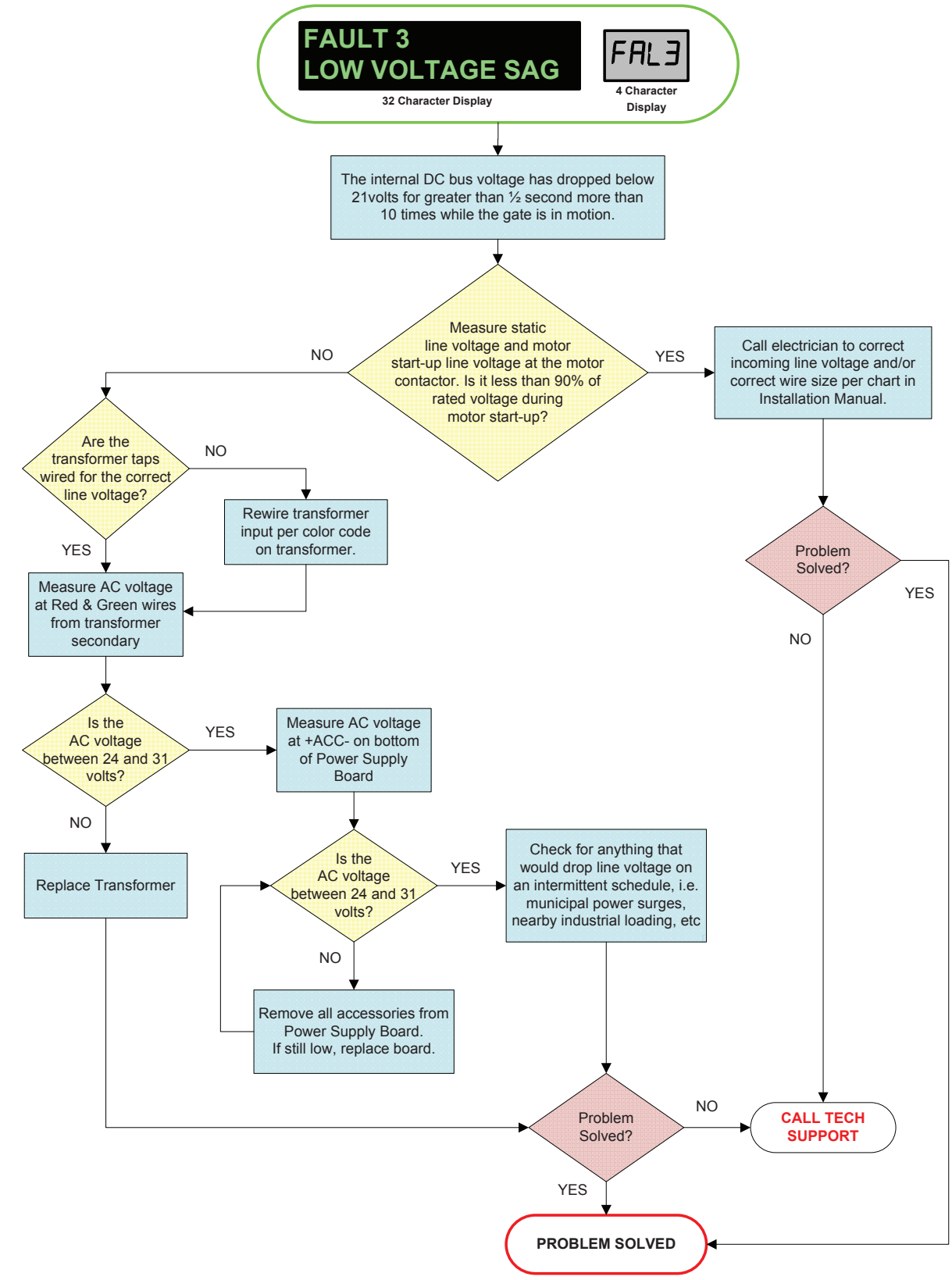
(FAL 1) Fault 1: Motor Run Time



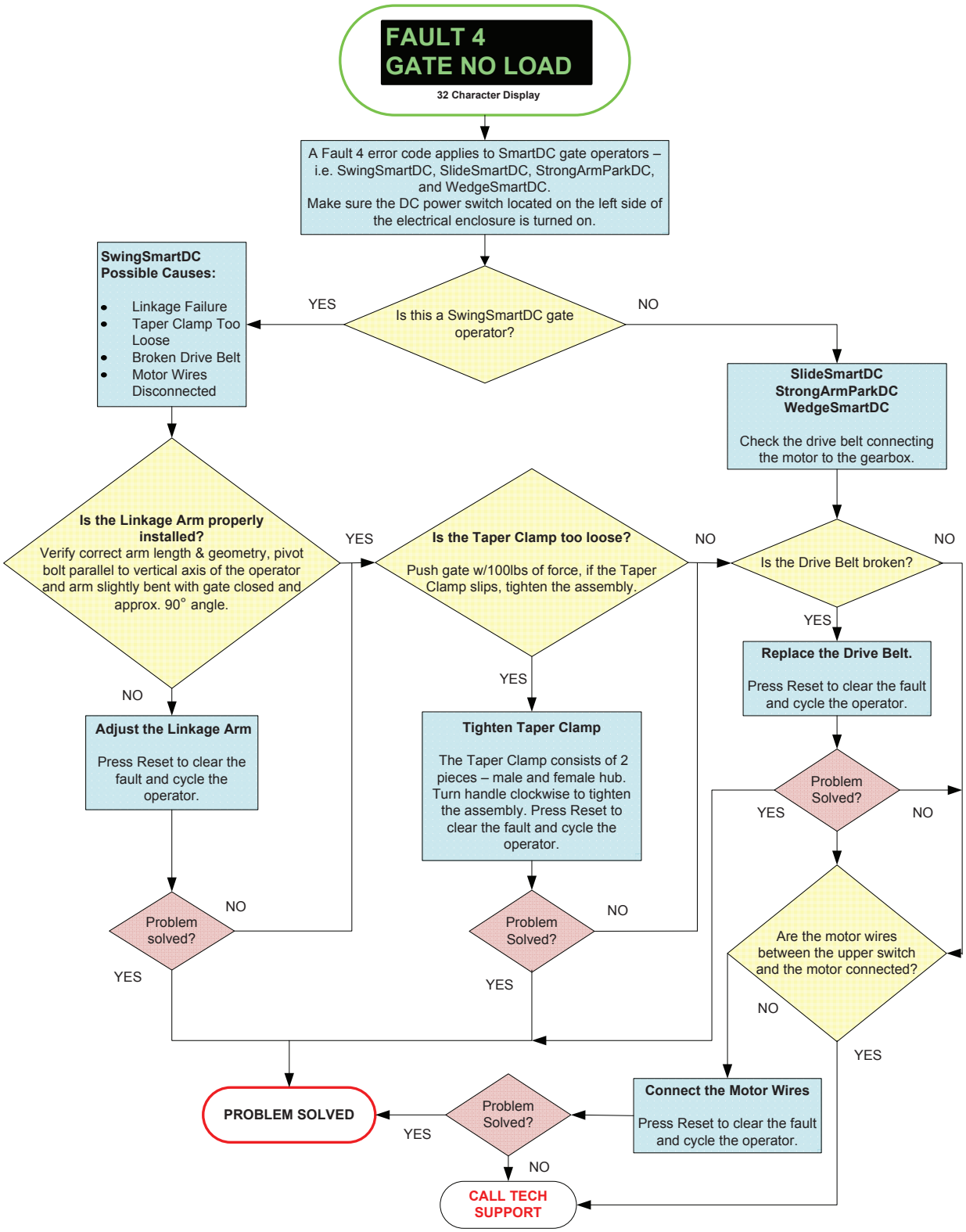
