

**EQUIPMENT TEST LIST**  
**KS-TYPE RECTIFIERS**  
**POWER SYSTEMS EQUIPMENT**

	CONTENTS	PAGE		CONTENTS	PAGE
1.	GENERAL . . . . .	1.0	28.20	KS-15911 L2,L3 . . . . .	5
28.1	KS-5651, KS-5651-01 & KS-5651-02 . . . . .	2	28.21	KS-15999 L2 . . . . .	5
28.2	KS-5669 . . . . .	2	28.22	KS-19210 L1 . . . . .	5
28.3	KS-5928 L5 OR KS-15620 L4 . . . . .	2	28.23	KS-19210 L2,L7 . . . . .	6
28.4	KS-15123 L2 . . . . .	2	28.24	KS-19210 L3 . . . . .	6
28.5	KS-15135 . . . . .	2	28.25	KS-19210 L4,L9 . . . . .	7
28.6	KS-15620 L1-L3, L6&L10 . . . . .	2	28.26	KS-19210 L11,L12 . . . . .	7
28.7	KS-15620 L7-L9,L11-L17,L21-L23 . . . . .	3	28.27	KS-19210 L23,L24 . . . . .	8
28.8	KS-15655 . . . . .	3	28.28	KS-19211 L1 . . . . .	8
28.9	KS-15661 L28 . . . . .	3	28.29	KS-19211 L2,L7 . . . . .	9
28.10	KS-15661 EXCEPT L28 . . . . .	3	28.30	KS-19211 L3 . . . . .	9
28.11	KS-15678 . . . . .	3	28.31	KS-19211 L4,L9 . . . . .	10
28.12	KS-15689 L1,L3 . . . . .	4	28.32	KS-19211 L11,L12 . . . . .	10
28.13	KS-15737 . . . . .	4	28.33	KS-19212 L1,L2 . . . . .	10
28.14	KS-15885 L1-L4 . . . . .	4	28.34	KS-19212 L3,L4 . . . . .	11
28.15	KS-15894 L1,L2 . . . . .	5	28.35	KS-19212 L11,L12 . . . . .	11
28.16	KS-15894 L3 . . . . .	5	28.36	KS-19213 L2 . . . . .	12
28.17	KS-15894 L4 . . . . .	5	28.37	KS-19213 L3 . . . . .	12
28.18	KS-15898 L1-L4 . . . . .	5	28.38	KS-19213 L5,L9 . . . . .	13
28.19	KS-15907 L1,L2 . . . . .	5	28.39	KS-19213 L6,L7 . . . . .	13

**NOTICE**

Not for use or disclosure outside the  
Bell System except under written agreement

SECTION 169-001-012

	CONTENTS	PAGE
28.40	KS-19213 L11,L12 . . . . .	14
28.41	KS-19214 L2,L5 . . . . .	14
28.42	KS-19214 L3,L6 . . . . .	15
28.43	KS-19214 L11,L12 . . . . .	15
28.44	KS-19215 L1,L2 . . . . .	16
28.45	KS-19215 L3,L4 . . . . .	17
28.46	KS-19215 L11,L12 . . . . .	17
28.47	KS-19216 L1,L2 . . . . .	17
28.48	KS-19231 L1,L2 . . . . .	18
28.49	KS-19356 L1,L2 . . . . .	18
28.50	KS-19356 L3,L4 . . . . .	18
28.51	KS-19356 L11,L12 . . . . .	19
28.52	KS-19424 L1-L3 . . . . .	19
28.53	KS-19412 L1 . . . . .	19
28.54	KS-19700 L1 . . . . .	20
28.55	KS-19790 L11,L12 . . . . .	20
28.56	KS-19791 L11,L12 . . . . .	20
28.57	KS-19792 L11,L12 . . . . .	21
28.58	KS-19793 L11,L12 . . . . .	22
28.59	KS-20039 L11,L12,L23 & L24 . . . . .	22
28.60	KS-20040 L11,L12 . . . . .	23
28.61	KS-20489 L11,L12 . . . . .	23
28.62	KS-20489 L21,L22 . . . . .	24
28.63	KS-20490 L11,L12 . . . . .	25
28.64	KS-20490 L21,L22 . . . . .	25
28.65	KS-20491 L21-L24 . . . . .	26

	CONTENTS	PAGE
28.66	KS-20493 L21,L22 . . . . .	27
28.67	KS-21113 L1,L2 . . . . .	27
28.68	KS-5663 L8, L9, L10 . . . . .	28
28.69	KS-15668 L1-L3 . . . . .	28
28.70	KS-19921 L1 . . . . .	29
28.71	KS-20121 L1-L4 . . . . .	29
28.72	KS-21090 . . . . .	29
28.73	KS-21091 . . . . .	29
28.74	KS-21195 . . . . .	29
28.75	KS-21421 L1,L2 . . . . .	29
28.76	KS-21520 . . . . .	30
28.77	KS-5789 . . . . .	31
28.78	KS-19790 L21,L22 . . . . .	31
28.79	KS-21522 L11, L12, L21 & L22 . . . . .	31

**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 section 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 169-001-012

28.0 RECTIFIERS, KS

◆ 28.1 RECTIFIERS, KS; KS-5651, KS-5651-01 & KS-5651-02

SELECT ONLY ONE CATEGORY

◆	RELAY TYPE CONTROL KS-5651 & KS-5651-01				
	169-660-302 (4/0)	4.07	CHECK OUTPUT VOLTAGE AND CURRENT	MW M	-----
		4.10	CLEAN VENTILATING PASSAGES	MW 12M	-----
◆	ELECTRONIC TYPE CONTROL KS-5651 & KS-5651-01				
	169-660-301 (3/0)	4.13	CLEAN VENTILATING PASSAGES	MW 12M	-----
		4.14	CHECK OUTPUT VOLTAGE	MW M	-----

TROUBLE TESTS

◆	ELECTRONIC TYPE CONTROL KS-5651 & KS-5651-01				
◆	169-660-301 (3/0)	4.09	VACUUM TUBES CHECK	TT	-----
◆		4.10	RELAY CONTACT CONDITION AND ADJMT	TT	-----
◆	RELAY TYPE OUTPUT CONTROL KS-5651-02				
◆	169-660-306 (2/1)	3.01	VACUUM TUBES CHECK	TT	-----
◆		3.02	RELAYS	TT	-----
◆	RELAY TYPE OUTPUT CONTROL KS-5651 & KS-5651-01				
◆	169-660-302 (4/0)	4.08	VACUUM TUBES CHECK	TT	-----
◆		4.09	RELAY CONTACT CONDITION AND ADJMT	TT	-----
◆	ELECTRONIC TYPE CONTROL KS-5651-02				
◆	169-660-311 (2/0)	4.01	VACUUM TUBES CHECK	TT	-----
◆		4.02	INSPECT RELAYS	TT	-----

28.2 RECTIFIERS, KS; KS-5669

FOR ALL UNITS

◆	169-661-301 (1/0)		CHECK OUTPUT VOLTAGE	MW M	-----
---	-------------------	--	----------------------	------	-------

◆ 28.3 RECTIFIERS, KS; KS-5928 L5 OR KS-15620 L4

FOR ALL UNITS

	169-662-301 (3/0)	1.04	CLEAN VENTILATING PASSAGES	MW 12M	-----
		4.01	(A) CHECK OUTPUT VOLTAGE	MW 3M	-----
		4.01	(B) CHECK VOLTAGE REFERENCE TUBES	MW 12M	-----

28.4 RECTIFIERS, KS; KS-15123 L2

FOR ALL UNITS

	169-680-301 (1/0)	3.02	CHECK STARTING TIME DELAY	MW 12M	-----
		3.03	CHECK OUTPUT VOLTAGE	MW 3M	-----
		3.04	CHECK LOAD REGULATION	MW 12M	-----

28.5 RECTIFIERS, KS; KS-15135

FOR ALL UNITS

	169-681-301 (1/0)	3.01	CHECK OUTPUT VOLTAGE	MW 3M	-----
--	-------------------	------	----------------------	-------	-------

28.6 RECTIFIERS, KS; KS-15620 L1-L3, L6&L10

FOR ALL UNITS

	169-682-301 (6/0)	1.04	CLEAN VENTILATING PASSAGES	MW 12M	-----
--	-------------------	------	----------------------------	--------	-------

