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| g <i>GE Energy Services, I & RS</i> | Test and Operating Procedure | |
| | DATE: 2/10/2006 | PAGE 1 OF 5 |
| QUALITY REP: | | |
| TITLE: DS200GGDAG# | | PROCEDURE: LOU – GED- DS200GGDAG- G |

1. INTRODUCTORY DESCRIPTION

- A. This procedure establishes the methods for testing a DS200GGDAGx.
- B. Environmental ranges: 70 +/- 10 Deg. F. with 20-75% R.H.
- C. Unit warm-up/stabilization period requirement: 5 MINUTES
- D. Personnel using this procedure are expected to have a high degree of confidence and expertise in related testing and calibration procedures.
- E. Procedures not explained here are considered to be understood as common practice.

2. TEST EQUIPMENT VERIFICATION

- A. Verify the accuracy of the standard(s) used in the repair/calibration process by evidence of recent calibration labeling affixed to the test equipment.
- B. All measurement standards used in this procedure shall be traceable to the NATIONAL INSTITUTE of STANDARDS and TECHNOLOGY (N.I.S.T.) and shall have the accuracy, stability, range and resolution required for the intended use.
- C. Unless otherwise specified, the collective uncertainty of the Measurement Standard(s) shall not exceed twenty five percent of the acceptable tolerance for each characteristic being calibrated.
- D. All deviations shall be documented.

3. EQUIPMENT CLEANING

- A. All equipment clean will be performed as instructed in the GE T&IC SOP Sec. 14.0

4. EQUIPMENT INSPECTION

- A. The following criteria should be used as a guideline or basis for the inspection process of the this unit:
 - 1. Wires broken or cracked.
 - 2. Terminal strips / connectors broken or cracked.
 - 3. Loose wires.
 - 4. Components visually damaged.
 - 5. Capacitors leaking.
 - 6. Solder joint, cold or otherwise inadequate.
 - 7. Circuit board discolored or burned.
 - 8. Printed wire runs burned or damaged.

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|--|-------------------------------------|--|
| g <i>GE Energy Services, I & RS</i> | Test and Operating Procedure | |
| | DATE: 2/10/2006 | PAGE 2 OF 5 |
| QUALITY REP: | | |
| TITLE: DS200GGDAG# | | PROCEDURE: LOU – GED- DS200GGDAG- G |

5. REVISION HISTORY

| Revision | Date | Initials | Reason for Revision |
|----------|-----------|----------|---|
| A | 11-01-99 | | Initial Procedure – After Verification |
| B | 6-20-01 | | Corrected grammar |
| C | 5/23/02 | RKD | Brought up to Quality standard. |
| D | 2/10/06 | JLM | Corrected more grammar, added notation, updated header title |
| E | 12-13-10 | RKJ | Up tester fixture Number |
| F | 5-30-2012 | C. Wade | Added Setup Comments on visual inspection of soldered components. |
| G | 12/7/2012 | C. Wade | Removed pictures and a redundant line on page 4 |
| H | | | |
| I | | | |
| J | | | |
| K | | | |

6. REFERENCE DOCUMENTATION

- Reference: GEH-6209
- DS200GGDAG1A

7. THEORY OF OPERATION

- Reference: GEH-6029

8. TEST EQUIPMENT TO BE USED

- Oscilloscope
- Fixture # H188852
- Frequency Counter
- DS200GDPAG1AGC
- 115VAC Input

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|--|-------------------------------------|--|
| g <i>GE Energy Services, I & RS</i> | Test and Operating Procedure | |
| | DATE: 2/10/2006 | PAGE 3 OF 5 |
| QUALITY REP: | | |
| TITLE: DS200GGDAG# | | PROCEDURE: LOU – GED- DS200GGDAG- G |

9. Setup

a. It was recently identified that a unit had been in operation for some period of time without CR37 (9.1V Zener) fully soldered into the card, causing an intermittent fault to occur. Before testing card, be sure to perform a visual check to ensure all components have adequate solder. Failure report can be reviewed if desired, see directory N:\Design Folders\DS\DS2020\AGSA.

