VIII. TROUBLESHOOTING GUIDE

A. MISSING PRINT (dots missing across label)

Check the Printhead for dirt, (label dust etc.), adhesive build-up or piece of label adhering to the Printhead.
Clean as directed in Section VI-C-3-a. When the Print head is clean and elements still fail to print, refer to Sections VII-D-2 and IX.

B. MECHANICAL

1. STAGING PROBLEMS
    - a. Upper sensor bracket not parallel with front edge of vertical plate. Adjust bracket.
    - b. Lower optical sensor not adjusted properly with upper sensor. Adjust lower sensor.
    - c. Insufficient drive friction
        - i. Loose timing belt. Replace faulty belt.
        - ii. Slippery drive roller. Clean drive roller (Section VI-C-3-a)
        - iii. Insufficient pressure roller extension spring tension. Increase tension (Section VII-G-1)
    - d. Binding front roller or binding guide roller. Adjust bearing plate.
    - e. Binding pressure rollers. Clean (Section VI-C-3-b).
    - f. Binding drive roller and/or idler shaft. Check ball bearing supports.

2. TRACKING PROBLEMS
    - a. Improper setting of pressure roller extension spring tension. Adjust (Section VII-G-2)
    - b. Loose or bent tracking plate. Tracking plate must be perpendicular to vertical plate. Tighten or replace.
    - c. Improper positioning of outer paper guide. Adjust (Section VII-C-1)
    - d. Improperly threaded take-up roll. Thread roll properly.
    - e. Improperly positioned label roll. Reposition roll.
    - f. Loose or misaligned pressure release assembly. Tighten and/or adjust.
    - g. Binding pressure roller assembly. Clean (Section VI-C-3-b) or replace.

3. LABELS STRIPPING TOO LOW

Adjust bearing plates such that front roller is positioned lower in tracking plate (Section VII-H).

4. LABELS STRIPPING UNDER PRINTHEAD
    - a. Improper positioning of outer paper guide. Adjust (Section VII-C-1).
    - b. Improper positioning of label guide strip. Reposition.

5. SPENT LINER TEARS AND BREAKS
    - a. Take-up belt is worn. Replace the belt.
    - b. Binding guide roller or front roller. Locate and correct.
    - c. Glue adhering to stripping edge. Clean tracking plate stripping edge.
    - d. Front Roller is too low in tracking plate cavity. Re-adjust tracking plate. (See Section VII-H).

C. ELECTRICAL

To help isolate the failure to an area in the printer, the scale or interconnection to the scale, PLACE the printer in diagnostics mode by depressing and holding in the push-button switch on the front of the printer. Continue to hold the push-button until a label delivers. The printer will feed test labels when the push-button is depressed and held.

NOTE: See Program Switch Summary for test label format selection.

1. CORRECT TEST LABELS ARE DELIVERED

If the scale was showing Communication Error Code 4 prior to entering diagnostics* check interconnecting harnesses between the scale and printer for “opens” or “shorts”.

   a. Connections Okay -- replace Main Logic PCB
   b. Still fails -- suspect scale

** Scale will show error when printer is in diagnostics*

2. PRINTER FAILS TO DELIVER BLANK LABELS

Is the printer door closed? Are the interlock switches okay? If the switches and interconnecting wires check okay, refer to section IX (fault isolation) should the printer fail to deliver correct test label(s).

3. PRINTER DELIVERS BLACK LABELS

Should the printer begin delivering labels that are (1) printed correctly, but excessively dark, (2) streaked by lines/the print elements do not turn off, or (3) burnt (all black) : immediately remove power from printer. Refer to Section IX-Fault Isolation.

4. BLOWS FUSES

   a. Fuse F1 (between line filter and transformer primary) -- replace fuse (1.5 amp slo-blo)
   b. If fuse continues to blow or fuses F1 and/or F2 on the Main Logic PCB blow, refer to Section IX, Fault Isolation

5. LABEL DELIVERY PROBLEMS

Labels do not stage properly and/or stock light on scale remains lit (without label present):

   a. Optical label sensors are misaligned, dirty or obstructed.
   b. Optical label sensors are not properly connected to the Logic PCB.
   c. The optical sensors are defective.
   d. The Logic PCB is defective.