(FAL2) Fault 2: Photo Eye



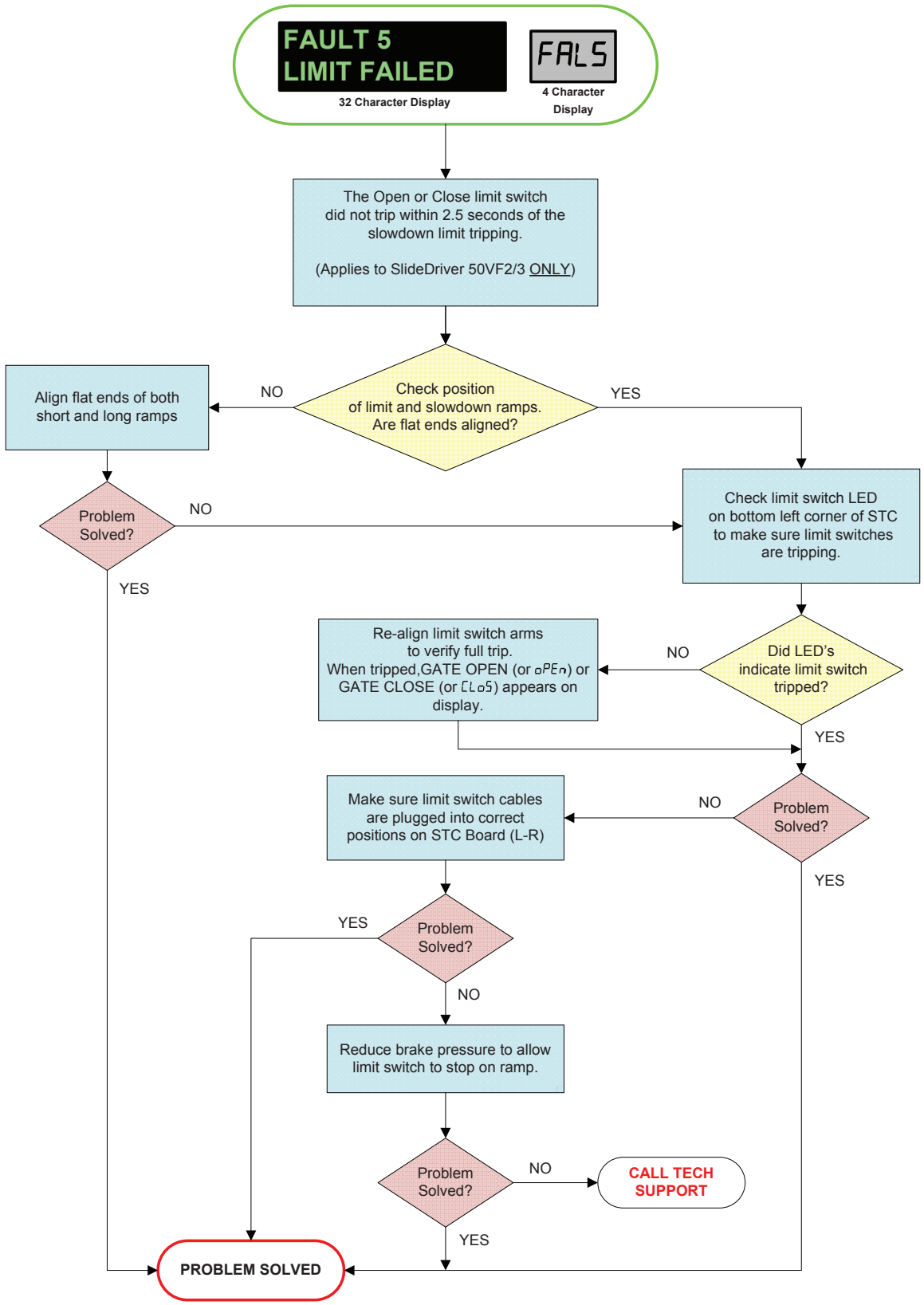
(FAL3) Fault 3: Low Voltage Sag



