

EQUIPMENT TEST LIST
CONVERTERS
POWER SYSTEMS EQUIPMENT

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NOTICE

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1. GENERAL

1.01 This section provides an index and information access system to locate the standard tests applicable to equipment listed in the preceding table of contents. Test classification and frequency of periodic routine are also provided.

1.02 This Equipment Test List (ETL) is reissued to incorporate changes which are indicated by an arrow to the left of each line which has been changed.

1.03 Comments on this schedule should be made by following the instructions in Bell System Practices (BSP), Section 000-010-015.

1.04 Routine test information is arranged in the following order from left to right: Section number, issue/addendum, test letter or paragraph number, test title, test class, frequency, and the last space is for a locally assigned job number.

1.05 Section 010-300-011 provides Equipment Test List instructions.

SECTION 161-001-015

17.0 CONVERTERS

17.1 CONVERTERS; J29183A-50

FOR ALL UNITS

161-294-301 (1/0)	4.02	CHECK OUTPUT VOLTAGE ADJUSTMENT	MW 6M	-----
	4.03	CHECK OUTPUT CURRENT LIMIT ADJUSTMENT	MW 6M	-----
	4.04	CHECK CONVERTER OUTPUT FAILURE ALARM	MW 6M	-----

TROUBLE TESTS

161-294-301 (1/0)	5.01	(5.01 - 5.02) TROUBLE TEST CHART	TT	-----
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17.2 CONVERTERS; J87248B

FOR ALL UNITS

161-285-301 (3/0)	1.05	CLEAN VENTILATING PASSAGES	MW 6M	-----
	4.01	INSPECT ADJMT AND CONDITION OF RELAY CONTACTS	MW 6M	-----
	4.02	CHECK DC OUTPUT VOLTAGE AND CURRENT	MW 6M	-----

TROUBLE TESTS

161-285-301 (3/0)	5.02	TROUBLE LOCATING CHART	TT	-----
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17.3 CONVERTERS; J87248C

FOR ALL UNITS

161-285-302 (1/2)	1.04	CLEAN VENTILATING PASSAGES	MW 6M	-----
	4.01	INSPECT ADJMT AND CONDITION OF RELAY CONTACTS	MW 6M	-----
	4.02	CHECK DC OUTPUT VOLTAGE AND CURRENT	MW 6M	-----

TROUBLE TESTS

161-285-302 (1/2)	5.02	TROUBLE LOCATING CHART	TT	-----
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17.4 CONVERTERS; J87248D

FOR ALL UNITS

161-285-303 (1/1)	1.04	CLEAN VENTILATING PASSAGES	MW 6M	-----
	4.01	INSPECT ADJMT AND CONDITION OF RELAY CONTACTS	MW 6M	-----
	4.02	CHECK DC OUTPUT VOLTAGE AND CURRENT	MW 6M	-----

TROUBLE TESTS

161-285-303 (1/1)	5.02	TROUBLE LOCATING CHART	TT	-----
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17.5 CONVERTERS; J87264

FOR ALL UNITS

161-296-301 (2/0)	1.03	CLEAN VENTILATING PASSAGES	MW 6M	-----
	4.01	INSPECT ADJMT AND CONDITION OF RELAY CIRCUITS	MW 6M	-----
	4.02	CHECK CONVERTER CIRCUIT	MW 3M	-----

17.6 CONVERTERS; J87271A

FOR ALL UNITS

161-287-301 (7/0)	4.02	(4.01 - 4.02) CHECK DC INPUT VOLTAGE	MW 6M	-----
	4.03	(4.01 & 4.03) CHECK DCC OUTPUT VOLTAGE	MW 6M	-----
	4.04	INSPECT MINIATURE RELAYS	MW 6M	-----