169-682-301	(6/0)	4.01	(A) CHECK FOR NORMAL OUTPUT VOLTAGE	MW M	-----
28.7 RECTIFIERS, KS; KS-15620 L7-L9,L11-L17,L21-L23					
FOR ALL UNITS					
169-682-302	(4/0)	4.02	CLEAN VENTILATING PASSAGES	MW 12M	-----
		4.05	CHECK FOR NORMAL OUTPUT VOLTAGE	MW M	-----
		4.06	CHECK OUTPUT VOLTAGE UNDER TEST LOAD	MW 12M	-----
28.8 RECTIFIERS, KS; KS-15655					
FOR ALL UNITS					
169-683-301	(1/0)	-	CHECK OUTPUT VOLTAGE	MW M	-----
		1.02	CLEAN VENTILATING PASSAGES	MW 12M	-----
		3.01	CHECK ELECTRON TUBES	MW 12M	-----
28.9 RECTIFIERS, KS; KS-15661 L28					
FOR ALL UNITS					
169-262-301	(5/0)	1.07	CLEAN VENTILATING PASSAGES	MW 12M	-----
		4.01	(A) CHECK DC OUTPUT	MW 3M	-----
OPTIONAL FEATURES					
E/W CHARGE FAILURE ALARM RELAY					
169-262-301	(5/0)	3.06	(C) TEST CHARGE FAILURE ALARM	MW 12M	-----
TROUBLE TESTS					
169-262-301	(5/0)	5.01	NO RECTIFIER OUTPUT VOLTAGE	TT	-----
		5.04	DEFECTIVE SELENIUM RECTIFIER STACKS	TT	-----
		5.05	DEFECTIVE SILICON DIODES	TT	-----
		5.06	TROUBLE CHART	TT	-----
28.10 RECTIFIERS, KS; KS-15661 EXCEPT L28					
FOR ALL UNITS					
169-262-301	(5/0)	1.07	CLEAN VENTILATING PASSAGES	MW 12M	-----
		4.01	(A) CHECK DC OUTPUT	MW 3M	-----
		4.01	(B) CHECK SELENIUM RECTIFYING ELEMENT FOR AGING	MW 12M	-----
OPTIONAL FEATURES					
E/W CHARGE FAILURE ALARM RELAY					
169-262-301	(5/0)	3.06	(A&C) TEST CHARGE FAILURE ALARM	MW 12M	-----
TROUBLE TESTS					
169-262-301	(5/0)	5.01	NO RECTIFIER OUTPUT VOLTAGE	TT	-----
		5.04	DEFECTIVE SELENIUM RECTIFIER STACKS	TT	-----
		5.05	DEFECTIVE SILICON DIODES	TT	-----
		5.06	TROUBLE CHART	TT	-----
28.11 RECTIFIERS, KS; KS-15678					
FOR ALL UNITS					
169-265-301	(3/0)	4.02	CHECK OUTPUT VOLTAGE ADJUSTMENT	MW 3M	-----
		4.03	CHECK CHARGE FAILURE ALARM	MW 12M	-----

## SECTION 169-001-012

169-265-301	(3/0)	4.04	CLEAN VENTILATING PASSAGES	MW 12M	-----
TROUBLE TESTS					
169-265-301	(3/0)	5.02	DEFECTIVE SELENIUM RECTIFIER STACK	TT	-----
		5.03	DEFECTIVE SILICON DIODES	TT	-----
		5.06	TROUBLE CHART	TT	-----
28.12 RECTIFIERS, KS; KS-15689 L1,L3					
SELECT ONLY ONE CATEGORY					
L1 RELAY TYPE CONTROL					
169-685-306	(2/0)	3.02	CHECK OUTPUT VOLTAGE	MW M	-----
		4.04	CLEAN VENTILATING PASSAGES	MW 12M	-----
		4.05	CHECK VM VOLTMETER	MW 12M	-----
L3 ELECTRONIC CONTROL					
169-685-301	(4/1)	4.05	CHECK AR AMMETER RELAY AND CC TST METER	MW 12M	-----
		4.06	CHECK VM VOLTMETER ACCURACY	MW 12M	-----
TROUBLE TESTS					
169-685-301	(4/1)	4.03	RECTIFIER OPERATION	TT	-----
		4.04	CCH AND CCL POTENTIOMETER ADJUSTMENT	TT	-----
169-685-306	(2/0)	4.02	ELECTRON TUBES	TT	-----
		4.03	ADJMT & CONDITION OF RELAY CONTACTS	TT	-----
		4.09	VARISTOR SR13	TT	-----
		4.10	SLOW RECTIFIER RESPONSE	TT	-----
28.13 RECTIFIERS, KS; KS-15737					
FOR ALL UNITS					
169-686-301	(2/0)	1.03	CLEAN VENTILATING PASSAGES	MW 12M	-----
		4.01	(B) CHECK OUTPUT VOLTAGE	MW M	-----
TROUBLE TESTS					
169-686-301	(2/0)	5.03	AGED RECT1 RECTIFIER STACK	TT	-----
		5.03	DEFECTIVE VIBR OR PWR OSC	TT	-----
		5.04	TROUBLE LOCATING CHART	TT	-----
		6.01	(6.01 - 6.04) POINT TO POINT VOLTAGE VALUES	TT	-----
28.14 RECTIFIERS, KS; KS-15885 L1-L4					
FOR ALL UNITS					
169-687-301	(3/0)	4.02	CLEAN VENTILATING PASSAGES	MW 12M	-----
		4.03	CHECK VOLTMETER (OUTPUT VOLTS) ACCURACY	MW 12M	-----
		4.04	CHECK AMMETER RELAY (AR) ACCURACY	MW 12M	-----
		4.06	CHECK RECTIFIER SHUTDOWN AND ALARMS	MW 12M	-----
TROUBLE TESTS					
169-687-301	(3/0)	3.03	OL RELAY OPERATION	TT	-----
		4.01	CONTACTOR AND RELAYS CONTACT CONDITION AND ADJMT	TT	-----
		4.05	LAMP AND OUTPUT VOLTS METER INDICATIONS (702C PLANT)	TT	-----

169-687-301	(3/0)	5.02	RECTIFIER REMOVAL FROM SERVICE	TT	-----
		5.03	SELENIUM SEMI-COND RECT CELLS	TT	-----
		5.04	DEFECTIVE RECTIFIER STACK	TT	-----
		5.06	DEFECTIVE CONT POTENTIOMETER AND CKT BRKR	TT	-----
		5.07	LINE VOLTAGE REGULATOR (BOOSTER)	TT	-----
		5.08	TROUBLE CHART	TT	-----
28.15 RECTIFIERS, KS; KS-15894 L1,L2					
FOR ALL UNITS					
169-688-301	(4/0)	1.05	CLEAN VENTILATING PASSAGES	MW 12M	-----
		4.01	(A) CHECK OUTPUT VOLTAGES	MW 3M	-----
28.16 RECTIFIERS, KS; KS-15894 L3					
FOR ALL UNITS					
169-688-301	(4/0)	1.05	CLEAN VENTILATING PASSAGES	MW 12M	-----
		4.01	(B) CHECK OUTPUT VOLTAGES	MW 3M	-----
28.17 RECTIFIERS, KS; KS-15894 L4					
FOR ALL UNITS					
169-688-301	(4/0)	1.05	CLEAN VENTILATING PASSAGES	MW 12M	-----
		4.01	(C) CHECK OUTPUT VOLTAGES	MW 3M	-----
28.18 RECTIFIERS, KS; KS-15898 L1-L4					
FOR ALL UNITS					
169-689-301	(2/1)	1.08	CLEAN VENTILATING PASSAGES	MW 12M	-----
		4.01	(A) CHECK OUTPUT VOLTAGE	MW 3M	-----
		4.01	(B) CHECK LOAD CURRENT (AND AFTER ALL EQUIPMENT ADDITIONS)	MW 12M	-----
28.19 RECTIFIERS, KS; KS-15907 L1,L2					
FOR ALL UNITS					
169-692-301	(2/0)	1.06	CLEAN VENTILATING PASSAGES	MW 12M	-----
		4.01	CHECK OUTPUT VOLTAGE	MW 3M	-----
28.20 RECTIFIERS, KS; KS-15911 L2,L3					
FOR ALL UNITS					
169-696-301	(1/0)	1.04	CLEAN VENTILATING PASSAGES	MW 12M	-----
		4.01	(A) CHECK OUTPUT VOLTAGE	MW 3M	-----
		4.01	(B) CHECK VOLTAGE AND DROOP ADJUSTMENT	MW 12M	-----
28.21 RECTIFIERS, KS; KS-15999 L2					
FOR ALL UNITS					
169-703-301	(1/0)	1.06	CLEAN VENTILATING PASSAGES AND RECTIFYING ELEMENTS	MW 12M	-----
		4.01	(A) CHECK OUTPUT VOLTAGE	MW 3M	-----
		4.01	(B) CHECK OFFICE LOAD	MW 3M	-----
28.22 RECTIFIERS, KS; KS-19210 L1					
FOR ALL UNITS					
169-701-701	(1/1)	3.07	CLEAN, LUBRICATE, AND OPERATE ROTATING ARMS	MW 6M	-----