6. REGISTRATION

   a. Printing is consistently high or low on label.
      Refer to the Program Switch Summary Switches: SW2-1,2,3 and 4. These switches provide adjustment for print position.
   b. Printing varies in position from one label to the next. Compare pre-printed information position between labels. Label pre-printed information may be varying in position. Check spring tension on the Pressure Roller Assembly. See Section VII-G-1 for this adjustment.
   c. Paper Tracking (left to right). Refer to Section VII-G-2 and adjust the Pressure Roller tensioning.

IX. FAULT ISOLATION

1.0 Disconnect the printhead from the main logic pcb.

2.0 Complete power supply test points

2.1 Check pin 10 at J5. It should be +5 VDC (± 0.3).
If 0 volts, check fuse F1 on the Main PCB.
If reading is low, isolate to Main Logic PCB or 5 volt regulator (VR1) at J5.

2.2 Check pin 8 A or B at J6 (VDD). It should be 27 to 32 VDC* (± 4.0 V) when printhead is disconnected from Logic PCB.
When printhead is connected voltage should be within ± 1.25 V.

** Voltage is selected via program switch SW1-2,3 and 4.*

If the pass transistor (Q1) checks okay (Section 3.0), replace Main Logic PCB. When VDD and VSS voltages (Section 2.3) are correct, check the printhead as in Section IX-4. replace or re-try original head (depending on results of printhead check). Test unit.

VDD fails high 39 VDC to 50 VDC: A protection circuit is provided such that if VDD goes high due to a shorted pass transistor, F2 (2.5 amp fuse on the Main Logic PCB) will immediately blow (open).

If F2 is open:
a. Check the printhead (Section 4.0)
b. Check the pass transistor (Section 3.0)
c. When the defective part is replaced, replace F2.
WARNING: F2 MUST BE NO GREATER THAN A 2.5 AMP SLO BLO FUSE.

2.3 Check pin 5 A or B at J6 (VSS). It should be 10 volts less than VDD, ± 1.0 volts.
When VSS fails high (above 29 volts), or low (usually will go to 0 volts), replace the Main Logic PCB.

2.4 When the readings in 2.1, 2.2 and 2.3 are correct, advance to Section IX-4.

3.0 Check the pass transistor

The pass transistor Q1 is one of the two transistors (tip 125) mounted to the vertical deck of the printer. With power removed from the printer disconnect the transistors harness from the Main Logic PCB and complete the following:

a. Set OHM meter to the 200K range.
b. Place the positive probe of your OHM meter to pin 1 at PJ5.
c. Place the negative probe to pin 5 at PJ5.
d. Read the Emitter to Collector showing on the Pass transistor: should read “OPEN”
e. If reversed the probes should generate a reading of at least 40K OHM’s.

Replace the transistors if the reading from (e) is lower than 40K OHM’s.

WARNING: ALWAYS RE-INSTALL HARNESS BEFORE TURNING PRINTER POWER ON.

4.0 Check the printhead (refer to figure 13, “Printhead Test”)

a. Set OHM meter to the 200K OHM range.
b. Place the positive probe of the meter in A8.
c. Place the negative probe at each of the other pins - one at a time
All positions should read as “OPEN” with the exception of B8, which is shorted A8.

If a resistance of less than 40K is read, replace the printhead.
If a low resistance is read (40K-100K), the printhead may be damaged, but should not damage other printer components.
If an acceptable reading is obtained re-try the printhead after verifying acceptable voltages at the Main Logic PCB. (Section IX-2,3)

This test only verifies that there are not shorts between VDD and ground on the printhead and that it is reasonably safe to test the printhead operation.

5.0 Assemble and test operation