10. FINAL TEST AND OPERATION PROCESS

1. Place the DS200GDPA1AGC card in SLOT 1

- Connect ACPL cable to the ACPL connector on the DS200GDPA1AGC
- Connect 1FAPL cable to the 1FAPL connector on the DS200GDPA1AGC
- Connect 1GDPL cable to the 1GDPL connector on the DS200GDPA1AGC

2. Place the DS200GGDAG card in SLOT 2

- Connect the Gate wire to the Gate connector on the DS200GGDAG
- Connect the Cathode wire to the Cathode connector on the DS200GGDAG.
- Connect JA cable to the JA connector on the DS200GGDAG.
- Plug the fiber optic cables (blue and gray) into their color coded receptacles.
- Place FC cable on FC connector of GGDA.
- Connect RED test clip to TP8 of the GGDA.
- On Control Panel pull out (twist) E-Stop. Verify all other switches are turned to OFF.
- Turn Chopper Supply switch to ON.
- Verify that the two green LED's on the GGDA are on.
- Push E-Stop in to turn off power.
- Move JA connector on GGDA to JB
- On Control Panel pull out (twist) E-Stop.
- Verify that the two green LED's on the GGDA are on.
- Turn Fiber-Optic switch to ON

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|--|-------------------------------------|--|
| g <i>GE Energy Services, I & RS</i> | Test and Operating Procedure | |
| | DATE: 2/10/2006 | PAGE 4 OF 5 |
| QUALITY REP: | | |
| TITLE: DS200GGDAG# | | PROCEDURE: LOU – GED- DS200GGDAG- G |

- Verify that yellow LED on the GGDA is on.
- Turn both Load and DC Supply switches to on.
- With the oscilloscope, verify the following table:

| OUTPUTS | | FIBER-OPTICS ON | FIBER-OPTICS OFF |
|---------|------------|------------------|------------------|
| FC-1 | 4 MHZ OSC. | 4MHZ OSC. | 4MHZ OSC. |
| FC-2 | ONCMNDF | FIGURE 1 | + 5 VDC |
| FC-3 | AUX2 | + 5 VDC | + 5 VDC |
| FC-4 | 2 MHZ OSC. | 2 MHZ OSC. | 2 MHZ OSC. |
| FC-5 | STATOK | FIGURE 2 | 0 VDC |
| FC-6 | OFFPLS | FIGURE 1 | + 5 VDC |
| FC-7 | N19VDC | - 19 TO 24 VDC | - 19 TO 24 VDC |
| FC-8 | DCOM | ----- | ----- |
| FC-9 | P19VDC | + 19 TO 24 VDC | + 19 TO 24 VDC |
| FC-10 | P5VDC | + 4.6 TO 5.2 VDC | + 4.6 TO 5.2 VDC |

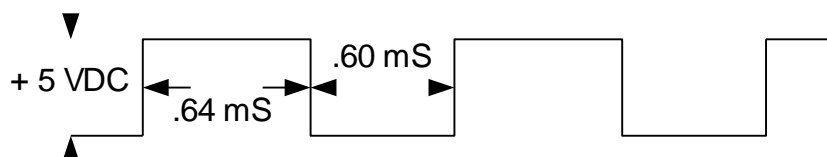


FIG.1

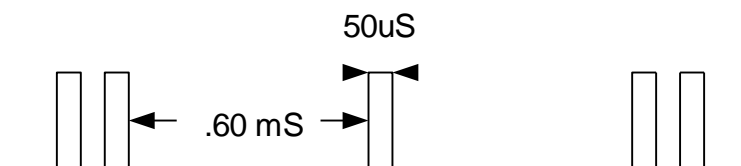


Fig.2

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|--|-------------------------------------|--|
| g <i>GE Energy Services, I & RS</i> | Test and Operating Procedure | |
| | DATE: 2/10/2006 | PAGE 5 OF 5 |
| QUALITY REP: | | |
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- Connect Oscilloscope to TB1 (-) and TB2 (+), verify the signal in figure 3.

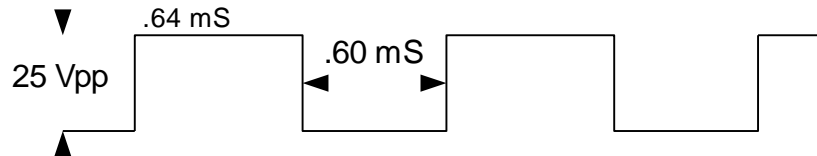


FIG.3

- Press (RED) Over Current push button and verify that red LED on the GGDA comes on and the output across TB1 and TB2 goes to 25VDC. Also verify that green OK LED goes out.
- **END OF TEST**

10. SPECIAL INFORMATION

TEST WRITTEN BY: David Smith

DATE: 11-01-99

TEST VERIFIED BY: Darren Johnson

DATE: 06-20-01