SECTION 169-001-012

169-704-301	(2/1)	4.02	INSPECT CONTACTOR AND RELAYS	MW 12M	-----
		4.05	CHECK VOLTAGE LIMITING CIRCUIT	MW 12M	-----
		4.06	CHECK MAXIMUM CURRENT LIMIT	MW 12M	-----
		4.07	CHECK FUSE ALARM	MW 12M	-----
		5.02	CHECK CONTROL CURRENT	MW 6M	-----
169-704-701	(1/1)	3.01	(B) INSPECT DC OUTPUT SWITCH	MW 6M	-----
		3.08	DISASSEMBLY OF DC OUTPUT SWITCH (WHEN INSPECTIONS SHOW NEED)	MW *	-----
		3.11	PERFORM PREVENTIVE MAINTENANCE OF DC OUTPUT SWITCH	MW 6M	-----

TROUBLE TESTS

169-704-311	(1/1)	4.01	(4.01 - 4.02) TROUBLE LOCATING PROCEDURES	TT	-----
		5.01	(5.01 - 5.06) TROUBLE TESTS	TT	-----
		6.01	(6.01 - 6.05) COMPONENT CHECKING PROCEDURES	TT	-----
169-704-701	(1/1)	3.03	DC OUTPUT SWITCH ELECTRICAL TESTS	TT	-----
		3.04	DC OUTPUT SWITCH TEMPERATURE RISE TESTS	TT	-----
		3.06	CLEANING AND LUBRICATION OF DC OUTPUT SWITCH (WHERE INSPECTIONS SHOW NEED)	TT	-----
		3.09	INSPECTING, ADJUSTING, AND LUBRICATING OF SWITCH (MUST FOLLOW DISASSEMBLY PROCEDURE)	TT	-----

28.23 RECTIFIERS, KS; KS-19210 L2,L7

FOR ALL UNITS

169-704-701	(1/1)	3.01	(B) INSPECT DC OUTPUT SWITCH	MW 6M	-----
		3.03	DC OUTPUT SWITCH ELECTRICAL TESTS	MW 6M	-----
		3.04	DC OUTPUT SWITCH TEMPERATURE RISE TESTS	MW 6M	-----
		3.06	CLEAN AND LUBRICATE DC OUTPUT SWITCH (WHERE INSPECTIONS SHOW NEED)	MW *	-----
		3.07	CLEAN, LUBRICATE, AND OPERATE ROTATING ARMS	MW 6M	-----
		3.08	DISASSEMBLY OF DC OUTPUT SWITCH (WHEN INSPECTIONS SHOW NEED)	MW *	-----
		3.09	INSPECTING, ADJUSTING, AND LUBRICATING OF SWITCH (MUST FOLLOW DISASSEMBLY PROCEDURE)	MW *	-----
		3.11	PERFORM PREVENTIVE MAINTENANCE OF OUTPUT SWITCH	MW 6M	-----
169-705-301	(2/1)	5.02	CHECK CONTROL CURRENT	MW 6M	-----

TROUBLE TESTS

169-704-311	(1/1)	4.01	(4.01 - 4.02) TROUBLE LOCATING PROCEDURES	TT	-----
		5.01	(5.01 - 5.06) TROUBLE TESTS	TT	-----
		6.01	(6.01 - 6.05) COMPONENT CHECKING PROCEDURES	TT	-----
169-705-301	(2/1)	4.02	INSPECT CONTACTOR AND RELAYS	TT	-----
		4.04	VOLTAGE-LIMITING CIRCUIT	TT	-----
		4.05	CURRENT-LIMITING CIRCUIT	TT	-----
		4.06	MINIMUM LOAD PLANT SIGNAL	TT	-----
		4.07	MAXIMUM LOAD PLANT SIGNAL	TT	-----

28.24 RECTIFIERS, KS; KS-19210 L3

## FOR ALL UNITS

169-704-701 (1/1)	3.01 (B) INSPECT DC OUTPUT SWITCH	MW 6M	-----
	3.11 PREVENTIVE MAINTENANCE OF DC OUTPUT SWITCH	MW 6M	-----
169-706-301 (2/1)	4.02 INSPECT CONTACTOR AND RELAYS	MW 12M	-----
	4.03 CHECK MAXIMUM CURRENT LIMIT	MW 12M	-----
	4.05 CHECK ALARMS AND INDICATING LAMPS	MW 12M	-----
	5.02 CHECK CONTROL CURRENT	MW 6M	-----

## OPTIONAL FEATURES

## NOT USED ON G2 UNIT

169-706-301 (2/1)	4.04 CHECK CONSTANT CURRENT HIGH AND LOW SETTINGS	MW 12M	-----
-------------------	---	--------	-------

## TROUBLE TESTS

169-704-311 (1/1)	4.01 (4.01 - 4.02) TROUBLE LOCATING PROCEDURES	TT	-----
	5.01 (5.01 - 5.06) TROUBLE TESTS	TT	-----
	6.01 (6.01 - 6.05) COMPONENT CHECKING PROCEDURES	TT	-----
169-704-701 (1/1)	3.03 DC OUTPUT SWITCH ELECTRICAL TESTS	TT	-----
	3.04 DC OUTPUT SWITCH TEMPERATURE RISE TESTS	TT	-----
	3.06 CLEAN AND LUBRICATE DC OUTPUT SWITCH (WHERE INSPECTIONS SHOW NEED)	TT	-----
	3.07 CLEAN, LUBRICATE, AND OPERATE ROTATING ARM	TT	-----

## 28.25 RECTIFIERS, KS; KS-19210 L4,L9

## FOR ALL UNITS

169-704-701 (1/1)	3.01 (B) INSPECT DC OUTPUT SWITCH	MW 6M	-----
	3.03 DC OUTPUT SWITCH ELECTRICAL TESTS	MW 6M	-----
	3.04 DC OUTPUT SWITCH TEMPERATURE RISE TESTS	MW 6M	-----
	3.06 CLEAN AND LUBRICATE DC OUTPUT SWITCH (WHERE INSPECTIONS SHOW NEED)	MW 12M	-----
	3.07 CLEAN, LUBRICATE, AND OPERATE ROTATING ARM	MW 6M	-----
	3.11 PERFORM PREVENTIVE MAINTENANCE OF DC OUTPUT SWITCH	MW 6M	-----
169-707-301 (3/1)	4.04 CHECK CURRENT LIMIT	MW 12M	-----
	4.05 CHECK PLANT LOAD SIGNAL	MW 12M	-----
	4.06 CHECK ALARM AND INDICATING LAMPS	MW 12M	-----

## TROUBLE TESTS

169-704-311 (1/1)	4.01 (4.01 - 4.02) TROUBLE LOCATING PROCEDURES)	TT	-----
	5.01 (5.01 - 5.02) TROUBLE LOCATING PROCEDURES	TT	-----
	6.01 (6.01 - 6.05) COMPONENT CHECKING PROCEDURES	TT	-----

## 28.26 RECTIFIERS, KS; KS-19210 L11,L12

## FOR ALL UNITS

169-704-312 (3/0)	4.02 CLEAN VENTILATING PASSAGES	MW 12M	-----
	4.04 (4.04.1) CHECK OUTPUT VOLTAGE ADJUSTMENT	MW 12M	-----
	4.08 CHECK FUSE FAILURE ALARM	MW 12M	-----
	4.09 CHECK SHUTDOWN FEATURE-PLANT TR LEAD	MW 12M	-----

