Equipment Frames Preliminary Test and Power-Up Procedures

1. General

1.1 Purpose

This addendum was issued to update information contained in GTE Telephone Operations Practice 205-001-501 issue 4, July 1991.

1.2 Filing Instructions

File this addendum with the practice in numerical order in your GTE Telephone Operations Practices set.

1.3 Copyright and Responsibility

This addendum was published by the GTE Telephone Operations Administrative Services Department. For more information about this practice contact the Headquarters Network Operations COE Construction Focal Point.

1.4 Disclaimer

This addendum was prepared solely for the use of GTE Telephone Operations. It must be used only by its employees, contractors, customers and end users, when installing, operating, maintaining, and repairing GTE Telephone Operations' equipment, facilities and services. Any other use of this practice is forbidden. The information contained in this practice may not be applicable in all circumstances and is subject to change without notice. By using this practice the user agrees that GTE Telephone Operations will have no liability-to the extent permitted by applicable law) for any consequential, incidental, special, or punitive damages that may result.

2. Adding the Revised Pages to Practice 205-001-501

2.1 Page Replacement

Remove Pages 3 and 4 from Issue 4 of Practice 205-001-501 and insert the replacement pages attached to this addendum.

2.2 Revision Bars

Revision bars mark all parts of the practice which are changed by this addendum.

Equipment Frames Preliminary Test and Power-up Procedures

Contents

1. General

1.1 Purpose

This practice provides the procedures for:

- Testing equipment frame power installation for ail types of frames (e.g., SxS, Digital, Transmission, etc.).
- Bay battery filter charging.
- Power-up of equipment frames not covered by a manufacturer's specific product line procedure.

1.2 Filing Instructions

File this practice in numerical order in your practices set. Remove Issue 3 and replace it with this issue.

1.3 Supersedures

This practice supersedes:

- All local practices, policies, procedures, general instructions, letters, and memoranda which address this subject.
- Any document which provides information contrary to the information contained in this practice.

1. General. continued

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2. Overview

2.1 Test Objective

This test procedure ensures proper wiring of power distribution circuits within equipment frames before applying input power.

2.2 Safety Precautions

For safety precautions to observe while working near power equipment, refer to the ZOO-001 subdivision of GTE Telephone Operations Practices.

2.3 References

For additional information, refer to:

- GTE Telephone Operations Practices:
  - 200-001-000 through 200-001-004.
  - 205-000-500.
- GTE Installation Handbook: CH-110.
- The Installation Test Handbook, CHB-224-002, Volume 1, Section 1, concerning GTD-5 EAX equipment.

2.4 Requirement

Use a digital volt-ohm multi-meter (VOM) or its equivalent to perform the test procedure referenced in this practice.

3. Test Procedures

3.1 Introduction

Power-up any equipment frames according to the manufacturer-specific product-line procedures. If the manufacturer does not provide a power-up procedure, use the procedure in this practice.

3.2 Powering Up

Use the following procedure for preliminary testing and powering-up equipment frames and equipment.

Step	Powering-Up and Testing Equipment Frames
	CAUTION: Connect the frame grounds before they are needed. The ground is to protect from a short to ground.
1	Apply the ground before applying the battery.
2	Connect the anti-static grounding device to the ground and to your body before working with any printed wiring cards and equipment frame components. (See GTE Telephone Operations Practice 007-005-015, Handling Static-Sensitive Materials.)
3	Remove any paper from all card files in the frame.
4	Ensure that all printed wiring cards are unseated or removed before applying power.
5	Check the torque values of all power connections within the equipment frames and power boards. This includes any backplane power bus connections. **NOTE: AG Communication Systems (AGCS) requires 5-inch pounds torque on backplane bus connectors with 1/4" nuts as a check. Factory torque is 7-inch pounds. (See GTE Telephone Operations Practice 205-000-500 Power Equipment Power Connections, CO Inspection and Tightening Procedures, for additional torque values for power connections.)**
6	Verify that backplane bus bar assemblies are not touching each other or other hardware. If they are touching: • Bend the bars slightly. OR • Insulate the assemblies with bus bar insulator strips. (On the GTD-5, use the EF-16508-A provided in EC-95507-A and B.)
7	Verify that all clip/push-on connectors in each frame are fully engaged onto their tabs. Connectors are located on the sides of the frames and on the backplanes. If any push-on connector is not fully seated on its terminal, apply pressure directly downward toward the terminal to fully seat the connector.

(continued)

3.2 Powering Up, continued

Step	Powering-Up and Testing Equipment Frames
8	Use a VOM to check the following measurements with all fuses removed and/or all circuit breakers associated with the equipment frames turned off: • If the distribution -MB or the equipment -MB has a filter network, the VOM might show a low resistance or indicate that a voltage is present. This is because the filter network has a capacitive charge. Eliminate this charge by attaching a 48 volt trouble light or equivalent to the + MB and -MB. This drains the capacitor. If the circuit does not read open, trace the circuit and clear the trouble before proceeding. • Check the resistance and voltage between the input terminals (+ MB and -MB) and from the frame ground to TMB and -MB at the equipment frame. The VOM should indicate an open circuit. Repeat this step for all other battery types. • Check the resistance and voltage between the output terminals (+ MB and -MB) of the power rack distribution fuse or circuit breaker that powers the equipment frame. If the VOM does not indicate an open circuit, use normal trouble-shooting procedures to clear the problem before proceeding. • Check the resistance and voltage between the output terminals (+ MB and -MB) of each individual circuit fuse and/or circuit breaker. The VOM should indicate an open circuit. Repeat this step for all power sources.

(continued)

3.2 Powering Up, continued

Step	Power Up and Preliminary Test of Equipment Frames
	WARNING: Before applying power to the frames, ensure: • **All bay battery filter capacitors are charged by placlng a trouble lamp or similar device across the fuse or breaker.** • **Any screw-in type cartridge fuse holders are not out of round which causes the fuse to "hang up." The cap spring should move the fuse freely when the fuse is pressed and released by hand. If there is no free movement, elther fix the problem or replace the holder.** • **The fuse Is lightly coated on its contact surface area with NO-OX-ID Type A grease (MC 769213).** • **All fuse holders are seated properly and not cross threaded.** Connect power to the frame(s) in this lineup by: • Inserting the Power Bay distribution fuse. OR • Setting the circuit breakers to the "ON" position.
10	Prior to appiying the circuit power, insert or reseat all cards into their proper slots according to the applicable job drawing for the frame.
11	Insert all circuit fuses into their holders and reset any circuit breakers, if applicable, for individual files or assemblies within the frames. Ensure that: • No alarm lamps are lit. AND • Fuse holders are not cross threaded.
12	Check for the appropriate DC voltage on all file assemblies/shelves within the frame.