TABLE OF CONTENTS

1- OVERVIEW

This procedure applies to Signa Open*Speed* 0.7T Power Cabinet and the required steps to remove and replace the RF Amplifier Module or the Fan Assembly.

Field replaceable units are listed in Table 1-1:

TABLE 1-1
FRU (1) PART LIST

Manufacturer's Part Number	GEMS Part Number	Item Description
AN8102GN	2243079-2	RF Amplifier Module (2243079) with Case
21-515283	2262478	Fan Assembly

1-1 Required Tools

- Lock and Tag (for Lock Out Tag Out)
- Digital Multimeter
- Philips Screwdriver
- Standard Screwdriver
- Two medium sized crescent wrenches

2- LOCK OUT TAG OUT

DANGER!!

FATAL ELECTRIC SHOCK HAZARD! TO PREVENT FATAL ELECTRIC SHOCK, DISCONNECT POWER AT THE PDU BEFORE YOU PERFORM THE REMOVAL/REPLACEMENT PROCEDURES.
PERFORM LOCKOUT TAGOUT PROCEDURE. DO THIS BY SECURING THE PDU MAIN INPUT CIRCUIT BREAKER.

1. Bring Signa software down.
2. Remove the front and rear covers from the 0.7T Power Cabinet.
3. Turn OFF the “OC/HOST” circuit breaker at the Power Distribution Unit (PDU).
4. Turn OFF the “SSM” circuit breaker at the Power Distribution Unit (PDU).
5. At the front (left) of the PDU place the “MAIN INPUT CIRCUIT BREAKER” switch to the OFF position.
6. Lock Out Tag Out the PDUs “MAIN INPUT CIRCUIT BREAKER” (press the light gray arrow on the handle and insert the lock and tag).
7. Verify all LEDs are OFF (not illuminated) on front of SSM, RFI. Verify all LEDs are OFF (not illuminated) at the rear of the RF Amplifier Power Module.
8. Using a Voltmeter measure the RF Amplifier Power Module input power located in the rear (right) of the 0.7T Power Cabinet.
   - Measure between L1 and L2, verify voltmeter measures 0 VAC.

3- REMOVAL/REPLACEMENT OF RF AMPLIFIER POWER MODULE

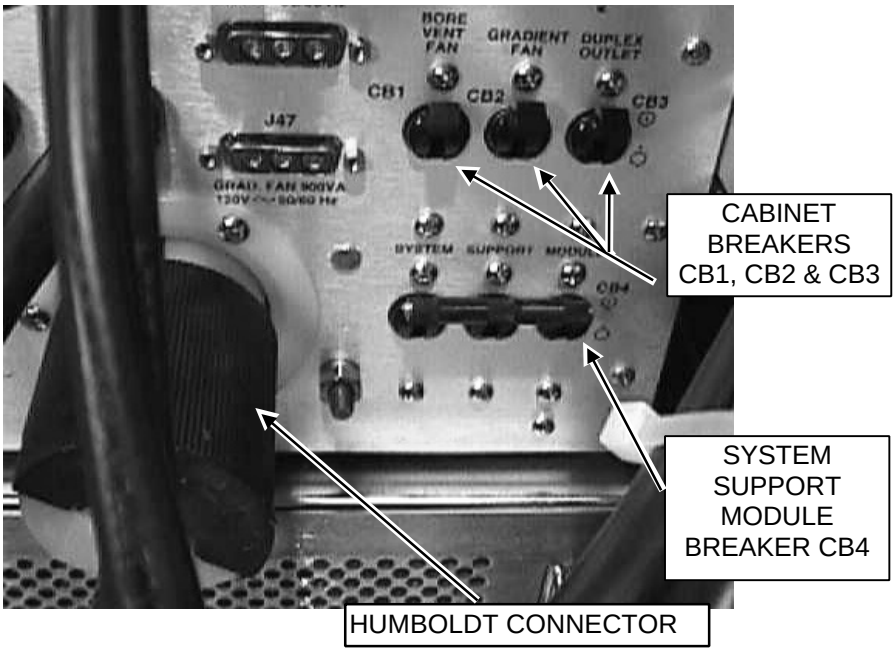
3-1 RF Amplifier Power Module Removal

WARNING!