TROUBLE TESTS

161-287-301 (7/0)	5.06	TROUBLE LOCATING LIST	TT	-----
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161-287-301 (7/0)	5.07	OPEN LOOP TEST	TT	-----
17.7 CONVERTERS; J87283, J87284 & J87285				
FOR ALL UNITS				
161-298-301 (2/0)	4.01	CHECK DC OUTPUT VOLTAGE AND CURRENT	MW 6M	-----
	4.04	CHECK LV AND HV MONITORS	MW 3M	-----
TROUBLE TESTS				
161-298-301 (2/0)	5.02	(5.02 - 5.04) COMPONENT TROUBLE LIST	TT	-----
17.8 CONVERTERS; J87288A				
FOR ALL UNITS				
161-289-301 (4/0)	3.01	CHECK FOR ADEQUATE VENTILATION	MW 6M	-----
	4.01	(4.01 - 4.02) CHECK OUTPUT VOLTAGE	MW 6M	-----
17.9 CONVERTERS; J87293				
FOR ALL UNITS				
161-290-301 (2/0)	1.04	CLEAN VENTILATING PASSAGES	MW 6M	-----
	4.01	(A) CHECK NOMINAL INPUT VOLTAGE	MW 6M	-----
	4.01	(B) CHECK OUTPUT VOLTAGE	MW 6M	-----
TROUBLE TESTS				
161-290-301 (2/0)	5.01	TROUBLE LOCATING PROCEDURE	TT	-----
17.10 CONVERTERS; J87294				
FOR ALL UNITS				
161-291-301 (3/0)	1.04	CLEAN VENTILATING PASSAGES	MW 6M	-----
	4.01	(A) CHECK NOMINAL INPUT VOLTAGE	MW 6M	-----
	4.01	(B) CHECK OUTPUT VOLTAGE	MW 6M	-----
TROUBLE TESTS				
161-291-301 (3/0)	5.04	(5.04, 5.05A) INPUT FUSE OR F1 START PROT FUSE OPERATED	TT	-----
	5.05	(B) LOSS OF OUTPUT VOLTAGE-INPUT FUSE NOT OPERATED	TT	-----
	5.06	DYNAMIC TESTS	TT	-----
17.11 CONVERTERS; J87297				
FOR ALL UNITS				
161-292-301 (5/0)	1.04	CLEAN VENTILATING PASSAGES	MW 6M	-----
	4.01	CHECK OUTPUT VOLTAGE	MW 6M	-----
17.12 CONVERTERS; J87298				
FOR ALL UNITS				
161-293-301 (4/0)	1.08	CHECK VENTILATING PASSAGES	MW 6M	-----
	4.01	INSPECT ADJMT AND CONDITION OF RELAY CONTACTS	MW 6M	-----
	4.04	CHECK CONVERTER OUTPUT VOLTAGE	MW 6M	-----
	4.05	CHECK ALARM AND SHUTDOWN CIRCUITS	MW 6M	-----
TROUBLE TESTS				
161-293-301 (4/0)	5.04	SCR VOLTAGE WAVEFORM	TT	-----
	5.05	OSCILLATOR CIRCUIT PACK (CP3)	TT	-----

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161-293-301 (4/0)	5.06	TROUBLE CHART	TT	-----
	6.01	(6.01 - 6.07) COMPONENT TEST PROCEDURES	TT	-----
17.13 CONVERTERS; J87304A				
FOR ALL UNITS				
161-295-301 (4/0)	4.01	CLEAN VENTILATING PASSAGES	MW 6M	-----
	4.02	CONVERTER INPUT VOLTAGE CHECK	MW 12M	-----
	4.03	CONVERTER OUTPUT VOLTAGE CHECK	MW 12M	-----
TROUBLE TESTS				
161-295-301 (4/0)	5.02	(A) TEST FOR EXCESSIVE CONVERTER OUTPUT RIPPLE VOLTAGE (X-WIRING OPTION)	TT	-----
	5.02	(B) TEST FOR EXCESSIVE CONVERTER OUTPUT RIPPLE VOLTAGE (W-WIRING OPTION)	TT	-----
17.14 CONVERTERS; J87305A				
FOR ALL UNITS				
161-297-301 (3/0)	1.06	CLEAN VENTILATING PASSAGES	MW 6M	-----
	4.03	CHECK DC OUTPUT VOLTAGE AND CURRENT	MW 6M	-----
	4.04	(1-10) CHECK LOW-VOLTAGE ALARM CIRCUIT	MW 6M	-----
	4.04	(11-23) CHECK HIGH-VOLTAGE SHUTDOWN CIRCUIT	MW 6M	-----
	4.04	(24-27) CHECK OSCILLATOR INPUT VOLTAGE CIRCUIT.	MW 6M	-----
	4.04	(28-39) CHECK CURRENT LIMITING CIRCUIT	MW 6M	-----
17.15 CONVERTERS; J87306A				
FOR ALL UNITS				
161-261-301 (2/0)	4.03	CLEAN VENTILATING PASSAGES	MW 6M	-----
	4.04	DC OUTPUT VOLTAGE AND CURRENT	MW 6M	-----
	4.05	LOW-VOLTAGE ALARM	MW 6M	-----
	4.06	HIGH-VOLTAGE SHUTDOWN	MW 6M	-----
	4.07	OSCILLATOR INPUT VOLTAGE	MW 6M	-----
	4.08	CURRENT LIMITING	MW 6M	-----
17.16 CONVERTERS; J87307				
FOR ALL UNITS				
161-266-301 (2/0)	1.04	CLEAN VENTILATING PASSAGES	MW 6M	-----
	4.03	CHECK DC OUTPUT VOLTAGE AND CURRENT	MW 6M	-----
	4.04	CONVERTER CIRCUIT CHECK	MW 12M	-----
TROUBLE TESTS				
161-266-301 (2/0)	5.04	TROUBLE LOCATING CHART	TT	-----
17.17 CONVERTERS; J87308A				
FOR ALL UNITS				
161-262-301 (1/0)	4.05	CHECK OUTPUT VOLTAGE	MW 6M	-----
	4.06	CHECK LOW-VOLTAGE ALARM	MW 6M	-----
17.18 CONVERTERS; J87310A				
FOR ALL UNITS				