## SECTION 169-001-012

169-704-312	(3/0)	4.10	CHECK HIGH VOLTAGE SHUTDOWN AND LOCKOUT FEATURE	MW 12M	-----
169-704-701	(1/1)	3.01	(B) INSPECT DC OUTPUT SWITCH	MW 6M	-----
		3.11	PERFORM PREVENTIVE MAINTENANCE OF DC OUTPUT SWITCH	MW 6M	-----

## TROUBLE TESTS

169-704-311	(1/1)	4.01	(4.01 - 4.02) TROUBLE LOCATING PROCEDURES	TT	-----
		5.01	(5.01 - 5.06) TROUBLE TESTS	TT	-----
		6.01	(5.01 - 6.05) COMPONENT CHECKING PROCEDURES	TT	-----
169-704-312	(3/0)	4.03	CONTACTOR AND RELAYS	TT	-----
		4.05	MAXIMUM-CURRENT LIMIT	TT	-----
		4.06	PARTIAL-CURRENT LIMIT	TT	-----
		4.07	MINIMUM LOAD PLANT SIGNAL	TT	-----
169-704-701	(1/1)	3.03	DC OUTPUT SWITCH ELECTRICAL TESTS	TT	-----
		3.04	DC OUTPUT SWITCH TEMPERATURE RISE TESTS	TT	-----
		3.06	CLEAN AND LUBRICATE DC OUTPUT SWITCH	TT	-----
		3.07	CLEAN, LUBRICATE, AND OPERATE ROTATING ARM	TT	-----

## 28.27 RECTIFIERS, KS; KS-19210 L23,L24

## FOR ALL UNITS

169-704-313	(1/1)	4.02	CLEAN VENTILATING PASSAGES	MW 12M	-----
		4.05	ADJUST OUTPUT VOLTAGE	MW 12M	-----
		4.07	CHECK MINIMUM LOAD PLANT SIGNAL	MW 12M	-----
		4.08	CHECK HIGH VOLTAGE MONITOR	MW 12M	-----
		4.09	CHECK FUSE FAILURE ALARM	MW 12M	-----
		4.10	CHECK TR SHUTDOWN	MW 12M	-----
		4.11	CHECK TEST MODE START-UP	MW 12M	-----
169-704-701	(1/1)	3.01	(B) INSPECT DC OUTPUT SWITCH CONTACT SURFACES	MW 6M	-----
		3.11	PERFORM PREVENTIVE MAINTENANCE OF DC OUTPUT SWITCH	MW 6M	-----

## TROUBLE TESTS

169-704-311	(1/1)	4.01	(4.01 - 4.02) TROUBLE LOCATING PROCEDURES	TT	-----
		5.01	(5.01 - 5.06) TROUBLE TESTS	TT	-----
		6.01	(6.01 - 6.05) COMPONENT CHECKING PROCEDURES	TT	-----
169-704-313	(1/1)	4.03	CONTACTOR & RELAYS	TT	-----
		4.06	MAXIMUM CURRENT LIMIT	TT	-----
169-704-701	(1/1)	3.03	DC OUTPUT SWITCH ELECTRICAL TEST	TT	-----
		3.04	DC OUTPUT SWITCH TEMPERATURE RISE TEST	TT	-----
		3.06	CLEAN AND LUBRICATE DC OUTPUT SWITCH	TT	-----
		3.07	CLEANING ROTATING ARM	TT	-----

## 28.28 RECTIFIERS, KS; KS-19211 L1

## FOR ALL UNITS

169-708-301	(2/1)	4.02	INSPECT CONTACTOR AND RELAYS FOR CONDITION OF CONTACTS & ADJMT	MW 12M	-----
-------------	-------	------	--	--------	-------

169-708-301	(2/1)	4.03	CHECK VOLTAGE-LIMITING CIRCUIT OPRN	MW 12M	-----
		4.04	CHECK CURRENT-LIMITING CIRCUIT OPRN	MW 12M	-----
169-708-701	(1/0)	3.01	INSPECT DC OUTPUT SWITCH	MW 6M	-----
		3.03	DC OUTPUT SWITCH ELECTRICAL TESTS	MW 6M	-----
		3.04	DC OUTPUT SWITCH TEMPERATURE RISE TESTS	MW 6M	-----
		3.06	CLEAN AND LUBRICATE DC OUTPUT SWITCH (OR WHEN INSPECTION SHOWS NEED)	MW 12M	-----
		3.09	PERFORM PREVENTIVE MAINTENANCE OF DC OUTPUT SWITCH	MW 6M	-----
28.29 RECTIFIERS, KS; KS-19211 L2,L7					
FOR ALL UNITS					
169-708-701	(1/0)	3.01	INSPECT DC OUTPUT SWITCH	MW 6M	-----
		3.03	DC OUTPUT SWITCH ELECTRICAL TESTS	MW 6M	-----
		3.04	DC OUTPUT SWITCH TEMPERATURE RISE TESTS	MW 6M	-----
		3.06	CLEAN AND LUBRICATE DC OUTPUT SWITCH (WHEN INSPECTION SHOWS NEED)	MW 12M	-----
		3.09	PERFORM PREVENTIVE MAINTENANCE OF DC OUTPUT SWITCH	MW 6M	-----
169-709-301	(3/1)	4.02	CLEAN VENTILATING PASSAGES	MW 12M	-----
		4.03	CHECK CONTACTOR AND RELAY	MW 12M	-----
		4.04	CHECK VOLTAGE-LIMITING CIRCUIT	MW 12M	-----
		4.05	CHECK CURRENT-LIMITING CIRCUIT	MW 12M	-----
		4.06	CHECK MINIMUM LOAD PLANT SIGNAL	MW 12M	-----
		4.07	CHECK MAXIMUM LOAD PLANT SIGNAL	MW 12M	-----
TROUBLE TESTS					
169-709-311	(1/0)	4.01	(4.01 - 4.07) TROUBLESHOOTING PROCEDURES	TT	-----
		5.01	(5.01 - 5.06) COMPONENT CHECKING PROCEDURES	TT	-----
28.30 RECTIFIERS, KS; KS-19211 L3					
FOR ALL UNITS					
169-708-701	(1/0)	3.01	INSPECT DC OUTPUT SWITCH	MW 6M	-----
		3.03	DC OUTPUT SWITCH ELECTRICAL TESTS	MW 6M	-----
		3.04	DC OUTPUT SWITCH TEMPERATURE RISE TESTS	MW 6M	-----
		3.06	CLEAN AND LUBRICATE DC OUTPUT SWITCH (WHEN INSPECTION SHOWS NEED)	MW 12M	-----
		3.09	PERFORM PREVENTIVE MAINTENANCE OF DC OUTPUT SWITCH	MW 6M	-----
169-710-301	(2/1)	4.02	INSPECT CONTACTOR AND RELAYS FOR CONDITION OF CONTACTS & ADJMT	MW 12M	-----
		4.03	CHECK CURRENT-LIMITING CIRCUIT OPRN	MW 12M	-----
OPTIONAL FEATURES					
NOT USED ON A G2 UNIT					
169-710-301	(2/1)	4.04	CHECK CONSTANT CURRENT HIGH AND LOW SETTINGS (NOTE: DO NOT PERFORM THIS TEST ON G2 UNIT)	MW 12M	-----
TROUBLE TESTS					
169-710-311	(1/0)	4.01	(4.01 - 4.07) TROUBLESHOOTING PROCEDURES	TT	-----

