Tools Needed:
Philips head screwdriver
Multi-meter

Always turn off the power to the sign prior to opening the cabinet.
Disconnect the power wires going to the sign.

Note: Clear all metal chips created by drilling into sign cabinet.
Note: Do not over-tighten fasteners or distort back panel.
Note: Make appropriate wiring connections per local codes.

Description of Normal Operation for the Sign’s Internal Power Supply
Diagnostic LEDs are included on the internal power supply to aid in verifying that input power is present and is being transferred to the sign face through the output connectors.

**+12V LED**
This LED illuminates Green when 12-24VDC power is applied to the internal power supply’s input power pigtail.

*Note: The transformer on the power supply converts 12-24VDC power to +12V.*

**A Output LED**
Illuminates with power applied to Blue wire on the input power pigtail

**B Output LED**
Illuminates with power applied to Yellow wire on the input power pigtail

**C Output LED**
Illuminates with power applied to Red wire on the input power pigtail

**Output Connectors**
These connectors transfer power from the internal power supply to the sign face to illuminate the individual message(s).
There are some LEDs out

- There are some LEDs out
  - < 10 LEDs Lit
    - YES
      - Can you measure the correct incoming voltage at the sign?
        - NO
          - Check switches and wiring
        - YES
          - Output voltage is > 12VDC?
            - YES
              - Entire sign needs replaced
            - NO
              - Supply is defective and needs replaced
        - NO
          - Contact sales with the serial number of the sign

Please refer to the diagrams on page 1.
Problem: A message is lit that shouldn’t be

TCL Series 12-24VDC

A message is lit that should not be

Do the wires run parallel to other high power devices? YES

Run wires in separate conduit

NO

Is there incoming voltage on that channel? YES

Recheck all connections to switches or controlling system

NO

Replace power supply

Contact sales with the serial number of the sign

Please refer to the diagrams on page 1.
Problem: Display is flickering
TCL Series 12-24VDC

Display is flickering

Is the +12V LED illuminated steady?

NO

External power source may be AC or it may not have adequate current capacity to accommodate the sign's power supply inrush current

NO

Check switches and wiring

YES

Supply is defective and needs replaced

YES

Contact sales with the serial number of the sign

NO

Re-attach connector

Please refer to the diagrams on page 1.
Problem: Entire display is out

TCL Series 12-24VDC

Please refer to the diagrams on page 1.

Entire display is out

Is the +12V LED illuminated steady?
- NO
  - Is the input polarity correct?
    - NO
      - Can you measure the correct incoming voltage at the sign?
        - NO
          - Check switches and wiring
        - YES
          - Supply is defective and needs replaced
    - YES
      - Is the output LED for the affected message illuminated?
        - YES
          - Is the output connector secure?
            - YES
              - Contact sales with the serial number of the sign
            - NO
              - Re-attach connector
        - NO
          - Re-attach connector

Is the input polarity correct?
- NO
  - Can you measure the correct incoming voltage at the sign?
    - NO
      - Check switches and wiring
    - YES
      - Supply is defective and needs replaced

Please refer to the diagrams on page 1.