161-263-301 (2/0)	4.04	CHECK CONVERTER OUTPUT VOLTAGE	MW 6M	-----
	4.05	CHECK OSCILLATOR REGULATOR VOLTAGE AND FREQUENCY (CP1)	MW 3M	-----
	4.06	CHECK CURRENT-LIMITING (CP2)	MW 6M	-----
	4.07	CHECK LOW OUTPUT VOLTAGE TEST CIRCUIT (CP2)	MW 6M	-----
	4.08	CHECK LOW-VOLTAGE ALARM	MW 6M	-----
	4.09	CHECK HIGH-VOLTAGE ALARM	MW 6M	-----
	4.10	CHECK HIGH-VOLTAGE SHUTDOWN	MW 6M	-----
TROUBLE TESTS				
161-263-301 (2/0)	5.04	ALARM LAMPS	TT	-----
	5.05	TROUBLE LOCATING CHART	TT	-----
17.19 CONVERTERS; J87311A				
FOR ALL UNITS				
161-264-301 (1/0)	4.01	CLEAN VENTILATING PASSAGES	MW 6M	-----
	4.03	VOLTAGE AND CURRENT CHECK	MW 6M	-----
	4.04	CHECK OSCILLATOR INPUT VOLTAGE	MW 3M	-----
	4.05	CHECK OSCILLATOR FREQUENCY	MW 3M	-----
	4.06	CHECK LOW-VOLTAGE ALARM	MW 6M	-----
	4.07	CHECK HIGH-VOLTAGE ALARM	MW 6M	-----
	4.08	CHECK HIGH-VOLTAGE SHUTDOWN	MW 6M	-----
	4.09	CURRENT LIMITING CHECK	MW 6M	-----
TROUBLE TESTS				
161-264-301 (1/0)	5.05	TROUBLE LOCATING CHART	TT	-----
17.20 CONVERTERS; J87325				
FOR ALL UNITS				
161-271-301 (1/0)	4.04	CHECK FUSE ALARM CIRCUIT	MW 12M	-----
	4.06	CHECK OUTPUT VOLTAGE	MW 6M	-----
	4.07	CHECK VENTILATING PASSAGES	MW 6M	-----
17.21 CONVERTERS; J87331				
FOR ALL UNITS				
161-299-301 (1/1)	4.01	CLEAN VENTILATING PASSAGES	MW 6M	-----
	4.02	CONVERTER OUTPUT CHECKS	MW 6M	-----
	4.03	FUSE ALARM CHECKS	MW 12M	-----
17.22 CONVERTERS; J87332				
FOR ALL UNITS				
161-272-301 (2/0)	4.02	CHECK OUTPUT VOLTAGE	MW 6M	-----
	4.04	CHECK VOLTAGE MONITORS ADJUSTMENTS	MW 6M	-----
TROUBLE TESTS				
161-272-301 (2/0)	4.03	PULSE GENERATOR ADJMT	TT	-----
	5.02	TROUBLE LOCATING CHART	TT	-----
17.23 CONVERTERS; J87334A				