## SECTION 169-001-012

◆	169-710-311 (1/0)	5.01 (5.01 - 5.06)	COMPONENT CHECKING PROCEDURES	TT	-----
	28.31 RECTIFIERS, KS; KS-19211 L4,L9				
	FOR ALL UNITS				
◆	169-708-701 (1/0)	3.01	INSPECT DC OUTPUT SWITCH	MW 6M	-----
◆		3.06	CLEAN AND LUBRICATE DC OUTPUT SWITCH (WHEN INSPECTION SHOWS NEED)	MW 12M	-----
◆		3.09	PERFORM PREVENTIVE MAINTENANCE OF DC OUTPUT SWITCH	MW 6M	-----
	169-711-301 (2/1)	4.01	CLEAN VENTILATING PASSAGES	MW 12M	-----
		4.02	INSPECT CONTACTOR AND RELAYS	MW 12M	-----
		4.04	CHECK ACCURACY OF OUTPUT (VM1) VOLTMETER	MW 12M	-----
◆		4.05	CHECK OUTPUT VOLTAGE	MW 3M	-----
◆		4.06	CHECK CURRENT LIMITING	MW 12M	-----
◆		4.07	CHECK LOAD SIGNALING	MW 12M	-----
	TROUBLE TESTS				
	169-708-701 (1/0)	3.03	DC OUTPUT SWITCH ELECTRICAL TESTS	TT	-----
		3.04	DC OUTPUT SWITCH TEMPERATURE RISE TESTS	TT	-----
◆	169-711-311 (1/0)	4.01 (4.01 - 4.06)	TROUBLESHOOTING PROCEDURES	TT	-----
◆		5.01 (5.01 - 5.06)	COMPONENT CHECKING PROCEDURES	TT	-----
	28.32 RECTIFIERS, KS; KS-19211 L11,L12				
	FOR ALL UNITS				
	169-708-701 (1/0)	3.01	INSPECT DC OUTPUT SWITCH	MW 6M	-----
◆		3.09	PERFORM PREVENTIVE MAINTENANCE OF DC OUTPUT SWITCH	MW 6M	-----
	169-711-312 (2/1)	4.01	CLEAN VENTILATING PASSAGES	MW 12M	-----
		4.02	INSPECT CONTACTOR AND RELAYS FOR CONDITION OF CONTACTS	MW 12M	-----
		4.04	CHECK ACCURACY OF METERS	MW 12M	-----
		4.05	CHECK OUTPUT VOLTAGE	MW 3M	-----
		4.06	CHECK MAXIMUM CURRENT LIMIT	MW 12M	-----
		4.07	CHECK PARTIAL LOAD SETTING	MW 12M	-----
		4.08	CHECK MINIMUM LOAD PLANT SIGNAL	MW 12M	-----
	TROUBLE TESTS				
	169-708-701 (1/0)	3.03	DC OUTPUT SWITCH ELECTRICAL TESTS	TT	-----
		3.04	DC OUTPUT SWITCH TEMPERATURE RISE TESTS	TT	-----
◆		3.06	CLEAN AND LUBRICATE DC OUTPUT SWITCH	TT	-----
◆	169-711-311 (1/0)	4.01 (4.01 - 4.06)	TROUBLESHOOTING PROCEDURES	TT	-----
◆		5.01 (5.01 - 5.06)	COMPONENT CHECKING PROCEDURES	TT	-----
	28.33 RECTIFIERS, KS; KS-19212 L1,L2				
	FOR ALL UNITS				
	169-712-301 (5/1)	4.01	CLEAN VENTILATING PASSAGES	MW 12M	-----
		4.03	CHECK CALIBRATION OF VM VOLTMETER	MW 12M	-----
		4.04	CHECK VOLTAGE LIMITING CIRCUIT OPRN	MW 12M	-----

169-712-301 (5/1)	4.05	CHECK CURRENT LIMITING CIRCUIT ADJMT	MW 12M	-----
	4.06	CHECK RAISE AND LOWER RATE	MW 12M	-----
	4.07	CHECK AR1 AMMETER RELAY	MW 12M	-----
	4.08	CHECK FUSE ALARM	MW 12M	-----
	4.09	SCR CHECK	MW 12M	-----
169-712-701 (1/0)	3.02	INSPECT SW1 & SW2 SWITCHES	MW 6M	-----
	3.03	SW1 & SW2 TEMPERATURE RISE TEST	MW 6M	-----
	3.06	CLEAN & ADJUST SW2 SWITCH (# WHEN INSPECTION SHOWS NEED)	MW *	-----
	3.07	CLEAN & ADJUST SW1 SWITCH (# WHEN INSPECTION SHOWS NEED)	MW *	-----
	3.08	LUBRICATION OF SW2 SWITCH (# WHEN INSPECTION SHOWS NEED)	MW *	-----
	3.09	LUBRICATION OF SW1 SWITCH (# WHEN INSPECTION SHOWS NEED)	MW *	-----

TROUBLE TESTS

169-713-311 (1/0)	4.01	(4.01 - 4.07) TROUBLESHOOTING PROCEDURES	TT	-----
	5.01	(5.01 - 5.10) COMPONENT CHECKING PROCEDURES	TT	-----

28.34 RECTIFIERS, KS; KS-19212 L3,L4

FOR ALL UNITS

169-712-701 (1/0)	3.02	INSPECT SW1 & SW2 SWITCHES	MW 6M	-----
	3.03	SW1 & SW2 TEMPERATURE RISE TEST	MW 6M	-----
	3.06	CLEAN & ADJUST SW2 SWITCH (# WHEN INSPECTION SHOWS NEED)	MW *	-----
	3.07	CLEAN & ADJUST SW1 SWITCH (# WHEN INSPECTION SHOWS NEED)	MW *	-----
	3.08	LUBRICATION OF SW2 SWITCH (# WHEN INSPECTION SHOWS NEED)	MW *	-----
	3.09	LUBRICATION OF SW1 SWITCH (# WHEN INSPECTION SHOWS NEED)	MW *	-----
169-713-301 (3/1)	4.02	CHECK FLOAT AND CHARGE VOLTAGE ADJUSTMENTS	MW 12M	-----
	4.03	CHECK VOLTAGE RISE FOR CONSTANT CURRENT ADJUSTMENT	MW 12M	-----
	4.04	CHECK CURRENT-LIMITING CIRCUIT	MW 12M	-----
	4.05	CHECK FUSE ALARM	MW 12M	-----
	4.06	CHECK AR1 AND AR2 AMMETER RELAY SETTINGS FOR PLANT SIGNALING	MW 12M	-----
	4.07	CHECK SCR	MW 12M	-----

28.35 RECTIFIERS, KS; KS-19212 L11,L12

FOR ALL UNITS

169-712-701 (1/0)	3.02	INSPECT SW1 & SW2 SWITCHES	MW 6M	-----
	3.03	SW1 & SW2 TEMPERATURE RISE TEST	MW 6M	-----
	3.06	CLEAN & ADJUST SW2 SWITCH (# WHEN INSPECTION SHOWS NEED)	MW *	-----
	3.07	CLEAN & ADJUST SW1 SWITCH (# WHEN INSPECTION SHOWS NEED)	MW *	-----
	3.08	LUBRICATION OF SW2 SWITCH (# WHEN INSPECTION SHOWS NEED)	MW *	-----

SECTION 169-001-012

169-712-701	(1/0)	3.09	LUBRICATION OF SW1 SWITCH (# WHEN INSPECTION SHOWS NEED)	MW *	-----
169-713-312	(4/1)	4.02	CHECK FUSE INDICATING LAMPS	MW 6M	-----
		4.03	CHECK SCRS	MW 6M	-----
		4.04	CIRCUIT CHECKS	MW 12M	-----

28.36 RECTIFIERS, KS; KS-19213 L2

FOR ALL UNITS

169-715-301	(2/0)	4.04	CLEAN VENTILATING PASSAGES	MW 12M	-----
		4.05	CHECK VOLTMETER CALIBRATION	MW 6M	-----
		4.11	CHECK HIGH LOAD PLANT SIGNAL	MW 12M	-----
		4.12	CHECK MAX LOAD PLANT SIGNAL	MW 12M	-----
		4.13	CHECK LOW LOAD PLANT SIGNAL	MW 12M	-----
		4.14	CHECK MIN LOAD PLANT SIGNAL	MW 12M	-----
		4.16	CHECK FUSE ALARMS	MW 12M	-----
		4.17	CHECK PF ALARM LAMPS	MW W	-----
169-715-701	(2/0)	3.05	MEASURE DC OUTPUT SWITCH VOLTAGE DROP	MW 6M	-----
		3.06	MEASURE DC OUTPUT SWITCH TEMPERATURE RISE	MW 12M	-----

TROUBLE TESTS

169-715-301	(2/0)	4.02	INSPECT CONTACTOR AND RELAYS	TT	-----
		4.07	OUTPUT VOLTAGE	TT	-----
		4.08	AMPLIFIER	TT	-----
		4.09	HIGH CURRENT LIMIT	TT	-----
		4.10	LOW CURRENT LIMIT	TT	-----
		4.15	OVERLOAD RELAY	TT	-----
169-715-701	(2/0)	3.02	CHG OR BAT DISC SWITCH	TT	-----
		3.03	CS SWITCH	TT	-----
		3.10	CLEAN, INSPECT & LUBRICATE DC OUTPUT (CHG OR BAT DISC) SW CONTACTS (OR MORE OFTEN IF INSPECTION SHOWS NEED)	TT	-----
169-718-311	(1/0)	4.01	(4.01 - 4.09) TROUBLE LOCATING PROCEDURES	TT	-----
		5.01	(5.01 - 5.06) COMPONENT CHECKING PROCEDURES	TT	-----