POSSIBLE PERSONAL INJURY! REMOVE POWER FROM THE PDU MAIN INPUT CIRCUIT BREAKER BEFORE REMOVING RF AMPLIFIER. VERIFY THAT LOCK OUT AND TAG OUT THE PDU MAIN INPUT CIRCUIT BREAKER IS PROPERLY PERFORMED. SERIOUS INJURY OR DEATH BY ELECTROCUTION MAY OTHERWISE OCCUR.

1. Perform Section 2- Lock Out Tag Out (Refer to CD-ROM *Dir. 2250758-3 [or -2], MR Signa OpenSpeed Service Methods, Renewal Parts and Service Tools,* Safety, Section 6, OSHA LOCKOUT/TAGOUT REQUIREMENTS.)

2. At the rear of the 0.7T Power Cabinet turn OFF the CB1, CB2, CB3, and CB4 circuit breakers on the rear of the System Support Module (SSM). Remove the humboldt connector (P1) on rear of SSM. See Illustration 3-1.

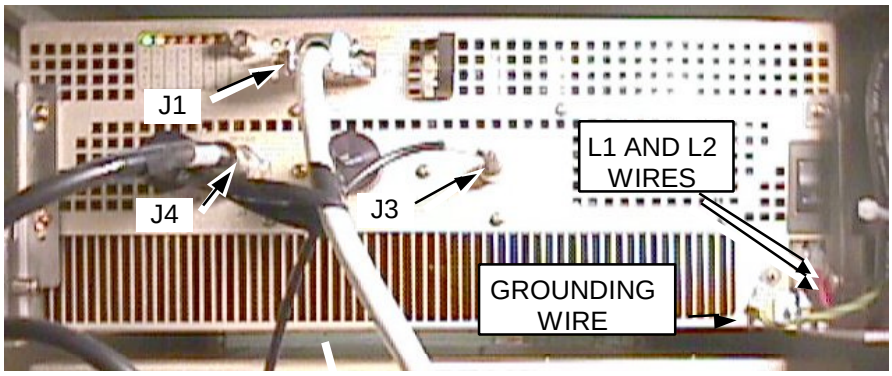


REAR CABINET CIRCUIT BREAKER LOCATIONS
ILLUSTRATION 3-1

3-1 RF Amplifier Power Module Removal (continued)

3. Visually verify that power has been removed by verifying the fans and LEDs on the RFI, RF Amp, and SSM (System Support Module) are OFF.

4. Disconnect wires from L1 (black) and L2 (red) of AC connectors and the grounding wire (yellow/green) from the ground stud on rear of RF Amplifier Module. See Illustration 3-2.



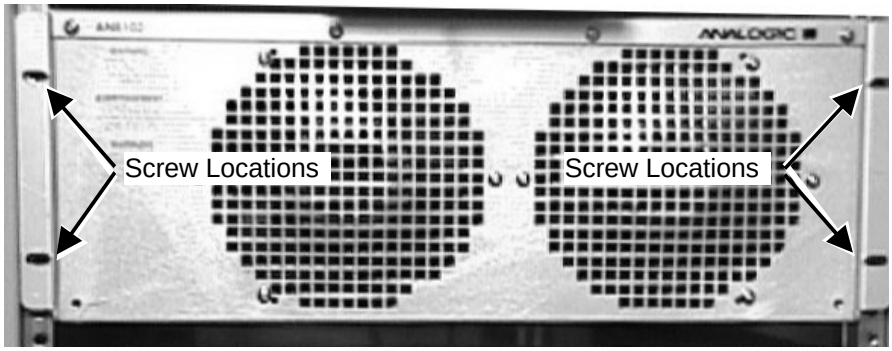
INPUT POWER CONNECTION LOCATIONS
ILLUSTRATION 3-2

5. Remove the J1 (Customer Interface), J3 (RF In), and J4 (RF Out) connections at the rear of the RF Amplifier. See Illustration 3-2.