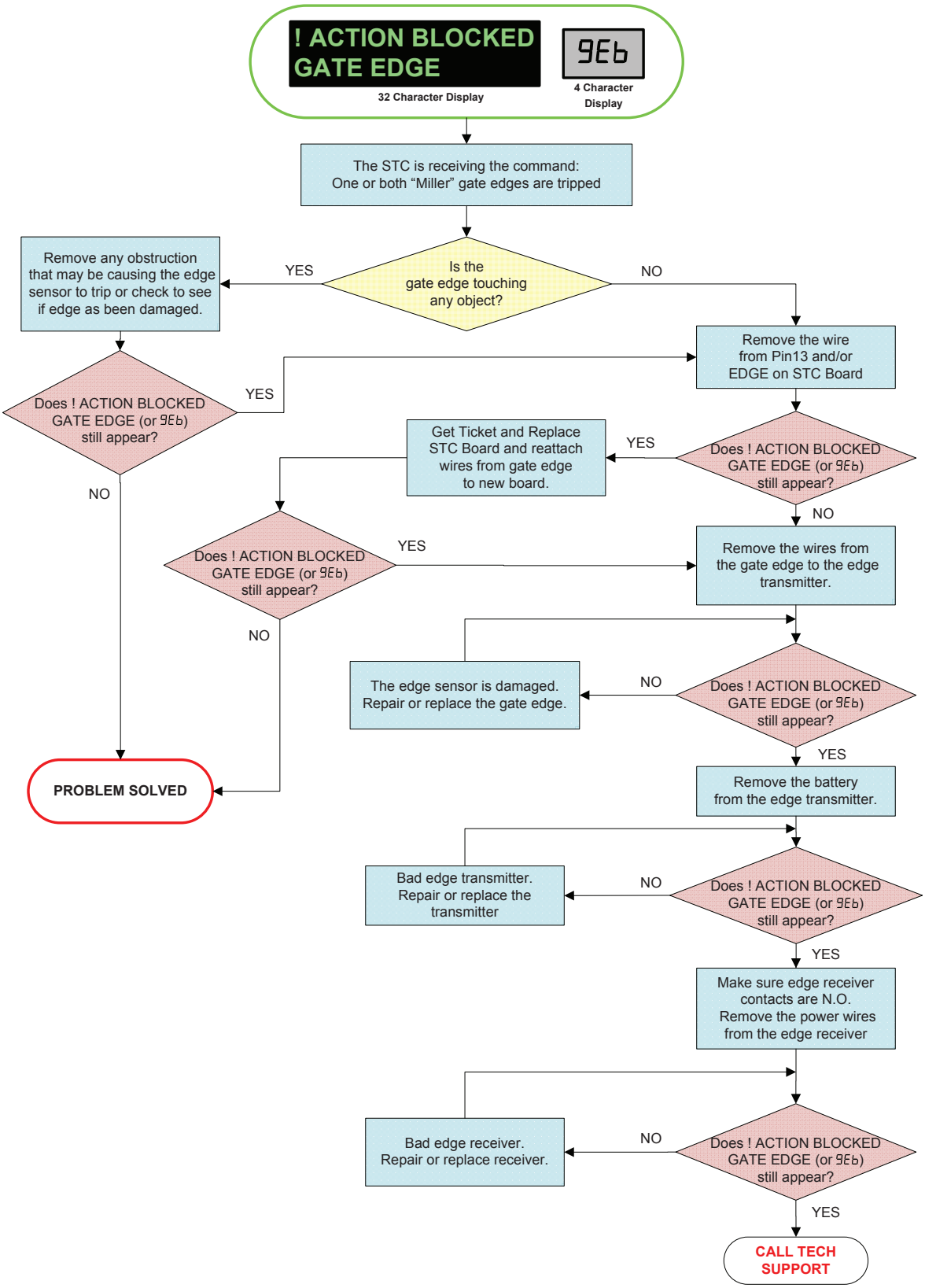
Fault 4: Gate No Load (Smart DC)



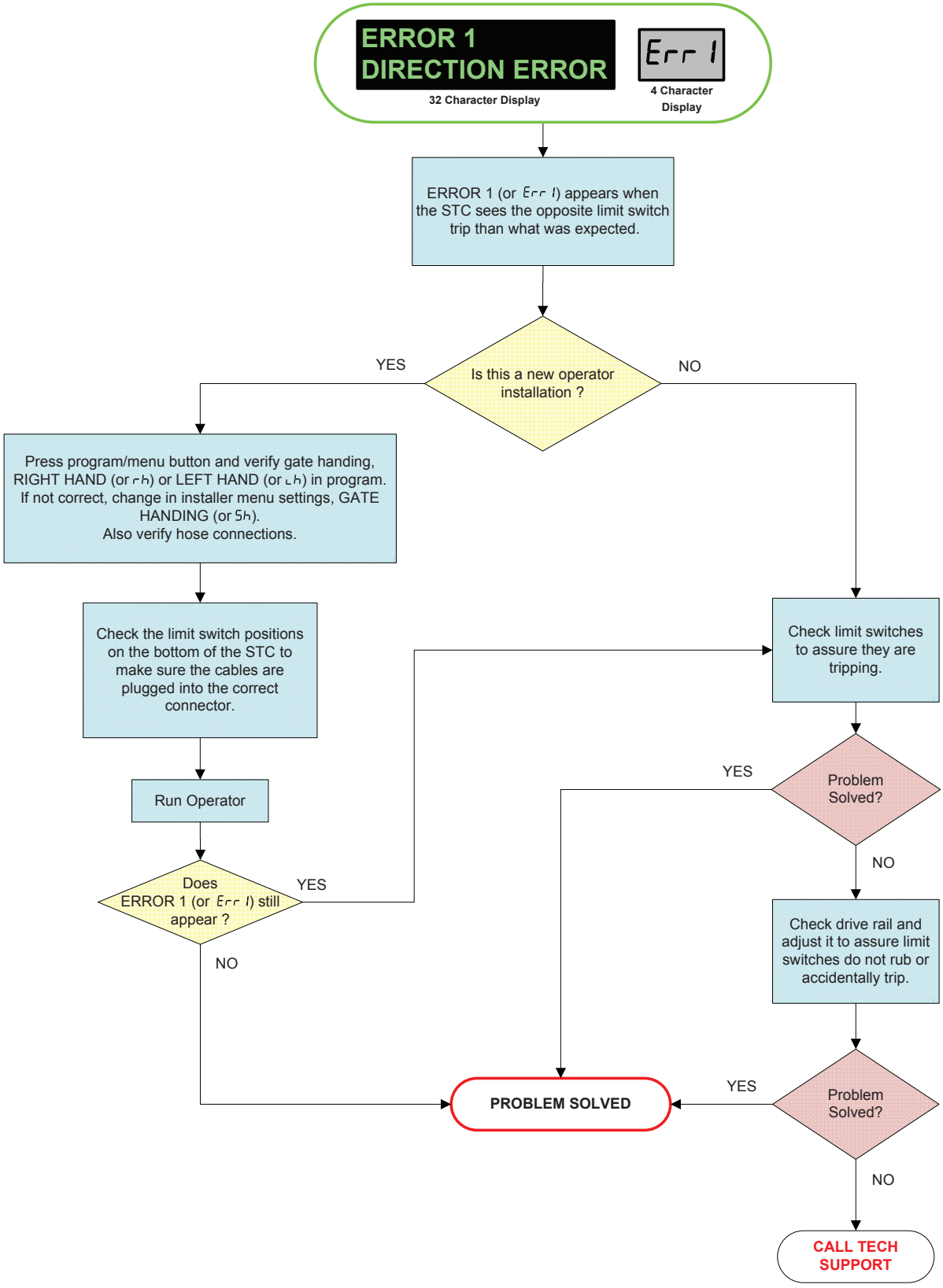