28.37 RECTIFIERS, KS; KS-19213 L3

FOR ALL UNITS

169-715-701	(2/0)	3.02	EXERCISE CHG OR BAT DISC SWITCH	MW 6M	-----
		3.03	EXERCISE CS SWITCH	MW 6M	-----
		3.05	MEASURE DC OUTPUT SWITCH VOLTAGE DROP	MW 6M	-----
		3.06	MEASURE DC OUTPUT SWITCH TEMPERATURE RISE	MW 12M	-----
		3.10	CLEAN, INSPECT & LUBRICATE DC OUTPUT (CHG OR BAT DISC) SW CONTACTS (OR MORE OFTEN IF INSPECTION SHOWS NEED)	MW 12M	-----
169-716-301	(2/0)	4.02	INSPECT CONTACTOR AND RELAYS CONTACT CONDITION & ADJMT	MW 12M	-----
		4.04	CLEAN VENTILATING PASSAGES	MW 12M	-----
		4.05	CHECK VM OUTPUT VOLTAGE VOLTMETER	MW 6M	-----

169-716-301 (2/0)	4.07	CHECK VOLTAGE LIMITING CKT	MW 12M	-----
	4.08	CHECK CURRENT LIMITING CKT	MW 12M	-----
	4.09	CHECK MAX LOAD PLANT SIGNAL	MW 12M	-----
	4.10	CHECK MIN LOAD PLANT SIGNAL	MW 12M	-----
	4.11	CHECK RAISE AND LOWER RATE	MW 12M	-----
	4.12	CHECK OVERLOAD RELAY	MW 12M	-----
	4.13	CHECK FUSE ALARMS	MW 12M	-----
	4.14	CHECK PF ALARM LAMP	MW 6M	-----

## TROUBLE TESTS

◆ 169-718-311 (1/0)	4.01	(4.01 - 4.09) TROUBLE LOCATING PROCEDURES	TT	-----
◆	5.01	(5.01 - 5.06) COMPONENT CHECKING PROCEDURES	TT	-----

## 28.38 RECTIFIERS, KS; KS-19213 L5,L9

## FOR ALL UNITS

169-715-701 (2/0)	3.05	MEASURE DC OUTPUT SWITCH VOLTAGE DROP	MW 6M	-----
	3.06	MEASURE DC OUTPUT SWITCH TEMPERATURE RISE	MW 12M	-----
169-717-301 (3/0)	4.03	CLEAN VENTILATING PASSAGES	MW 12M	-----
◆	4.05	CHECK FLOAT VOLTAGE	MW 6M	-----
◆	4.06	CHECK CHARGE VOLTAGE	MW 6M	-----
◆	4.11	CHECK FUSE ALARM	MW 12M	-----
◆	4.12	CHECK POWER FAILURE ALARM	MW 6M	-----

## TROUBLE TESTS

◆ 169-715-701 (2/0)	3.02	CHG OR BAT DISC SWITCH	TT	-----
◆	3.03	CS SWITCH	TT	-----
	3.10	CLEAN, INSPECT & LUBRICATE DC OUTPUT (CHG OR BAT DISC) SW CONTACTS (OR MORE OFTEN IF INSPECTION SHOWS NEED)	TT	-----
◆ 169-717-301 (3/0)	4.02	CONTACTOR & ADJUST RELAY	TT	-----
◆	4.07	PLANT SIGNALING	TT	-----
◆	4.08	CURRENT-LIMITING CIRCUIT	TT	-----
◆	4.09	OVERLOAD RELAY	TT	-----
◆	4.10	AMPLIFIER CIRCUIT	TT	-----
◆ 169-718-311 (1/0)	4.01	(4.01 - 4.09) TROUBLE LOCATING PROCEDURES	TT	-----
◆	5.01	(5.01 - 5.06) COMPONENT CHECKING PROCEDURES	TT	-----

## 28.39 RECTIFIERS, KS; KS-19213 L6,L7

## FOR ALL UNITS

169-715-701 (2/0)	3.05	MEASURE DC OUTPUT SWITCH VOLTAGE DROP	MW 6M	-----
	3.06	MEASURE DC OUTPUT SWITCH TEMPERATURE RISE	MW 12M	-----
169-718-301 (2/0)	4.02	CHECK VOLTAGE-LIMITING CIRCUIT	MW 12M	-----
	4.03	CHECK CURRENT-LIMITING CIRCUIT	MW 12M	-----
	4.04	CHECK OVERLOAD RELAY	MW 12M	-----
	4.07	CHECK FUSE ALARMS	MW 12M	-----

## TROUBLE TESTS

SECTION 169-001-012

◆	169-715-701	(2/0)	3.02	CHG OR BAT DISC SWITCH	TT	-----
◆			3.03	CS SWITCH	TT	-----
			3.10	CLEAN, INSPECT & LUBRICATE DC OUTPUT (CHG OR BAT DISC) SW CONTACTS (OR MORE OFTEN IF INSPECTION SHOWS NEED)	TT	-----
◆	169-718-301	(2/0)	4.05	PLANT SIGNALING	TT	-----
◆			4.06	RAISE AND LOWER RATES	TT	-----
◆	169-718-311	(1/0)	4.01	(4.01 - 4.09) TROUBLE LOCATING PROCEDURES	TT	-----
◆			5.01	(5.01 - 5.06) COMPONENT CHECKING PROCEDURES	TT	-----

28.40 RECTIFIERS, KS; KS-19213 L11,L12

FOR ALL UNITS

	169-715-701	(2/0)	3.05	MEASURE DC OUTPUT SWITCH VOLTAGE DROP	MW 6M	-----
			3.06	MEASURE DC OUTPUT SWITCH TEMPERATURE RISE	MW 12M	-----
	169-718-312	(4/0)	4.03	CLEAN VENTILATING PASSAGES	MW 12M	-----
◆			4.07	CHECK FLOAT AND CHARGE VOLTAGE ADJUSTMENT	MW 12M	-----
◆			4.08	CHECK AUTOMATIC SHUTDOWN	MW 12M	-----

TROUBLE TESTS

◆	169-715-701	(2/0)	3.02	CHG OR BAT DISC SWITCH	TT	-----
◆			3.03	CS SWITCH	TT	-----
			3.10	CLEAN, INSPECT & LUBRICATE DC OUTPUT (CHG OR BAT DISC) SW CONTACTS (OR MORE OFTEN IF INSPECTION SHOWS NEED)	TT	-----
◆	169-718-311	(1/0)	4.01	(4.01 - 4.09) TROUBLE LOCATING PROCEDURES	TT	-----
◆			5.01	(5.01 - 5.06) COMPONENT CHECKING PROCEDURES	TT	-----
	169-718-312	(4/0)	4.01	INSPECT CONTACTOR & RELAYS	TT	-----
			4.05	OVERLOAD RELAY	TT	-----
◆			4.06	CURRENT LIMIT CIRCUIT	TT	-----

28.41 RECTIFIERS, KS; KS-19214 L2,L5

FOR ALL UNITS

	169-720-301	(3/0)	5.02	CHECK SAT CURRENT	MW M	-----
◆	169-720-332	(2/0)	4.02	CHECK AR1 MIN RELAY ADJUSTMENT	MW 12M	-----
◆			4.03	CHECK AR1 FULL RELAY ADJUSTMENT	MW 12M	-----
◆			4.04	CHECK AR1 OL RELAY ADJUSTMENT	MW 12M	-----
◆			4.05	CHECK OL THERMAL RELAY ADJUSTMENT	MW 12M	-----
◆			4.06	CHECK AR2 LOW RELAY ADJUSTMENT	MW 12M	-----
◆			4.07	CHECK AR2 HIGH RELAY ADJUSTMENT	MW 12M	-----
◆			4.08	PERFORM RECTIFIER CHECKOUT	MW 12M	-----
	169-720-701	(1/0)	3.01	TEST S1 SWITCH	MW 6M	-----
			4.01	INSPECT S2 SWITCH	MW 6M	-----
◆			4.03	CLEAN & INSPECT S2 SWITCH AND FUSE ASSEMBLY	MW 6M	-----

