



Diagnosing 187 and 955 Errors



Before performing any service on the machine tool make sure to read and understand the procedure prior to making the repair. Follow all applicable safety rules and guidelines. Do not operate any machine that is in an unsafe condition and comply with company's local Lock out/Tag out procedure



Revision: 01

Applies to: cent7, 7200, 8200

Tools:

- Digital Multi-meter
- Allen wrenches

Note: Error 187 Interface card not detected – occurring during power-up
Error 955 Interface not detected.

CAUSES:

1. 5 vdc Power supply
2. Bad interface card.
3. Fiber-optic cable not attached at both ends
4. Bad ncb card, since it must receive the information from the interface card.
5. Bad fiber-optic cable.

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Procedure:

1. Check voltage on front panel power supply

- a. Locate front panel power supply (see Figure 1) *(there are a few variations of this power supply)*

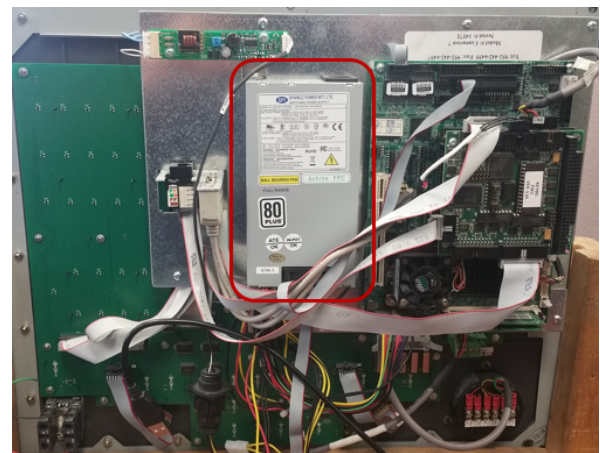


Figure 1 example of a front panel power supply

- b. Check the voltages of the power supply at one of the available accessory connectors (see Figure 2)

Yellow = 12VDC

Black = dc ground

Record the voltage _____ VDC

(Must be 12VDC or better for ref 12.2VDC is good 11.9VDC is not good)

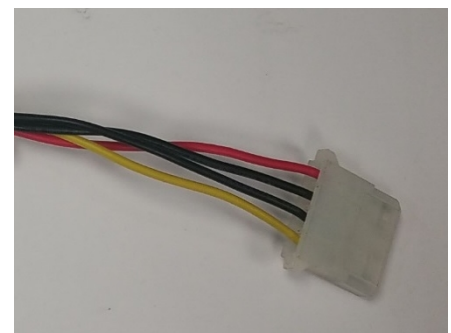


Figure 2

Red = 5VDC

Black = dc ground

Record the voltage _____ VDC

(Must be 5VDC or better for ref 5.2VDC is good 4.9VDC is not good)

2. Locate terminal blocks 12 and 22 in the electrical cabinet

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- The image displays two power supply units. On the left is a rack-mountable power supply with a metal chassis. It features a green terminal block on the left side and a control panel on the right with labels: 'V ADJ' (with a potentiometer), '+V', '-V', 'L' (with a switch), 'N (AC)', and 'S-15'. On the right is a desktop power supply with a grey plastic casing. It has an 'INPUT' section with a fuse and two AC input terminals labeled 'L' and 'N', with specifications '100-240VAC' and '0.45A'. The main body is labeled 'IDEC' and '10W'. It includes a 'LOW' indicator light, an 'ON' switch, and a 'VR. ADJ.' potentiometer. The output section is labeled 'POWER SUPPLY P55R-SB05', '5VDC 2.0A', and has terminals for '-V' and '+V', with an 'OUTPUT' label and a ground symbol.

Figure 3 example of 5vdc power supplies

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- A close-up photograph of a multi-pin connector, likely a D-sub or similar industrial connector. The connector has a metal housing with a grid of pins. Several cables are plugged into the connector: a red cable, a black cable, a white cable, a blue cable, and a yellow cable. The cables are bundled together and secured with a blue plastic strap. The connector is mounted on a metal surface.