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FOR ALL UNITS

161-268-301 (4/0)	4.02	CLEAN VENTILATING PASSAGES	MW 6M	-----
	4.03	CHECK INPUT VOLTAGE	MW 6M	-----
	4.04	CHECK OUTPUT VOLTAGE ADJUSTMENT	MW 6M	-----
	4.05	CHECK REGULATOR INPUT AND BIAS VOLTAGE ADJUSTMENT	MW 6M	-----

TROUBLE TESTS

161-268-301 (4/0)	5.02	TROUBLE LOCATING CHART	TT	-----
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17.24 CONVERTERS; J87338A

FOR ALL UNITS

161-265-301 (2/1)	4.01	CLEAN VENTILATING PASSAGES	MW 6M	-----
	4.04	VOLTAGE AND CURRENT CHECK	MW 6M	-----
	4.05	CHECK OSCILLATOR INPUT VOLTAGE	MW 6M	-----
	4.06	CHECK LOW-VOLTAGE ALARM	MW 12M	-----
	4.07	CHECK HIGH-VOLTAGE SHUTDOWN	MW 12M	-----
	4.08	CURRENT LIMITING CHECK	MW 12M	-----
	4.09	CHECK OSCILLATOR FREQUENCY	MW 12M	-----

TROUBLE TESTS

161-265-301 (2/1)	5.05	DEFECTIVE OSCILLATOR CIRCUIT PACK	TT	-----
	5.06	TROUBLE LOCATING CHART	TT	-----

17.25 CONVERTERS; J87340

FOR ALL UNITS

161-267-301 (1/0)	4.01	CHECK OUTPUT VOLTAGE	MW 6M	-----
	4.02	CLEAN VENTILATING PASSAGES	MW 6M	-----

17.26 CONVERTERS; J87372A

FOR ALL UNITS

161-274-301 (1/0)	4.05	OUTPUT VOLTAGE BLOCKING DIODE CHECK	MW 3M	-----
	4.06	(4.04,4.06) OUTPUT VOLTAGE CHECK	MW 6M	-----

17.27 CONVERTERS; J87379A

FOR ALL UNITS

161-276-301 (1/0)	4.02	CHECK OUTPUT VOLTAGE	MW 6M	-----
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17.28 CONVERTERS; J87388A

FOR ALL UNITS

161-275-301 (1/0)	4.02	CHECK OUTPUT VOLTAGE	MW 6M	-----
	4.03	CHECK FUSE FAILURE ALARM	MW 3M	-----

17.29 CONVERTERS; J87391

FOR ALL UNITS

161-277-301 (2/0)	4.05	OUTPUT VOLTAGE BLOCKING DIODE CHECK	MW 6M	-----
	4.06	CHECK OUTPUT VOLTAGE	MW 6M	-----
	4.07	CHECK LOW VOLTAGE ALARM	MW 6M	-----
	4.08	CHECK HIGH VOLTAGE SHUTDOWN	MW 6M	-----

◆ 17.30 CONVERTERS; KS-5144-01, KS-5481, KS-5481-01 & KS-5485

FOR ALL UNITS

161-205-701 (5/1)	2.03	CHECK FREEDOM OF ROTATING SHAFT	MW 12M	-----
	2.04	CHECK NOISE AND VIBRATION	MW 12M	-----
	2.09	INSPECT BRUSHES	MW 12M	-----

OPTIONAL FEATURES, SELECT NO MORE THAN ONE CATEGORY

BALL BEARINGS

161-205-701 (5/1)	2.01	(A) LUBRICATE BALL BEARINGS	MW 12M	-----
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SLEEVE BEARING

161-205-701 (5/1)	2.01	(C) INSPECT WOOL PACKING-SLEEVE BEARINGS	MW 12M	-----
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OPTIONAL FEATURES

EQUIPPED W/SPEED REGULATOR

161-205-701 (5/1)	2.05	(B) CHECK OUTPUT VOLTAGE	MW 6M	-----
	2.10	CHECK SPEED REGULATOR	MW 12M	-----

TROUBLE TESTS

161-205-701 (5/1)	2.02	CHECK BEARINGS FOR EXCESSIVE WEAR	TT	-----
	2.05	CHECK SPEED AND FREQUENCY	TT	-----
	2.06	(A) CHECK OUTPUT VOLTAGE	TT	-----
	2.07	CHECK CONDITION OF COMMUTATORS AND COLLECTOR RINGS	TT	-----
	2.11	CHECK TEMPERATURE	TT	-----