TROUBLE TESTS

◆	169-720-301	(3/0)	4.02	CONTACTOR & RELAYS	TT	-----
◆			4.04	(1-16) REGULATOR CIRCUIT	TT	-----

◆	169-720-301	(3/0)	4.04	(17-30) HIGH CURRENT LIMIT	TT	-----
◆			4.04	(31-42) LOW CURRENT LIMIT	TT	-----
◆			4.04	(43-83) OVERLOAD RELAY	TT	-----
◆			4.04	(84-92) AMMETER ACCURACY	TT	-----
◆			4.04	(93-104) FUSE ALARMS	TT	-----
	169-720-701	(1/0)	3.02	CLEAN AND LUBRICATE S1 CONTACTS	TT	-----
			3.03	CLEAN CENTER ARM CONNECTION	TT	-----
			3.04	CLEAN CENTER ARM CONNECTION	TT	-----
			3.08	PREVENTIVE MAINTENANCE	TT	-----
			4.02	S2 SWITCH ELECTRICAL AND THERMAL TEST	TT	-----
◆	169-721-311	(1/0)	4.01	(4.01 - 4.11) TROUBLE LOCATING PROCEDURES	TT	-----
◆			5.01	(5.01 - 5.06) COMPONENT CHECKING PROCEDURES	TT	-----

## 28.42 RECTIFIERS, KS; KS-19214 L3,L6

## FOR ALL UNITS

◆	169-720-332	(2/0)	4.02	CHECK AR1 MIN RELAY ADJUSTMENT	MW	12M	-----
◆			4.03	CHECK AR1 FULL RELAY ADJUSTMENT	MW	12M	-----
◆			4.04	CHECK AR1 OL RELAY ADJUSTMENT	MW	12M	-----
◆			4.05	CHECK OL THERMAL RELAY ADJUSTMENT	MW	12M	-----
◆			4.06	CHECK AR2 LOW RELAY ADJUSTMENT	MW	12M	-----
◆			4.07	CHECK AR2 HIGH RELAY ADJUSTMENT	MW	12M	-----
◆			4.08	PERFORM RECTIFIER CHECKOUT	MW	12M	-----
	169-720-701	(1/0)	3.01	TEST S1 SWITCH	MW	6M	-----
			4.01	INSPECT S2 SWITCH	MW	6M	-----
◆			4.03	CLEAN & INSPECT S2 SWITCH AND FUSE ASSEMBLY	MW	6M	-----
	169-721-301	(2/0)	3.03	CHECK OUTPUT CURRENT	MW	12M	-----
			4.04	(1-16) CHECK VOLTAGE-LIMITING CIRCUIT	MW	12M	-----
			4.04	(17-28) CHECK CURRENT-LIMITING CIRCUIT	MW	12M	-----
			4.04	(29-52) CHECK OVERLOAD RELAY	MW	12M	-----
			4.05	CHECK FUSE ALARMS	MW	12M	-----

## TROUBLE TESTS

	169-720-701	(1/0)	3.02	CLEAN AND LUBRICATE S1 CONTACTS	TT	-----
◆			3.03	(3.03 - 3.04) CLEAN CENTER ARM CONNECTION	TT	-----
			3.08	PREVENTIVE MAINTENANCE	TT	-----
			4.02	S2 SWITCH ELECTRICAL AND THERMAL TEST	TT	-----
◆	169-721-301	(2/0)		RAISE AND LOWER RATE	TT	-----
			4.02	INSPECT CONTACTOR & RELAYS	TT	-----
◆	169-721-311	(1/0)	4.01	(4.01 - 4.11) TROUBLE LOCATING PROCEDURES	TT	-----
◆			5.01	(5.01 - 5.06) COMPONENT CHECKING PROCEDURES	TT	-----

## 28.43 RECTIFIERS, KS; KS-19214 L11,L12

## FOR ALL UNITS

◆	169-720-332	(2/0)	4.02	CHECK AR1 MIN RELAY ADJUSTMENT	MW	12M	-----
---	-------------	-------	------	--------------------------------	----	-----	-------

## SECTION 169-001-012

◆	169-720-332 (2/0)	4.03	CHECK AR1 FULL RELAY ADJUSTMENT	MW 12M	-----
◆		4.04	CHECK AR1 OL RELAY ADJUSTMENT	MW 12M	-----
◆		4.05	CHECK OL THERMAL RELAY ADJUSTMENT	MW 12M	-----
◆		4.06	CHECK AR2 LOW RELAY ADJUSTMENT	MW 12M	-----
◆		4.07	CHECK AR2 HIGH RELAY ADJUSTMENT	MW 12M	-----
◆		4.08	PERFORM RECTIFIER CHECKOUT	MW 12M	-----
	169-720-701 (1/0)	3.01	TEST S1 SWITCH	MW 6M	-----
		4.01	INSPECT S2 SWITCH	MW 6M	-----
		4.02	S2 SWITCH ELECTRICAL AND THERMAL TEST	MW 6M	-----
		4.03	S2 SWITCH AND FUSE ASSEMBLY CLEANING AND INSPECT	MW 6M	-----
	169-721-312 (3/0)	5.02	CHECK SAT CURRENT	MW M	-----
	TROUBLE TESTS				
	169-720-701 (1/0)	3.02	CLEAN AND LUBRICATE S1 CONTACTS	TT	-----
◆		3.03	(3.03 - 3.04) CLEAN CENTER ARM CONNECTION	TT	-----
		3.08	PREVENTIVE MAINTENANCE	TT	-----
◆	169-721-311 (1/0)	4.01	(4.01 - 4.11) TROUBLE LOCATING PROCEDURES	TT	-----
◆		5.01	(5.01 - 5.06) COMPONENT CHECKING PROCEDURES	TT	-----
◆	169-721-312 (3/0)	4.04	(1-16) MAXIMUM CURRENT LIMIT CIRCUIT	TT	-----
◆		4.04	(17-27) LOW CURRENT LIMIT	TT	-----
◆		4.04	(28-31) TR LEAD SHUTDOWN	TT	-----
◆		4.04	(32-47) HV LEAD SHUTDOWN	TT	-----
◆		4.04	(48-58) OVERLOAD RELAY	TT	-----
	28.44 RECTIFIERS, KS; KS-19215 L1,L2				
	FOR ALL UNITS				
	169-712-701 (1/0)	3.02	INSPECT SW1 & SW2 SWITCHES	MW 6M	-----
◆		3.03	PERFORM SW1 & SW2 TEMPERATURE RISE TEST	MW 6M	-----
◆	169-722-301 (5/2)	4.01	CLEAN INTERIOR OF RECTIFIER (OR AS REQUIRED)	MW 12M	-----
◆		4.04	CHECK FUSE ALARMS	MW 12M	-----
	TROUBLE TESTS				
	169-712-701 (1/0)	3.06	CLEAN & ADJUST SW2 SWITCH (# WHEN INSPECTION SHOWS NEED)	TT	-----
		3.07	CLEAN & ADJUST SW1 SWITCH (# WHEN INSPECTION SHOWS NEED)	TT	-----
		3.08	LUBRICATION OF SW2 SWITCH (# WHEN INSPECTION SHOWS NEED)	TT	-----
		3.09	LUBRICATION OF SW1 SWITCH (# WHEN INSPECTION SHOWS NEED)	TT	-----
◆	169-722-301 (5/2)	4.02	VOLTAGE-LIMITING CIRCUIT	TT	-----
◆		4.03	CURRENT-LIMITING CIRCUIT	TT	-----
◆		4.05	SCRS	TT	-----
◆		4.06	RAISE AND LOWER RATE	TT	-----
◆	169-723-311 (1/0)	4.01	(4.01 - 4.11) TROUBLE LOCATING PROCEDURES	TT	-----