(FAL5) Fault 5: Limit Failed



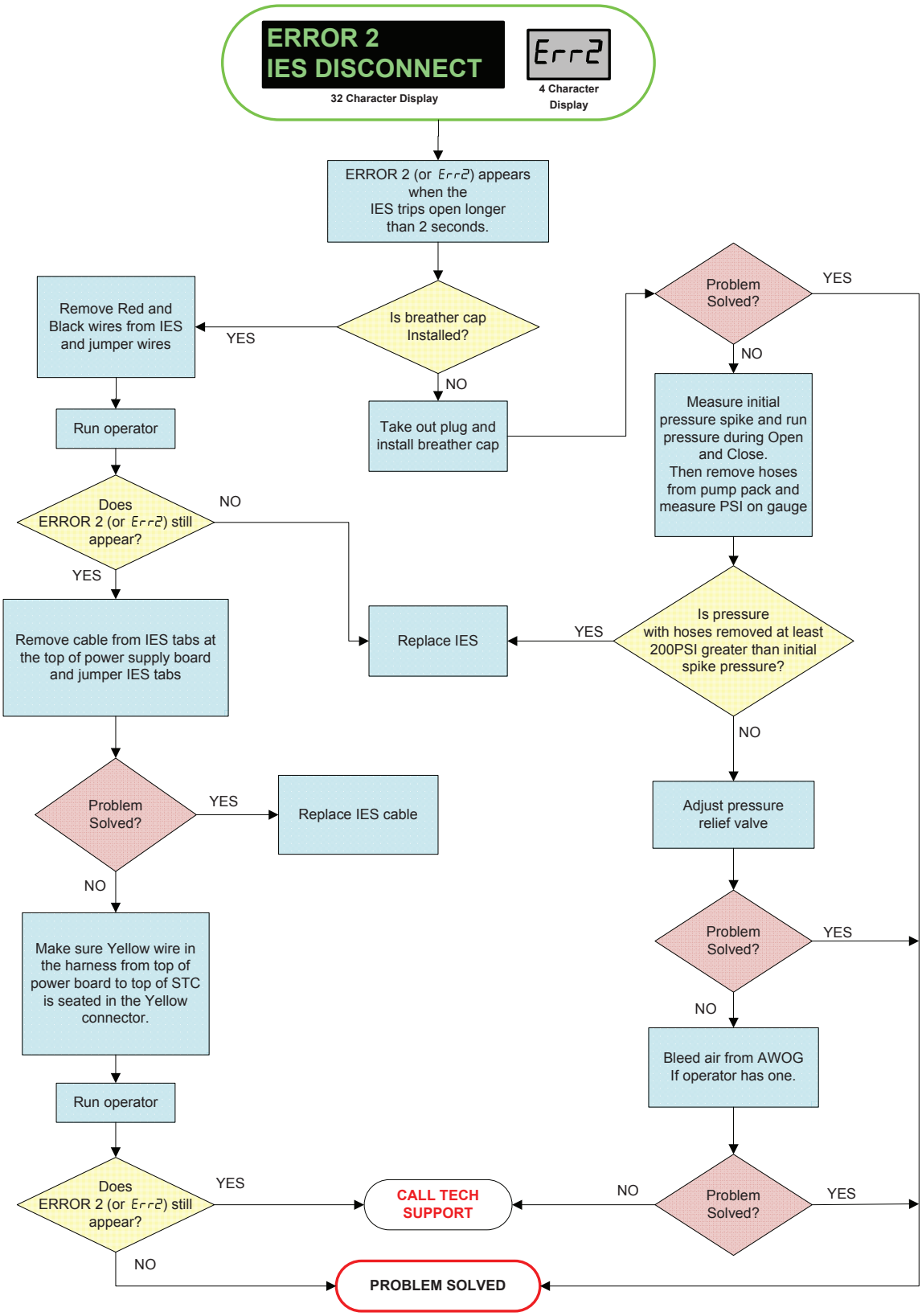
(9Eb) Error: !Action Blocked Gate Edge



