

# **Functional Testing Specification**

Parts & Repair Services Louisville, KY

#### LOU-GED-DS3800HLNC-B

### Test Procedure for a

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В	Added photos, burn in steps, corrected errors	J Morgan	6/30/2023		
С					

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PREPARED BY J MORGAN	REVIEWED BY	REVIEWED BY	QUALITY APPROVAL
<b>DATE</b> 6/30/2023	DATE	DATE	DATE

Parts & Repair Services
Louisville, KY

Page 2 of 7

REV. B

#### 1. SCOPE

- 1.1 This is a functional testing procedure for a DS3800HLNC Card.
- **1.2** This is a re-write of the original factory test with pictures and clarity.

### 2. STANDARDS OF QUALITY

2.1 Refer to the current revision of the IPC-A-610 standard for workmanship standards.

### 3. APPLICABLE DOCUMENTS

- **3.1** The following document(s) shall form part of this specification to the extent specified herein. Unless otherwise indicated, the latest issue shall apply.
  - **3.1.1** Check board's electronic folder for more information

### 4. ENGINEERING REQUIREMENTS

- 4.1 Equipment Cleaning
  - **4.1.1** Equipment should be clean and free of debris prior to applying power unless performing an initial check. Refer to site specific SRA's for cleaning guidelines.
- 4.2 Equipment Inspection
  - **4.2.1** Equipment should be visually inspected for any defects prior to applying power. This inspection should include the following as a minimum:
    - 4.2.1.1 Wires broken, cracked, or loosely connected
    - 4.2.1.2 Terminal strips / connectors broken or cracked
    - 4.2.1.3 Components visually damaged
    - 4.2.1.4 Capacitors bloated or leaking
    - 4.2.1.5 Solder joints damaged or cold
    - 4.2.1.6 Circuit board burned or de-laminated
    - 4.2.1.7 Printed wire runs / Traces burned or damaged

## 5. EQUIPMENT REQUIRED

**5.1** The following equipment is required to perform the process requirements. Equipment may be substituted provided that all accuracy's and test ratios are equivalent or better.

Qty	Reference #	Description
1		Fluke 87 DMM (or Equivalent)
1	H033689	FVE

Page 3 of 7

REV. B

### 6. Modifications/Upgrades

**6.1** Fill out if applicable.

#### 7. Testing Process

#### 7.1 Setup

- **7.1.1** The test rack needs to be populated with the following cards, and jumper settings:
  - 7.1.1.1 HMPG + DMPG (daughter card) in slot 2B
    - 7.1.1.1.1 Test Rom "SD\_88\_Monitor\_Ram\_TE see attach 01
  - 7.1.1.2 HLND in slot 2C
    - 7.1.1.2.1 PROM "PSP3815PLNC01AB IN u27 AND \*2AB IN u28 see attach 02
    - **7.1.1.2.2** Jumper 1 set to "T"
    - **7.1.1.2.3** Jumper 2-8 set to "F"
    - **7.1.1.2.4** Jumper 9 set to "IN"
  - 7.1.1.3 HLNC in slot 2D
    - **7.1.1.3.1** Jumper 1-3, 5-9 set to "F"
    - **7.1.1.3.2** Jumper 4 set to "T"
    - **7.1.1.3.3** Jumper 10-13 set to "A"
  - 7.1.1.4 Second HLND in slot 2E
    - **7.1.1.4.1** Same Jumper settings and test eprom as above
  - 7.1.1.5 Second HLND in slot 2F
    - **7.1.1.5.1** Same Jumper settings and test eprom as above
  - **7.1.1.6** Jumper settings for both HMAC on side of fixture:
    - **7.1.1.6.1** JA1-3 set to "T"
    - **7.1.1.6.2** JB1-3 set to "T"
  - 7.1.1.7 Connect com 2 cable to HMPG in slot 2B
  - **7.1.1.8** 20 pin ribbon HLND#1 to HMAC#1
  - **7.1.1.9** 20 pin ribbon HLND#2 to HMAC#2
  - **7.1.1.10** 50 pin ribbon HLND (2C to HLNC 2D)
  - **7.1.1.11** 50 pin ribbon HLND (2E to HLNC 2F)

### 7.2 Testing Procedure

- **7.2.1** On the pc, open vaxdmc (located on desktop) then press [F1] for vax communication.
- **7.2.2** Turn on the Main power for the rack
- 7.2.3 Wait for CR2 on the HMPG to light and the computer terminal to display "C"
- **7.2.4** Type [BB] on the computer. The "IMOK" led on the HMPG will illuminate and the prompt on the computer will change to HMPG see attach 03



Page 4 of 7

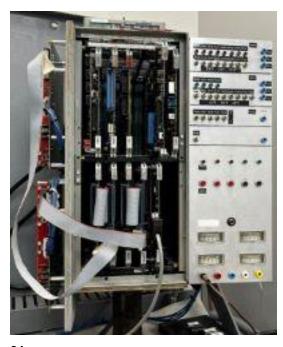
REV. B

- **7.2.5** Type [ SW4000, ] (don't forget the comma at the end) and press [enter]. The prompt will extend to add "A55A-" on the end. See attach 04
- **7.2.6** Type [7FF7] then press [enter] and watch for the following to occur.
  - 7.2.6.1 On the HLNC in slot 2D "IMOK" led will illuminate after approx. 5-10 seconds
  - 7.2.6.2 "DIAG" led will turn on for about 5 seconds and then turn off.
  - 7.2.6.3 After the "DIAG" led turns off, the "CONFIG" led will come on and blink.
  - 7.2.6.4 "IMOK" should remain on.
  - 7.2.6.5 Allow the card to burn in at this step for 15 minutes
- 7.2.7 Type [ SWC000, ] and press [enter] see attach 05
- **7.2.8** Type [7FF7] then press [enter] and verify that after approx. 5 seconds the "IMOK" led's on both HLNC's are now on and all other HLNC led's are off.
- **7.2.9** Allow the card to burn in at this step for an additional 15 minutes.
- 7.2.10 Remove power
- 7.3 \*\*\*TEST COMPLETE \*\*\*
- 8. Notes
  - **8.1** None at this time?
- 9. Attachments
  - Test fixture used for this test

REV. B



Page 5 of 7



## 01



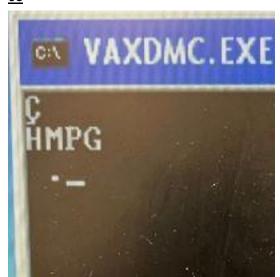
REV. B



Page 6 of 7



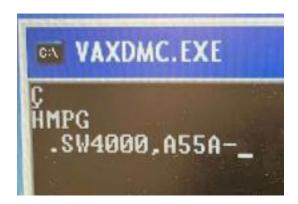
<u>03</u>



REV. B

Parts & Repair Services Louisville, KY

Page 7 of 7



## <u>05</u>