3-1 RF Amplifier Power Module Removal (continued)

6. Remove the four (4) screws securing the RF Amplifier to the cabinet rails (Illustration 3-3).

FRONT VIEW



SCREW LOCATIONS ON CABINET
ILLUSTRATION 3-3

7. Refer to *Appendix A- Universal Lift Kit Assembly* procedure to remove amplifier from cabinet.

3-2 RF Amplifier Power Module Installation

1. Refer to *Appendix A- Universal Lift Kit Assembly* procedure for instructions on using hoist to lift RF Amplifier Power Module into the 0.7T Power Cabinet.

2. Visually verify the “MAIN INPUT CIRCUIT BREAKER” switch is in the OFF position at the front (left) of the PDU and has the proper Lock Out Tag Out before continuing.

3. Insert four (4) screws into front of the RF Amplifier Power Module to secure to the 0.7T Power Cabinet.

4. Reconnect cables J1 (Customer Interface), J3 (RF In), and J4 (RF Out) connections at the rear of the RF Amplifier.

5. Connect wires from L1 (black) and L2 (red) of AC connectors and the grounding wire (yellow/green) at the ground stud on rear of the RF Amplifier Power Module.

6. Remove lock and tag out from the PDU “MAIN INPUT CIRCUIT BREAKER er” and restore power to the 0.7T Power Cabinet.

   A. Re-connect the SSM humboldt connector (P1).

   B. Place the four (4) circuit breakers located at the rear of the “SSM” to the ON position.

   C. Switch ON the “SSM” circuit breaker at the front of the PDU.

   D. Switch ON the “OC/HOST” circuit breaker at the front of the PDU.

   E. Verify the RF Amplifier switch is ON at the rear of the RF Amplifier.

   F. Re-SIGNA as required.

7. After replacing the RFI Module, the RF Amplifier needs to be calibrated, refer to *GRFD Power RF Out Setup And Calibration* on the CD ROM, Direction *2250758-3 [or -2]*.

8. Replace rear cabinet cover and front 0.7T Power Cabinet door.

4- REMOVAL/REPLACEMENT OF RF AMPLIFIER POWER MODULE FAN

4-1 Tools Required

- Phillips Screwdriver (30cm or longer)

4-2 Removal of Fans

WARNING!

SHOCK HAZARD! BEFORE OPENING THE RF AMPLIFIER MODULE, BREAK CURRENT TO CAPACITOR BY DISCONNECTING 208V~, L1 & L2 CONNECTOR WIRES. THE CAPACITOR REMAINS CHARGED APPROXIMATELY 5 MINUTES AFTER 208 VAC, L1 & L2 WIRES ARE DISCONNECTED. AFTER WAITING 5 MINUTES THE CAPACITOR WILL BE DISCHARGED TO LESS THAN 10 VDC. FAILURE TO FOLLOW SAFETY PRECAUTIONS MAY RESULT IN SERIOUS INJURY BY ELECTROCUTION.

1. Perform Section 2-, Lock Out Tag Out and Section 3-1, RF Amplifier Power Module Removal.

2. Remove RF Amplifier Power Module from the 0.7T Power Cabinet. Refer to Appendix A.

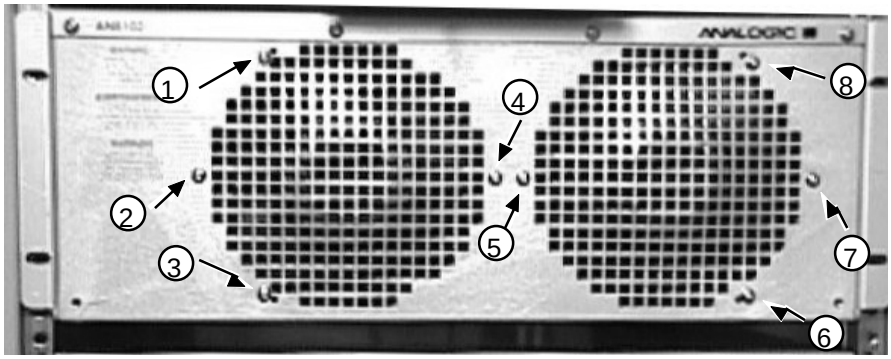
3. With unit resting on a flat surface, remove 16 screws from the RF Amplifier Power Module.
   - Four (4) screws along front top of RF Amplifier
   - Four (4) screws along rear top of RF Amplifier
   - Four (4) screws along each side of the RF Amplifier