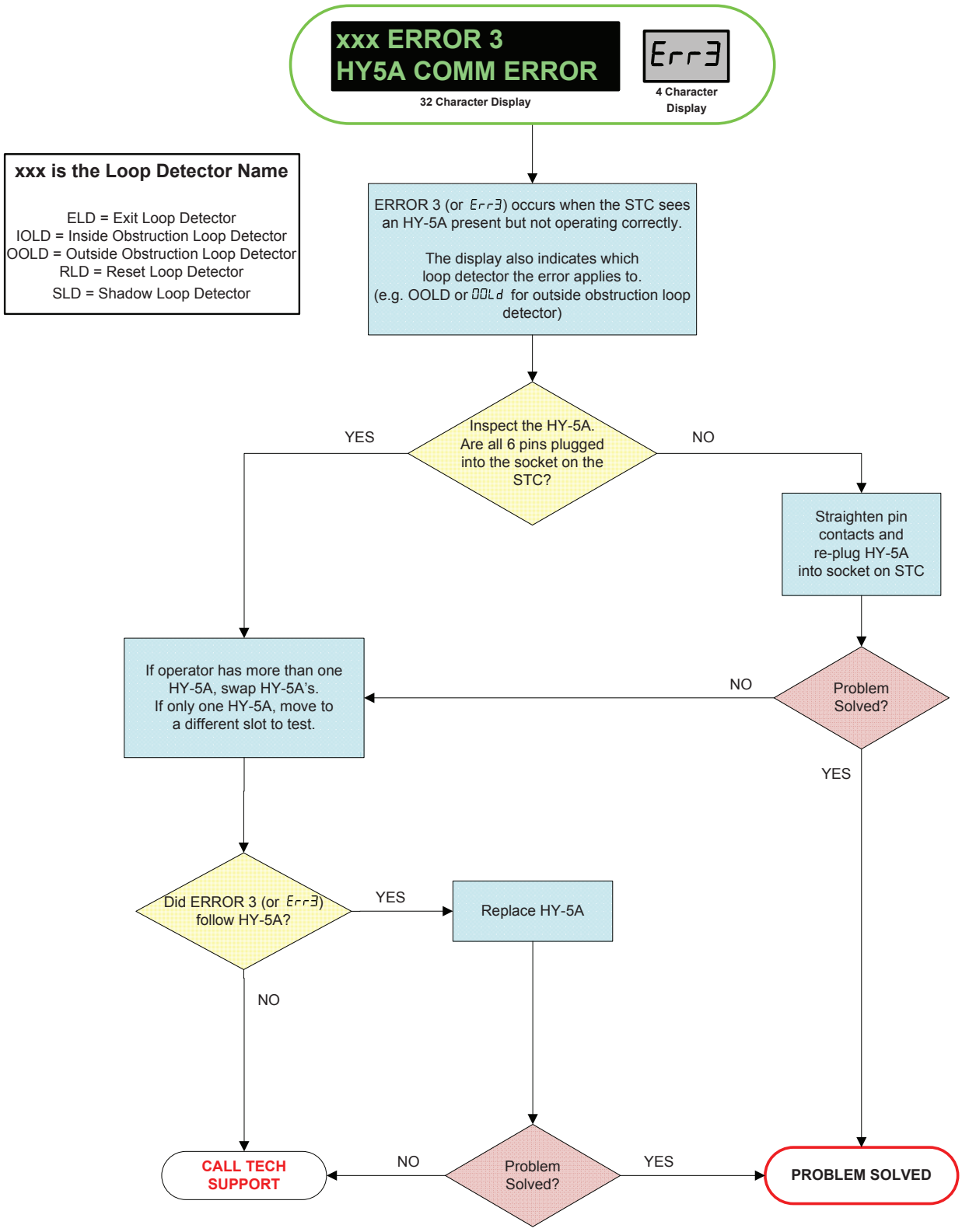
(Err 1) Error 1: Direction Error



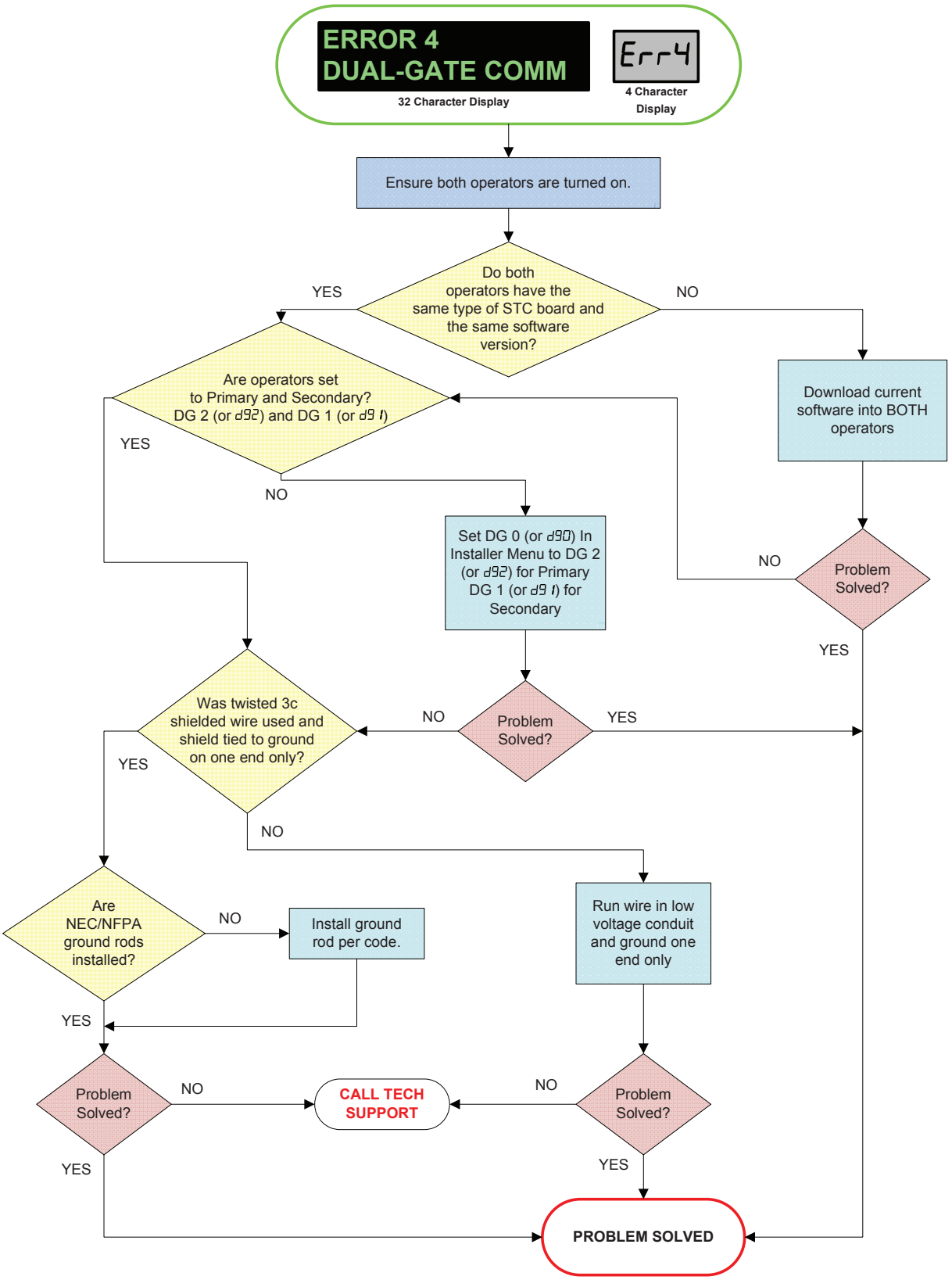
