Bad Injectors & Multiplexers Sent from CERN

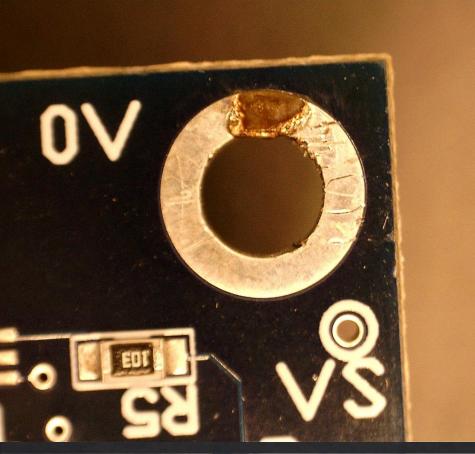
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Summary

	Received	Fixed & Tested
Injector	9	4
Multiplexer	7	5





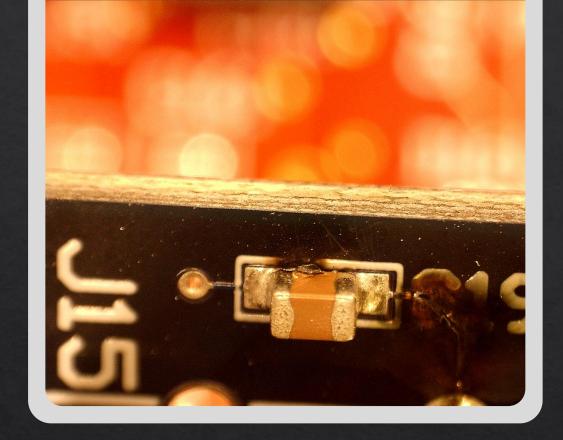
M48

- Symptoms
 - 1. No image with BCAM
 - 2. No loop back with device
 - 3. Burn marks (see fig.)
 - 4. Gap between the burn marks is in the interval (0.81,0.98) mm
 - 5. Hot logic chip (U65)
 - 6. Abnormally high supply current (next slide)

M48 (cont.)

 ♦ +5V supply current of a working multiplexer as control group is 32.551mA

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Diagnostic 9
Software Version: 15
Hardware Type: 71
Hardware Version: 2
Firmware Version: 9
Most Recent Loop Time (ns): 0
Data transfer speed (kBytes/s): 942
+15V Supply Voltage (V): 14.843
+15V Supply Current (mA): 11.149
+5V Supply Voltage (V): 4.854
+5V Supply Current (mA): 208.583
-15V Supply Voltage (V): -14.850
-15V Supply Current (mA): 7.952
Commom Mode Gain (V/V): 0.0202
Differential Mode Gain (V/V): 65.6
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M116

Symptoms

- 1. No image with BCAM
- 2. ∼50ns loop back without device
- 3. Burnt PCD and capacitor (see fig.)
- 4. Abnormally high supply current (next slide)

M116 (cont.)

 ♦ +5V supply current of a working multiplexer as control group is 32.551mA

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Diagnostic 10
Software Version: 15
Hardware Type: 71
Hardware Version: 2
Firmware Version: 9
Most Recent Loop Time (ns): 50
Data transfer speed (kBytes/s): 904
+15V Supply Voltage (V): 14.842
+15V Supply Current (mA): 11.255
+5V Supply Voltage (V): 4.899
+5V Supply Current (mA): 125.364
-15V Supply Voltage (V): -14.854
-15V Supply Current (mA): 8.088
Commom Mode Gain (V/V): 0.0204
Differential Mode Gain (V/V): 65.6
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J155

Symptoms

- 1. No LED works with HEX command
- 2. Casing deformed (see lower fig.)
- 3. C25 gone with possibly damaged track (see upper fig.)

J113



Symptoms

- 1. D341 gone
- 2. Pin pads & track of D341 damaged (see fig.)
- 3. U3 gone

Hypothesis

- In transportation or storage, injectors are <u>stacked in a way</u> that the knobs of one injector point at the exposed back side of another, presumably with bubble wrap or equivalent as separator.
- Fig.: Sketch of the positions of the knobs and damages on several injectors.