4. Lift the RF Amplifier top cover assembly by the handle on the rear of the RF Amplifier.

4-2 Removal of Fans (continued)

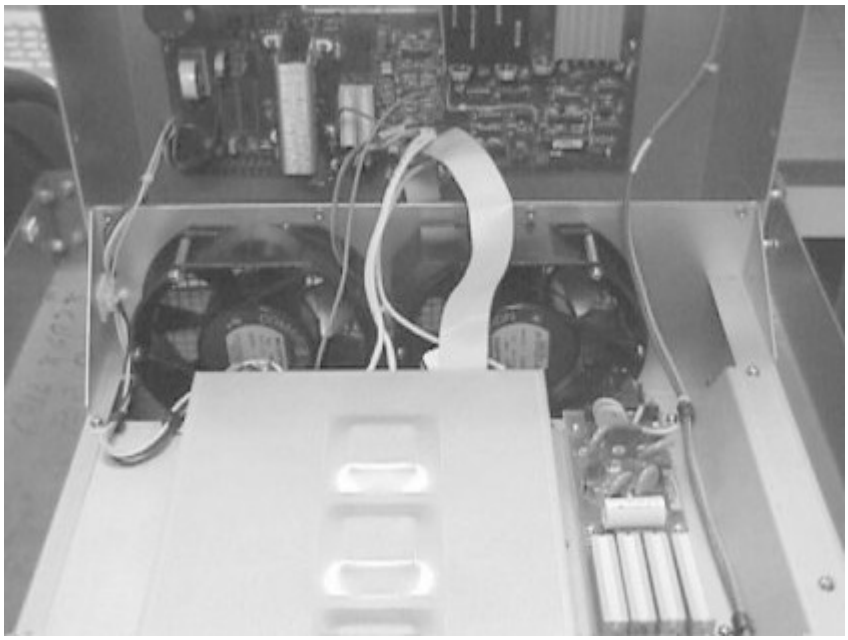
5. Remove the eight (8) screws holding the fans in place. See Illustration 4-1.

FRONT VIEW



SCREW LOCATIONS FOR FANS
ILLLUSTRATION 4-1

6. Lifting one fan at a time, remove the fan harness connection from the fans. **Do not pull on wires, grasp by the connector.** See Illustration 4-2.



FAN HARNESS LOCATION
ILLUSTRATION 4-2

This completes the procedure for removing cooling fans.

4-3 Fan Installation

Follow the steps below to install the cooling fans:

1. Install fan harness to connections on fans.

2. Install two (2) screws finger-tight in each fan, making sure not to crimp wires between the fan and chassis.

3. Close the RF Amplifier Power Module top cover assembly and install remaining six (6) screws into the fans.

4. Open cover and check again to insure fan harness is not crimped. Close cover and install remaining 16 screws in RF Amplifier Power Module top cover assembly.

5. This completes the procedure for installing cooling fans. Perform Section 3-2, RF Amplifier Power Module Installation.

APPENDIX A- UNIVERSAL LIFT KIT ASSEMBLY FOR 0.7T POWER CABINET

A-1 Introduction

The Universal Lift Hoist is assembled from parts stored in the Universal Lift Hoist Kit. Lift attachments specially designed for the RF/PDU Cabinet (1.0T) are found in the outer-most compartments of the lift kit.