(Err2) Error 2: IES Disconnect



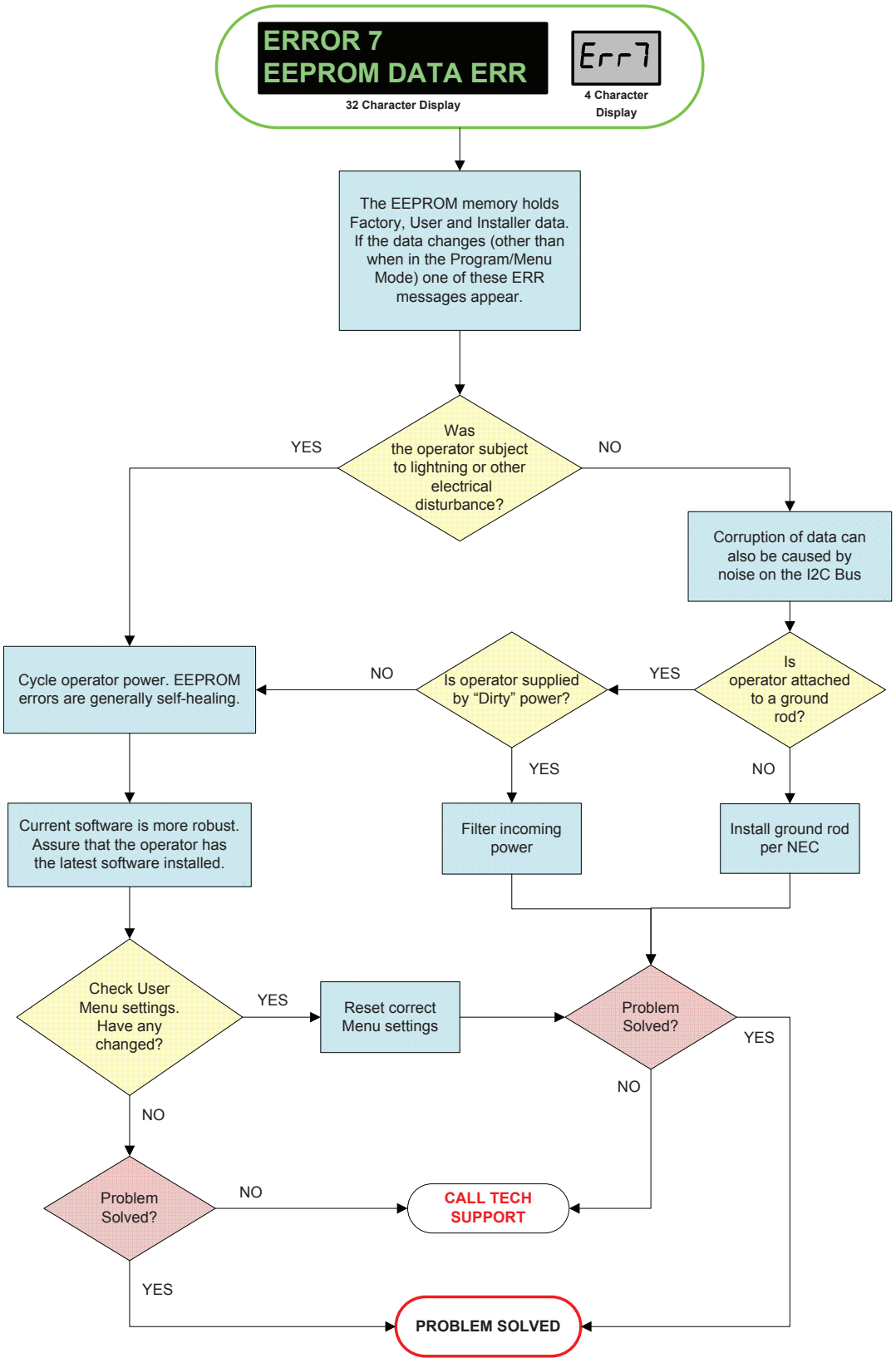
(Err3) Error 3: HY5A Comm Error