◆ 17.31 CONVERTERS; KS-15916

FOR ALL UNITS

161-280-301 (1/0)	1.03	CLEAN VENTILATING COVERS	MW 6M	-----
	4.01	(A) CHECK DC OUTPUT VOLTAGE	MW 6M	-----

TROUBLE TESTS

◆ 161-280-301 (1/0)	5.04	(5.04, 5.05) INPUT-OUTPUT CIRCUIT BREAKER TRIPS	TT	-----
◆	6.01	(6.01 - 6.08) MAJOR COMPONENT TEST	TT	-----
◆	8.01	(8.01 - 8.02) POINT TO POINT VOLTAGES	TT	-----

◆ 17.32 CONVERTERS; KS-19157 L1, L2

FOR ALL UNITS

161-281-301 (1/0)	1.03	CLEAN VENTILATING PASSAGES	MW 6M	-----
	4.01	(A) CHECK DC OUTPUT VOLTAGE	MW 6M	-----

TROUBLE TESTS

161-281-301 (1/0)	5.04	F2 OUTPUT FUSE OPEN	TT	-----
	5.05	F1 INPUT FUSE OPEN	TT	-----
	5.06	NO OR LOW OUTPUT VOLTAGE, F1, F2 FUSES NOT OPEN	TT	-----
	5.07	HIGH DC OUTPUT VOLTAGE	TT	-----
	5.08	NOISE AT DC LOAD	TT	-----
	5.09	NOISE AT INPUT BATTERY OR IN ADJACENT EQUIPMENT	TT	-----

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◆	161-281-301 (1/0)	6.01	(6.01 - 6.05) MAJOR COMPONENT TEST	TT	-----
◆		7.01	(7.01 - 7.02) POINT TO POINT VOLTAGES	TT	-----
17.33 CONVERTERS; KS-19158					
FOR ALL UNITS					
	161-282-301 (1/0)	1.03	CLEAN VENTILATING PASSAGES	MW 6M	-----
		4.01	(A) CHECK DC OUTPUT VOLTAGE	MW 6M	-----
TROUBLE TESTS					
	161-282-301 (1/0)	5.04	F1 OUTPUT FUSE OPEN	TT	-----
		5.05	CB1 INPUT CKT BRKR OPEN	TT	-----
		5.06	NO OUTPUT - CB1 CKT BRKR AND F1 FUSE DO NOT OPEN	TT	-----
		5.07	NOISE AT DC LOAD	TT	-----
		5.08	NOISE AT INPUT BATTERY OR IN ADJACENT EQUIPMENT	TT	-----
◆		6.01	(6.01 - 6.05) MAJOR COMPONENT TEST	TT	-----
◆		7.01	(7.01 - 7.02) POINT TO POINT VOLTAGES	TT	-----
17.34 CONVERTERS; KS-19303 L1					
FOR ALL UNITS					
	161-283-301 (2/0)	1.05	CLEAN VENTILATING PASSAGES	MW 6M	-----
		4.02	CHECK DC OUTPUT VOLTAGE AND CURRENT	MW 6M	-----
	163-283-301 (2/0)	4.01	INSPECT ADJMT AND CONDITION OF RELAY CONTACTS	MW 6M	-----
TROUBLE TESTS					
	161-283-301 (2/0)	5.05	TROUBLESHOOTING CHART	TT	-----
◆	17.35 CONVERTERS; KS-19303 L3 & KS-19815 L2				
SELECT ONLY ONE CATEGORY					
KS-19303 L3					
	161-283-302 (2/0)	4.01	CLEAN VENTILATING PASSAGES	MW 6M	-----
		4.02	INSPECT K1 & K2 RELAY ADJMT AND CONDITION OF CONTACTS	MW 6M	-----
		4.04	CHECK DC OUTPUT VOLTAGE AND CURRENT	MW 6M	-----
		4.05	CHECK CONVERTER CIRCUIT	MW 6M	-----
KS-19815 L2					
	161-283-302 (2/0)	4.01	CLEAN VENTILATING PASSAGES	MW 3M	-----
		4.02	INSPECT K1 & K2 RELAY ADJMT AND CONDITION OF CONTACTS	MW 6M	-----
		4.04	CHECK DC OUTPUT VOLTAGE AND CURRENT	MW 6M	-----
		4.05	CHECK CONVERTER CIRCUIT	MW 6M	-----
TROUBLE TESTS					
	161-283-302 (2/0)	5.05	TROUBLESHOOTING CHART	TT	-----
17.36 CONVERTERS; KS-19304 L1					
FOR ALL UNITS					
	161-284-301 (4/0)	1.05	CLEAN VENTILATING PASSAGES	MW 6M	-----
		5.01	INSPECT ADJMT AND CONDITION OF RELAY CONTACTS	MW 6M	-----