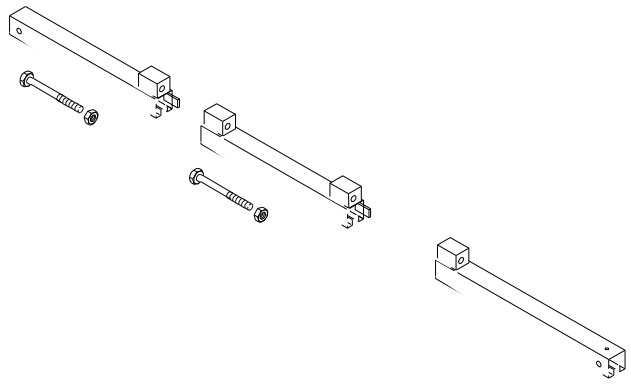
A-2 Tools Required

- Universal Lift Hoist Kit with RF/PDU attachments, 46-317266G5
- Small hand tools including a Phillips-head screwdriver
- Two medium sized crescent wrenches

A-3 Assembly Procedural Steps

1. Remove the bracket at top of cabinet.

2. Locate the three (3) large Steel Rail sections and place them on a flat surface for assembly. See Illustration A-1.



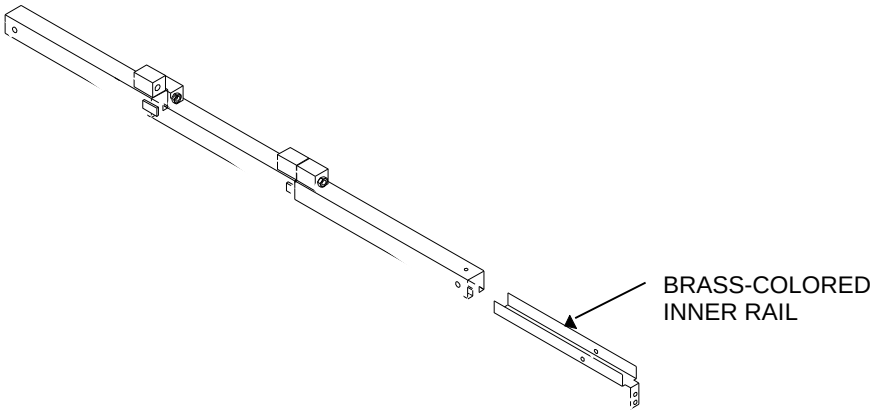
STEEL RAIL SECTIONS, HEX BOLTS, AND HEX NUTS
ILLUSTRATION A-1

3. Arrange the rail sections in the proper order (rear, center, then front) and fasten them together with 4.75” X 1/2” caps crews and hex nuts.

4. Use the crescent wrenches to tighten the cap screws.

A-3 Assembly Procedural Steps (continued)

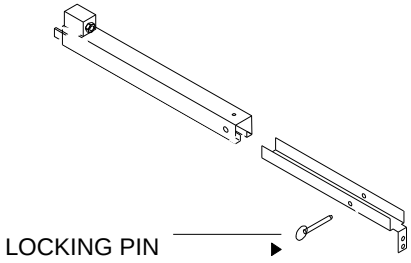
5. Locate the Brass Colored Inner Rail and insert it into the Steel Rails as shown in Illustration A-2.



ASSEMBLED STEEL RAILS AND BRASS-COLORED INNER RAIL
ILLUSTRATION A-2

6. Insert the Brass Colored Inner Rail into the open end of the rear rail section.

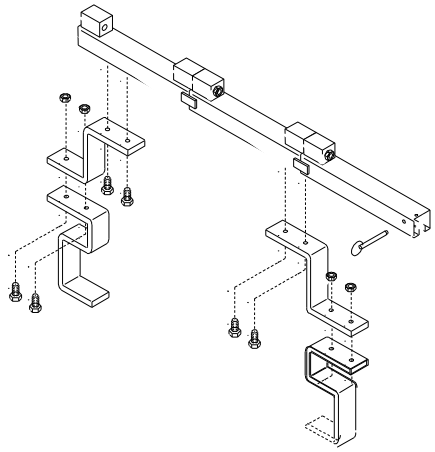
7. Locate one of two (2) locking pins in the lift kit. Insert one locking pin into the hole near the open end of the rear rail section. This locking pin secures the Brass Colored Inner Rail to the outer Steel Rail. See Illustration A-3.