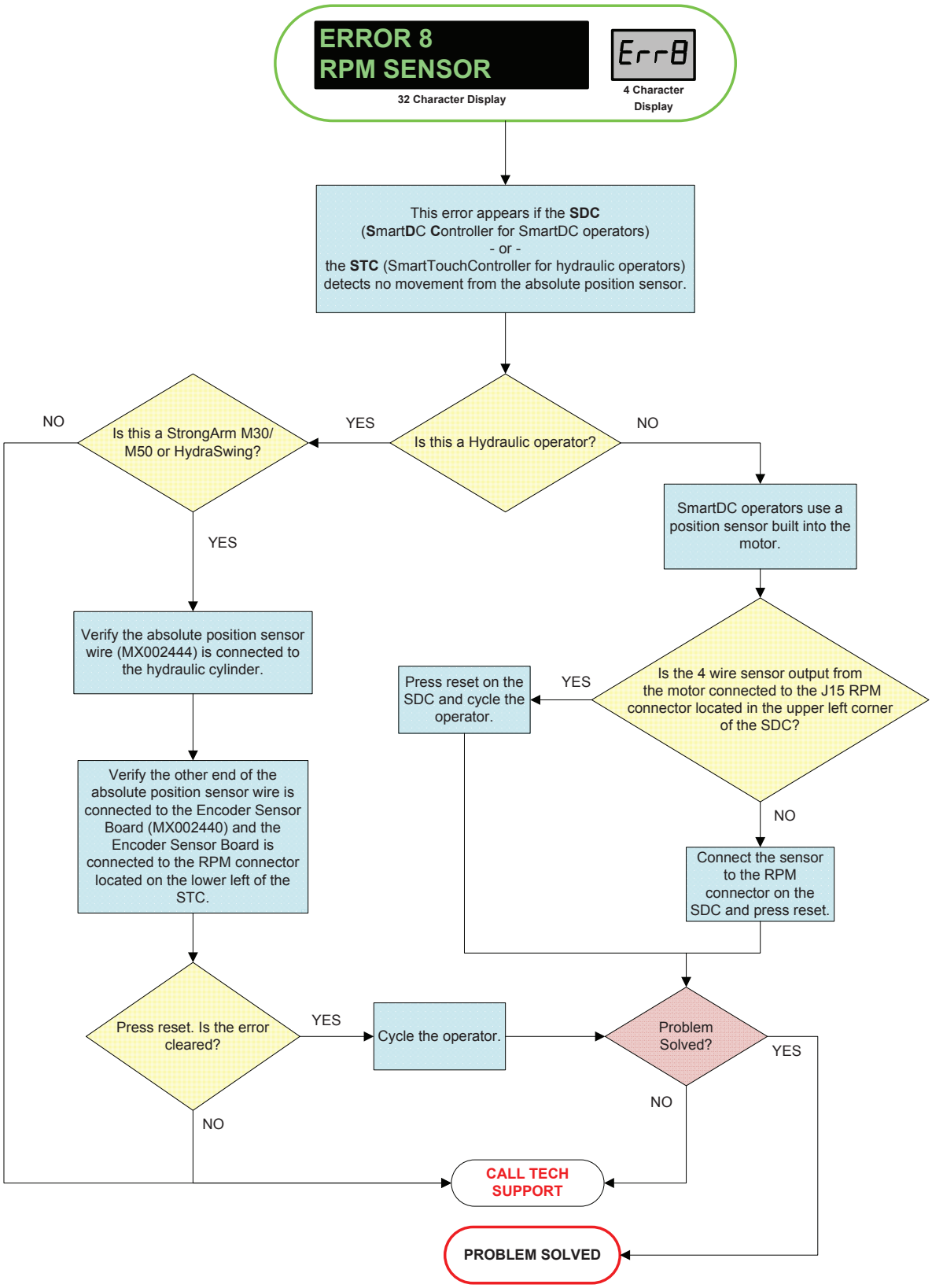
(Err4) Error 4: Dual Gate



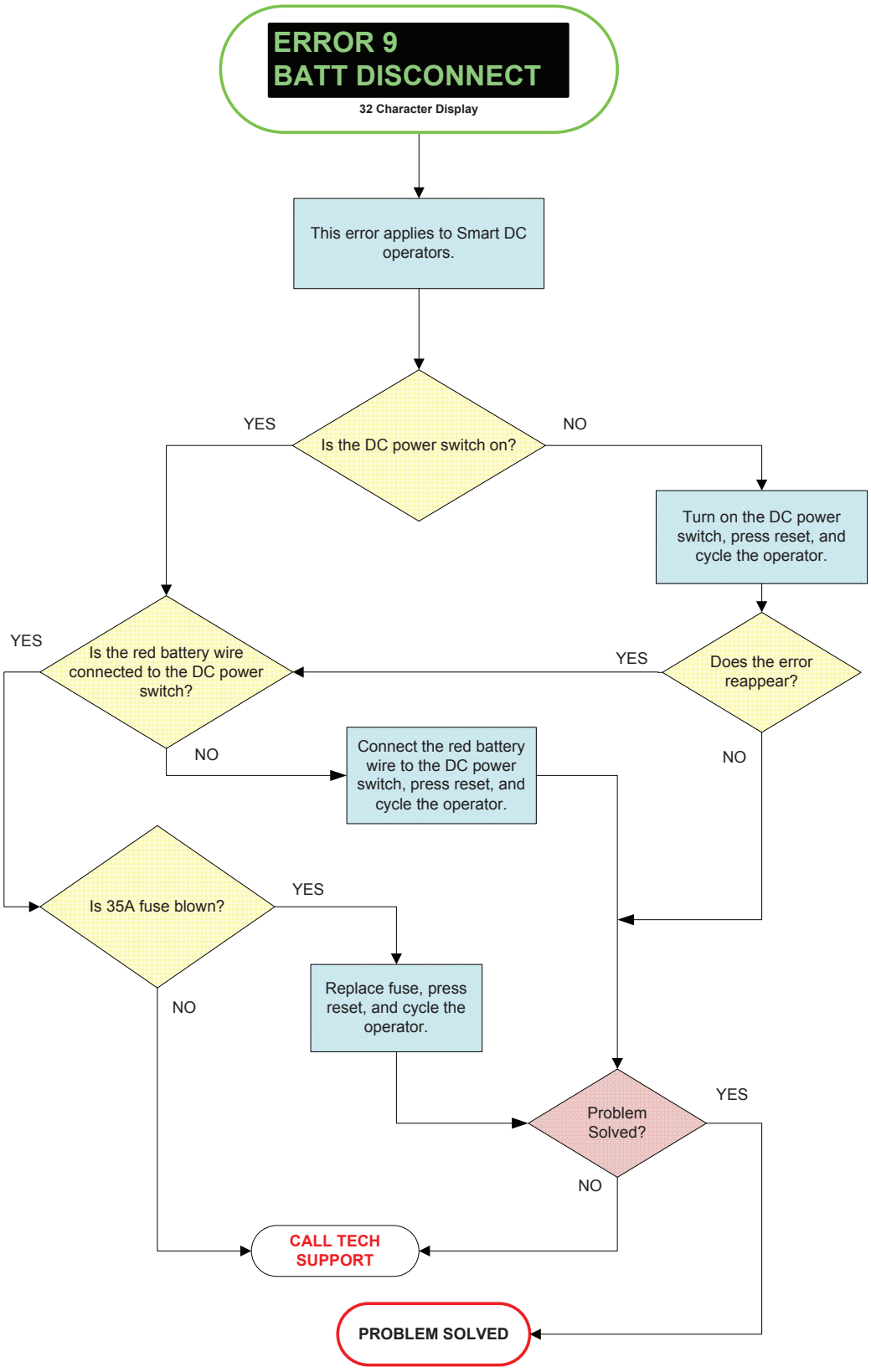
(Err7) Error 7: Menu Checksum



(Err8) Error 8: RPM Sensor



(Err9) Error 9: Batt Disconnect



(Er 10) Error 10: SlowDown Switch