161-284-301 (4/0)	5.02	CHECK DC OUTPUT VOLTAGE AND CURRENT	MW 6M	-----
	5.04	TEST LOW VOLTAGE ALARM	MW 12M	-----
	5.05	TEST HIGH VOLTAGE SHUTOFF	MW 12M	-----
TROUBLE TESTS				
161-284-301 (4/0)	6.05	TROUBLESHOOTING CHART	TT	-----
17.37 CONVERTERS; KS-19521				
FOR ALL UNITS				
161-288-301 (1/0)	1.03	CLEAN VENTILATING PASSAGES	MW 6M	-----
	4.01	(4.01 - 4.02) CHECK OUTPUT VOLTAGE	MW 6M	-----
17.38 CONVERTERS; KS-19815 L1				
FOR ALL UNITS				
161-279-301 (6/0)	4.01	CLEAN VENTILATING PASSAGES	MW 6M	-----
	4.02	INSPECT ADJMT AND CONDITION OF K1 AND K2 RELAY CONTACTS	MW 6M	-----
	4.04	CHECK CONVERTER OUTPUT VOLTAGE AND CURRENT	MW 6M	-----
	4.05	CHECK CONVERTER CIRCUITS	MW 12M	-----
17.39 CONVERTERS; KS-21092				
FOR ALL UNITS				
161-200-301 (1/0)	1.04	CLEAN VENTILATING PASSAGES	MW 6M	-----
	4.02	5 VDC ADJUSTMENT	MW 6M	-----
	4.03	+10 VDC ADJUSTMENT	MW 6M	-----
	4.04	+24 VDC ADJUSTMENT	MW 6M	-----
17.40 CONVERTERS; KS-21093				
FOR ALL UNITS				
161-200-302 (1/0)	1.04	CLEAN VENTILATING PASSAGES	MW 6M	-----
	4.02	(1-5) CHECK 5 VDC VOLTAGE ADJMT	MW 6M	-----
	4.02	(12-24) CHECK 5 VDC OVERVOLTAGE ADJMT	MW 6M	-----
	4.02	(6-11) CHECK 5 VDC OVERCURRENT ADJMT	MW 6M	-----
TROUBLE TESTS				
161-200-302 (1/0)	5.02	TROUBLE LOCATING CHART	TT	-----
17.41 CONVERTERS; J87400 L2				
FOR ALL UNITS				
161-256-301 (1/0)	4.01	CLEAN VENTILATING PASSAGES	MW 6M	-----
	4.03	CHECK OUTPUT VOLTAGE ADJUSTMENT	MW 3M	-----
	4.04	CHECK HV MONITOR AND OVERCURRENT MONITOR	MW 3M	-----
	4.05	CHECK HV MONITOR ADJ.	MW 6M	-----
TROUBLE TESTS				
161-256-301 (1/0)	5.02	TROUBLE TEST CHART	TT	-----
	5.03	DEFECTIVE CP2 TEST	TT	-----
	5.04	DEFECTIVE CP1 TEST	TT	-----
	5.05	DEFECTIVE CP3 TEST	TT	-----