Figure 4



Figure 5

5. Reseat the NCB board on the motherboard
 - a. Ground yourself to the front panel to insure no static electricity can jump to one of the components.
 - b. Remove the cables on the keyboard encoder card and NCB board noting there locations. see Figure 6 (keyboard encoder card is the outermost board and NCB is the middle board)
 - c. Remove the standoff screws and wiggle the boards apart gently.
 - d. Look for oxidation on the pins and clean them up if there is any
 - e. Put the boards and connectors all back together.

(Use caution to not bend any pins over when pushing the boards back together)

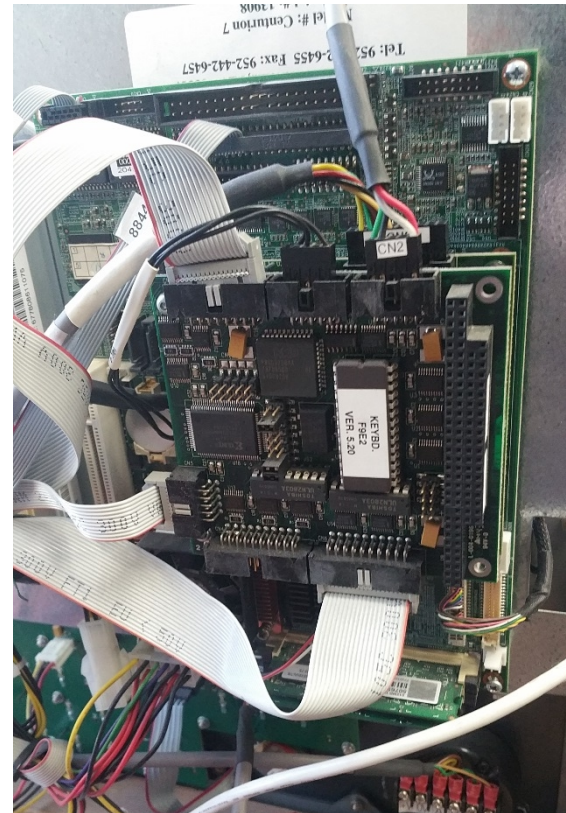


Figure 6

6. Check fiber optic cable for breaks in the cable also that it is plugged in to the interface (in the back cabinet see Figure 6) and to the ncb board (in front panel see figure 7)

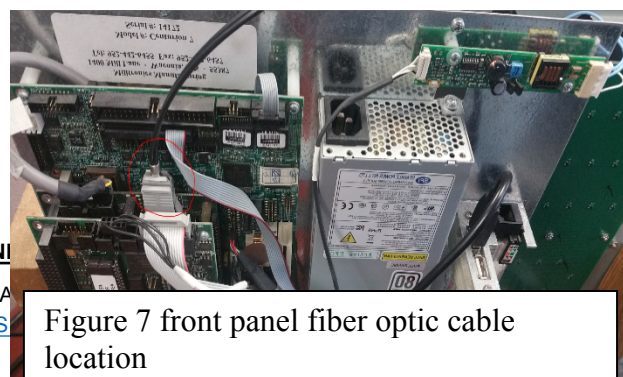


Figure 7 front panel fiber optic cable location

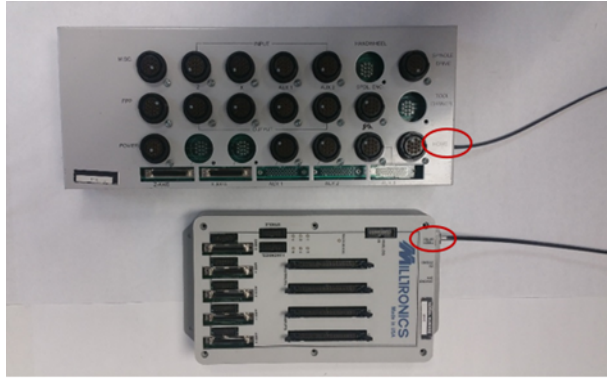


Figure 6 example of interfaces with fiber optic cable attached

7. If everything checks out above the interface has more than likely failed and will need to be replaced

Procedure Complete



Revision History

R01 – 03/23/2020 – Created

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