REAR STEEL RAIL, LOCKING PIN, AND BRASS-COLORED INNER RAIL
ILLUSTRATION A-3

A-3 Assembly Procedural Steps (continued)

8. Assemble and fasten the elevating brackets to the rail assembly. See Illustration A-4.

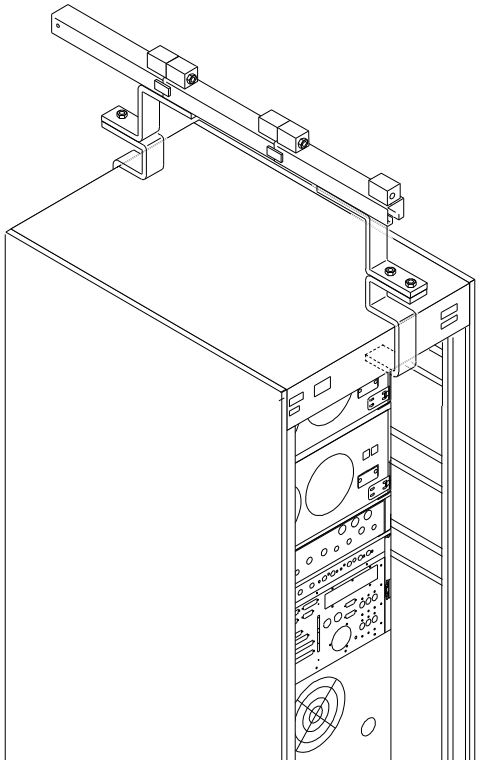


HOIST TOP RAIL PARTS WITH ELEVATING BRACKETS
ILLUSTRATION A-4

9. Remove the front and rear covers of the 0.7T Power Cabinet.

A-3 Assembly Procedural Steps (continued)

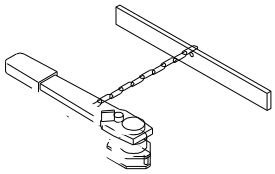
10. Place the Steel Rail and elevating bracket assembly at the top of the 0.7T Power Cabinet. Center the Rail Assembly on the top of the RF Amplifier. See Illustration A-5.



HOISTPARTS REAR VIEW ASSEMBLED
ILLUSTRATION A-5

A-3 Assembly Procedural Steps (continued)

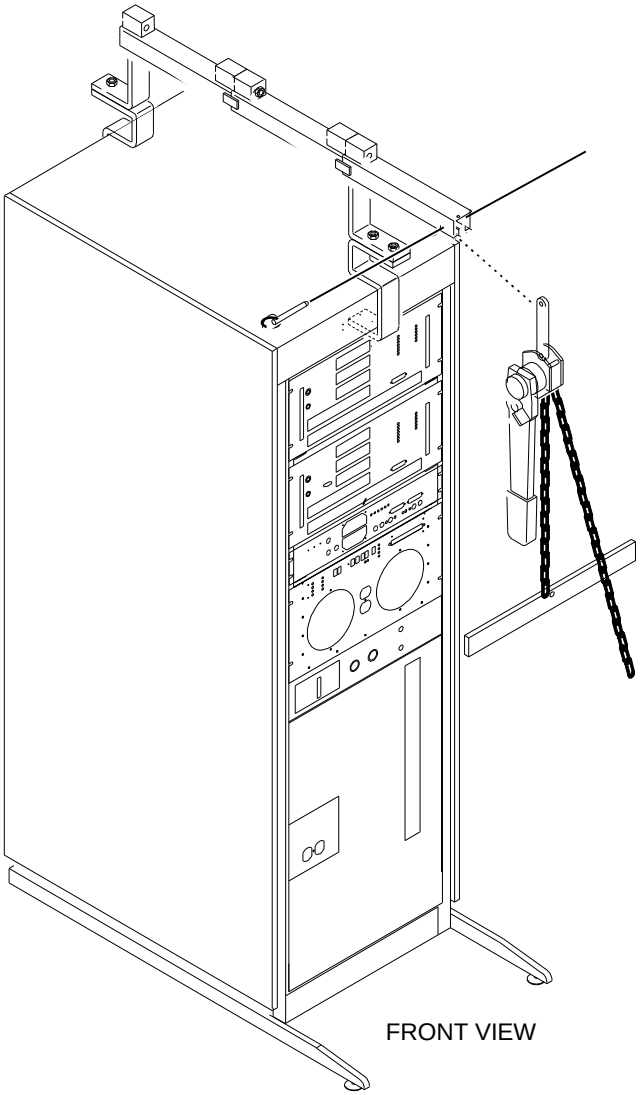
11. Locate the Hoist Assembly in the Lift Kit. See Illustration A-6.