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161-256-301 (1/0)	5.06	DEFECTIVE Q1 AND Q2 THYRTR TEST	TT	-----
17.42 CONVERTERS; J29361AB-1				
FOR ALL UNITS				
161-269-301 (1/0)	4.02	OUTPUT VOLTAGE CHECK	MW 6M	-----
	4.03	OUTPUT CURRENT LIMIT CHECK	MW 6M	-----
	4.04	CHECK CONVERTER OUTPUT FAILURE ALARM	MW 6M	-----
TROUBLE TESTS				
161-269-301 (1/0)	5.02	TROUBLE TEST CHART	TT	-----
	5.03	TEST FOR FAULTY CAPACITORS C1 THRU C6	TT	-----
	5.04	TEST FOR FAULTY VOLTAGE REGULATOR, CKT CARD A2	TT	-----
	5.05	TEST FAULTY INVERTER, CKT CARD A1 AND PWR TRANS	TT	-----
	5.06	TEST FOR FAULTY INPUT CHOKE L1	TT	-----
	5.07	TEST FOR FAULTY TRANSISTORS Q1 AND Q2	TT	-----
	5.08	TEST FOR FAULTY POWER RECTIFIERS CR1 AND CR2	TT	-----
	5.09	TEST FOR FAULTY RESISTOR R1	TT	-----
17.43 CONVERTERS; J87371A L2				
FOR ALL UNITS				
161-270-301 (1/0)	4.01	CLEAN VENTILATING PASSAGES	MW 6M	-----
	4.03	OUTPUT VOLTAGE ADJ CHECK	MW 3M	-----
	4.04	HIGH VOLTAGE MONITOR AND OVERCURRENT MONITOR CHECK	MW 3M	-----
	4.05	HIGH VOLTAGE MONITOR ADJ	MW 6M	-----
TROUBLE TESTS				
161-270-301 (1/0)	5.02	TROUBLE TEST CHART	TT	-----
	5.03	TEST FOR DEFECTIVE CP2	TT	-----
	5.04	TEST FOR DEFECTIVE CP1	TT	-----
	5.05	TEST FOR DEFECTIVE CP3	TT	-----
	5.06	TEST FOR DEFECTIVE Q1 AND Q2 THYRISTOR	TT	-----
17.44 CONVERTERS; J87416				
FOR ALL UNITS				
161-299-302 (1/0)	4.05	OUTPUT VOLTAGE CHECK	MW 6M	-----
	4.06	HIGH/LOW VOLTAGE SHUTDOWN CHECK	MW 6M	-----
	4.07	FUSE ALARM CHECKS	MW 6M	-----
TROUBLE TESTS				
161-299-302 (1/0)	5.01	TROUBLE TEST CHART	TT	-----
17.45 CONVERTERS; KS-21354 L1				
FOR ALL UNITS				
161-203-302 (2/0)	4.01	CLEAN VENTILATING PASSAGES	MW 12M	-----
	4.02	CHECK DC INPUT VOLTAGE	MW 6M	-----
	4.03	CHECK AC OUTPUT VOLTAGE	MW 6M	-----

161-203-302 (2/0)	4.04	CHECK OUTPUT VOLTAGE FREQUENCY	MW 6M	-----
TROUBLE TESTS				
161-203-302 (2/0)	5.02	(5.02 - 5.06) COMPONENT TEST	TT	-----
	5.08	TROUBLE CHART	TT	-----
17.46 CONVERTERS; J29361E-1				
FOR ALL UNITS				
161-269-302 (1/0)	4.03	CHECK OUTPUT VOLTAGE	MW 6M	-----
	4.04	CHECK OUTPUT CURRENT	MW 6M	-----
	4.08	CHECK VENTILATING PASSAGES	MW 3M	-----
OPTIONAL FEATURES				
USED IN J29361A-1 RINGING AND TONE PLANT				
161-269-302 (1/0)	4.05	CHECK OUTPUT CURRENT LIMIT ADJUSTMENT	MW 12M	-----
	4.06	CHECK HV SHUTDOWN ADJUSTMENT	MW 12M	-----
	4.07	CHECK LOW VOLTAGE ALARM ADJUSTMENT	MW 12M	-----
17.47 CONVERTERS; KS-21952 L1				
FOR ALL UNITS				
161-299-303 (1/1)	4.01	CHECK VENTILATING PASSAGES	MW 12M	-----
	4.02	CHECK HV AND CFA RELAY CONTACTS	MW 12M	-----
	4.04	CHECK OUTPUT VOLTAGE LEVEL	MW 6M	-----
	4.05	CHECK LOW-VOLTAGE ALARM	MW 6M	-----
	4.06	CHECK HV SHUTDOWN ALARM	MW 6M	-----
TROUBLE TESTS				
161-299-303 (1/1)	5.04	FAILURE INDICATION LIST	TT	-----
17.48 CONVERTERS; J87225A				
FOR ALL UNITS				
161-286-301 (1/0)	4.01	(A) CHECK DC INPUT VOLTAGE	MW 3M	-----
	4.01	(B) CHECK DC OUTPUT VOLTAGE	MW 3M	-----
TROUBLE TESTS				
161-286-301 (1/0)	5.01	(5.01 - 5.06) TROUBLE SYMPTOMS	TT	-----
	6.01	(6.01 - 6.11) COMPONENT CHECKING PROCEDURES	TT	-----