g GE Energy	**Functional Testing Specification**
Parts & Repair Services ***Louisville, KY***	**LOU-GEF-TAPE READER**

Test Procedure for 44D232560-G01, 3N3200TR103A1, 3N3200TR103B1, 3N3200TR104A1, 3N3200TR101A1, 3N3200TR102B1

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Rick Diercks			Charlie Wade
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Functional test procedure for 550/1050 Tape Reader/Reeler

1. SCOPE

1.1 This specification provides the Engineering Requirements for Tape Reader/Reeler models 44D232560-G01, 3N3200TR103A1, 3N3200TR103B1, 3N3200TR104A1, 3N3200TR101A1, and 3N3200TR102B1.

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 GEK-298990A
3.1.2 GEK-45563B
3.1.3 GEK-45562
3.1.4 GEK-45669
3.1.5 GEK-45650

4. ENGINEERING REQUIREMENTS

4.1 Description

4.1.1 The Tape Reader is a bidirectional tape reading device that operates with punch tape. Reading is accomplished photo-electrically at the read head. The Tape Reeler section of the Reader/Reeler controls the supply of tape as it is stepped through the read head during the operation, and it provides for rewind as required.

4.2 Equipment Cleaning

4.2.1 Equipment should be clean and free of debris prior to applying power unless performing an initial check. Refer to the local documented procedures for cleaning guidelines.

4.3 Equipment Inspection

4.3.1 Equipment should be visually inspected for any defects prior to applying power. This inspection should include the following as a minimum:

4.3.1.1 Wires broken or cracked
4.3.1.2 Terminal strips / connectors broken or cracked
4.3.1.3 Loose wires
4.3.1.4 Components visually damaged
4.3.1.5 Capacitors leaking
4.3.1.6 Solder joints damaged or cold
4.3.1.7 Circuit board burned or de-laminated
4.3.1.8 Printed wire runs burned or damaged
4.3.1.9 Broken Hardware

5. EQUIPMENT REQUIRED

5.1 The following equipment is required to perform the process requirements.

Qty	Reference #	Description
1	H188828	GE Reader/Reeler Tester
1	Test Tapes	Rate and Sequence Tests
1	Cable Set	Reader/Reeler Cable for the Reader/Reeler Tester.

*****EACH TAPE READER/REELER WILL USE IT OWN TEST CABLE!** Test Cable will be marked and be in it's own test cable box.

Each Tape Reader/Reeler Model will have its own GEK Instructions, which can help in testing.

6. TESTING PROCESS

6.1 Pre Test Requirement
- **6.1.1** Connect the right test cable for Model to be tested to Reader Tester plug connection.
- **6.1.2** Connect the test cable to Tape Reader/Reeler to TP as marker on cable's TB connectors.

6.2 Tape Reader Test
- **6.2.1** Set SW #1 to Rate, SW#2 to CURR, and SW #3 to RWD on Tester and RUN/LOAD Switch on Tape Reader/Reeler to RUN.
- **6.2.1.1** Turn Power On (SW#4)

6.3 Current Test
- **6.3.1.1** Current should be 500 micro amps or more (the higher the better) on Track Meters 1-8. Switch SW#3 to REV Currant meter should read @ 50 micro amps. Switch SW#3 back to FWD.
- **6.3.1.2** Place Rate Test Tape (blue tape) on to Read Head, Currant might go down but it cannot be below 500ua on any track.

6.4 Functional Test
- **6.4.1.1** Switch SW#2 up to FUNC. There should be an R displayed on Counter meter depress FWD RUN. Tape should run in a forward direction Speed Rate should be @150-180 cps for 150-cps Tape Reader or 300-cps for a 300-cps Tape Reader.
- **6.4.1.2** Depress Stop Break then depress RWD LOAD. Tape should run in reverse direction Speed rate will be @ 200-250 cps.

6.5 Reeler Test (Reelers only)
- **6.5.1.1** Test the Reeler Motor, REEL Brake, Tension Arms, Tape break switch, and Feedback Sensors.
- **6.5.1.2** Test Left side Motor Manually move Tension Arm Back and forward, motor should run smooth in both direction. Motor will should not run between the two **BLACK DOTS** on Fount Plate and should stop when ARM switches Broken Tape Switch.
- **6.5.2** Test Right Motor same as Left.
- **6.5.2.1** Tested RUN/LOAD Switch. Place Switch to LOAD on Tape Reader/Reeler to LOAD potion. Test Motor as to 6.1.2.10 the motor should not run.

6.6 Sequence Test (Reader/Reelers only)
- **6.6.1.1** Install SEQUENCE TEST TAPE on to Reeler motors and Reader Head, Switch RUN/LOAD Switch to RUN.
- **6.6.1.2** SW#1 on Tester To SEQ Display there will be an N displayed on Counter meter and depress FWD RUN. Tape should run DATA INFORMATION. Display Meter should count in Sequence from 0010 to 2700. When Tape run to the end of Test (end of Test Data) Tape should rewind and run tape again runs for 2 hours or more. Stop test by depress STOP BREAK to stop test.
- **6.6.2** Turn off TAPE READER TESTER
- **6.6.3** Remove Cables

6.7 END OF TEST FOR TAPE READER/REELER

6.8 Sequence Test (Reader only 44D232560-G01
- **6.8.1** Install Sequence Test Loop Tape on Reader Head.
- **6.8.2** SW#1 on Tester To SEQ Display there will be an N displayed on Counter meter and depress FWD RUN. Tape should run DATA INFORMATION. Display Meter should count in Sequence from 0010-0070 continual testing for 2 hours or more. Stop test by depress STOP BREAK, to stop test.
- **6.8.3** Remove power and disconnect all cables.

6.9 END OF TEST FOR TAPE READER

7. Notes

7.1 None at this time