HOIST ASSEMBLY
ILLUSTRATION A-6

A-3 Assembly Procedural Steps (continued)

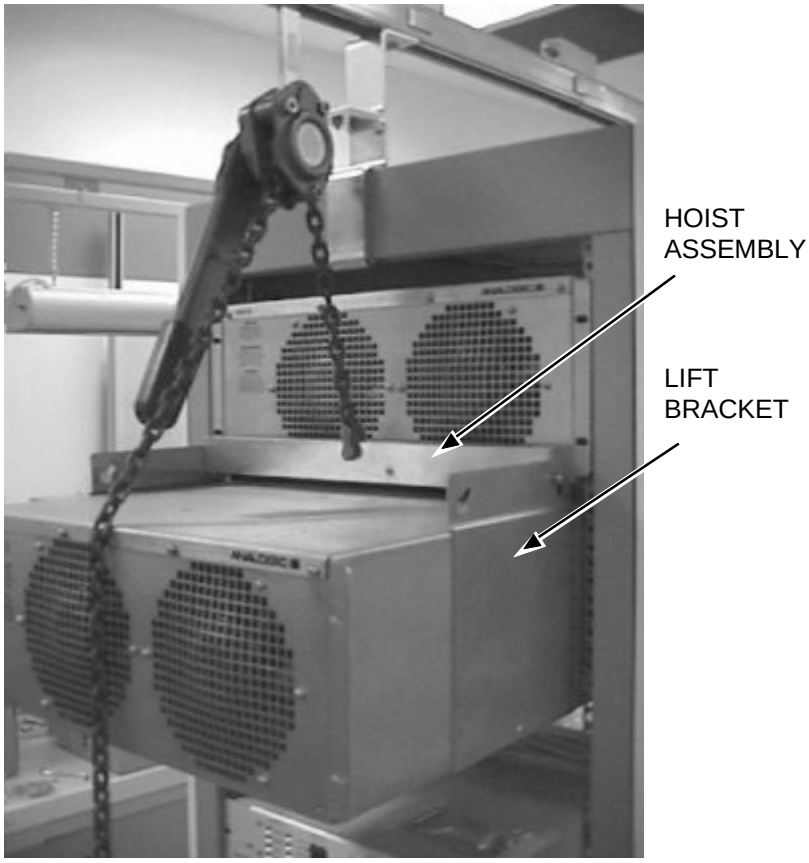
12. Insert the Hoist Assembly into the open end of the front rail. Insert a locking pin into the holes near the front edge of the front rail. This locking pin prevents the Hoist Assembly from sliding out of the rails. See Illustration A-7.



PLACEMENT OF HOIST ASSEMBLY INTO FRONT END OF STEEL RAIL ASSEMBLY
ILLUSTRATION A-7

A-3 Assembly Procedural Steps (continued)

13. Select the proper lift brackets for the Analogic RF Amplifier and attach to side of amplifier, then attach the Hoist Assembly to the lift bracket. See Illustration A-8.



ATTACHING LIFT BRACKET TO HOIST ASSEMBLY
ILLUSTRATION A-8

A-3 Assembly Procedural Steps (continued)

14. The Universal Lift Hoist is now ready for operation. Illustration A-9 shows the Universal Lift Hoist being used to remove a RF Amplifier Module from a 0.7T Power Cabinet.

USING THE UNIVERSAL LIFT HOIST TO REMOVE THE RF AMP
ILLUSTRATION A-9

REVISION HISTORY

REV	DATE	AUTHOR	PRIMARY REASONS FOR CHANGE
A	January 7, 2000	Resa Lambert	Preliminary Release.
0	January 10, 2000	Resa Lambert	Initial Release.