169-723-311	(1/0)	5.01	(5.01 - 5.06) COMPONENT CHECKING PROCEDURES	TT	-----
28.45 RECTIFIERS, KS; KS-19215 L3,L4					
FOR ALL UNITS					
169-712-701	(1/0)	3.02	INSPECT SW1 & SW2 SWITCHES	MW 6M	-----
		3.03	PERFORM SW1 & SW2 TEMPERATURE RISE TEST	MW 6M	-----
169-723-301	(4/3)	4.04	CHECK FUSE ALARM	MW 12M	-----
TROUBLE TESTS					
169-712-701	(1/0)	3.06	CLEAN & ADJUST SW2 SWITCH (# WHEN INSPECTION SHOWS NEED)	TT	-----
		3.07	CLEAN & ADJUST SW1 SWITCH (# WHEN INSPECTION SHOWS NEED)	TT	-----
		3.08	LUBRICATION OF SW2 SWITCH (# WHEN INSPECTION SHOWS NEED)	TT	-----
		3.09	LUBRICATION OF SW1 SWITCH (# WHEN INSPECTION SHOWS NEED)	TT	-----
169-723-301	(4/3)	4.02	HIGH AND LOW CURRENT-LIMITING	TT	-----
		4.03	VOLTAGE RISE FOR CONSTANT CURRENT	TT	-----
		4.05	SCRS	TT	-----
169-723-311	(1/0)	4.01	(4.01 - 4.11) TROUBLE LOCATING PROCEDURES	TT	-----
		5.01	(5.01 - 5.06) COMPONENT CHECKING PROCEDURES	TT	-----
28.46 RECTIFIERS, KS; KS-19215 L11,L12					
FOR ALL UNITS					
169-712-701	(1/0)	3.02	INSPECT SW1 & SW2 SWITCHES	MW 6M	-----
		3.03	PERFORM SW1 & SW2 TEMPERATURE RISE TEST	MW 6M	-----
		3.06	CLEAN & ADJUST SW2 SWITCH (OR WHEN INSPECTION SHOWS NEED)	MW 6M	-----
169-723-312	(3/2)	4.03	CHECK CIRCUIT OPERATION	MW 12M	-----
		4.04	CHECK AUTOMATIC SHUTDOWN AND ALARMS	MW 12M	-----
TROUBLE TESTS					
169-712-701	(1/0)	3.07	CLEAN & ADJUST SW1 SWITCH (# WHEN INSPECTION SHOWS NEED)	TT	-----
		3.08	LUBRICATION OF SW2 SWITCH (# WHEN INSPECTION SHOWS NEED)	TT	-----
		3.09	LUBRICATION OF SW1 SWITCH (# WHEN INSPECTION SHOWS NEED)	TT	-----
169-723-311	(1/0)	4.01	(4.01 - 4.11) TROUBLE LOCATING PROCEDURES	TT	-----
		5.01	(5.01 - 5.06) COMPONENT CHECKING PROCEDURES	TT	-----
169-723-312	(3/2)	4.05	SCRS	TT	-----
28.47 RECTIFIERS, KS; KS-19216 L1,L2					
FOR ALL UNITS					
169-724-301	(3/1)	4.04	CHECK VOLTAGE-LIMITING CIRCUIT	MW 12M	-----
		4.05	CHECK CURRENT-LIMITING CIRCUIT	MW 12M	-----
		5.02	CHECK CONTROL CURRENT	MW 12M	-----
169-724-701	(2/0)	3.01	(B) INSPECT S6 SWITCH	MW 6M	-----
		3.07	DISASSEMBLY OF THE S6 SWITCH (WHEN INSPECTION SHOWS NEED)	MW *	-----

## SECTION 169-001-012

	169-724-701	(2/0)	3.08	INSPECT, ADJUST, AND LUBRICATE DC OUTPUT SWITCH (MUST FOLLOW DISASSEMBLY PROCEDURE)	MW *	-----
◆			3.10	PERFORM PREVENTIVE MAINTENANCE OF S6 SWITCH	MW 6M	-----
	TROUBLE TESTS					
◆	169-724-311	(1/0)	4.01	(4.01 - 4.11) TROUBLESHOOTING PROCEDURES	TT	-----
◆			5.01	(5.01 - 5.06) COMPONENT CHECKING PROCEDURES	TT	-----
	169-724-701	(2/0)	3.02	S6 SWITCH ELECTRICAL TESTS	TT	-----
			3.03	S6 SWITCH TEMPERATURE RISE TESTS	TT	-----
			3.05	CLEANING AND LUBRICATION OF S6 SWITCH (WHEN INSPECTION SHOWS NEED)	TT	-----
	28.48 RECTIFIERS, KS; KS-19231 L1,L2					
	FOR ALL UNITS					
	169-271-301	(2/0)	4.01	CHECK OUTPUT VOLTAGE AND CURRENT	MW 3M	-----
			4.04	CHECK VENTILATING PASSAGES AND SEMICONDUCTOR HEAT SINKS	MW 12M	-----
	TROUBLE TESTS					
◆	169-271-301	(2/0)	5.01	(5.01 - 5.03) TROUBLE TEST CHART	TT	-----
	28.49 RECTIFIERS, KS; KS-19356 L1,L2					
	FOR ALL UNITS					
	169-726-301	(2/0)	4.02	INSPECT CONTACTOR AND RELAYS	MW 12M	-----
			4.03	CHECK VOLTAGE-LIMITING CIRCUIT	MW 12M	-----
			4.04	CHECK CURRENT-LIMITING CIRCUIT	MW 12M	-----
◆			4.05	CHECK PLANT SIGNALING	MW 12M	-----
◆			4.06	CHECK RAISE AND LOWER RATE	MW 12M	-----
◆			4.07	CHECK FUSE ALARM	MW 12M	-----
			5.02	CHECK CONTROL CURRENT	MW 12M	-----
	169-726-701	(2/0)	3.01	(B) INSPECT DC OUTPUT SWITCH	MW 6M	-----
			3.03	DC OUTPUT SWITCH ELECTRICAL TESTS	MW 6M	-----
			3.04	DC OUTPUT SWITCH TEMPERATURE RISE TESTS	MW 6M	-----
◆			3.06	CLEAN AND LUBRICATE DC OUTPUT SWITCH (OR WHEN INSPECTION SHOWS NEED)	MW 12M	-----
			3.11	PREVENTIVE MAINTENANCE OF DC OUTPUT SWITCH	MW 6M	-----
	TROUBLE TESTS					
◆	169-727-311	(1/0)	4.01	(4.01 - 4.08) TROUBLE LOCATING PROCEDURES	TT	-----
◆			5.01	(5.01 - 5.06) COMPONENT CHECKING PROCEDURES	TT	-----
	28.50 RECTIFIERS, KS; KS-19356 L3,L4					
	FOR ALL UNITS					
	169-726-701	(2/0)	3.01	(B) INSPECT DC OUTPUT SWITCH	MW 6M	-----
			3.03	DC OUTPUT SWITCH ELECTRICAL TESTS	MW 6M	-----
			3.04	DC OUTPUT SWITCH TEMPERATURE RISE TESTS	MW 6M	-----
◆			3.06	CLEAN AND LUBRICATE DC OUTPUT SWITCH (WHEN INSPECTION SHOWS NEED)	MW 12M	-----
◆			3.11	PERFORM PREVENTIVE MAINTENANCE OF DC OUTPUT SWITCH	MW 6M	-----

	169-727-301 (1/1)	3.05	CHECK FUSE ALARMS	MW 12M	-----
▶		4.03	(A,B) CHECK MAXIMUM CURRENT LIMIT	MW 12M	-----
▶		4.03	(A,C) CHECK HIGH CURRENT LIMIT	MW 12M	-----
▶		4.03	(A,D) CHECK LOW CURRENT LIMIT	MW 12M	-----
		5.02	CHECK CONTROL CURRENT	MW 12M	-----
	TROUBLE TESTS				
▶	169-727-311 (1/0)	4.01	(4.01 - 4.08) TROUBLE LOCATING PROCESURES	TT	-----
▶		5.01	(5.01 - 5.06) COMPONENT CHECKING PROCEDURES	TT	-----
	28.51 RECTIFIERS, KS; KS-19356 L11,L12				
	FOR ALL UNITS				
	169-726-701 (2/0)	3.01	(B) INSPECT DC OUTPUT SWITCH	MW 6M	-----
▶		3.06	CLEAN AND LUBRICATE DC OUTPUT SWITCH (WHEN INSPECTION SHOWS NEED)	MW 12M	-----
▶		3.11	PERFORM PREVENTIVE MAINTENANCE OF DC OUTPUT SWITCH	MW 6M	-----
	169-727-311 (1/0)	4.04	TIGHTEN MAIN LOAD CARRYING BOLTS	MW 12M	-----
	169-727-312 (3/0)	4.09	CHECK ALARM CIRCUIT	MW 12M	-----
		4.10	CHECK PLANT SIGNALS	MW 12M	-----
		5.02	CHECK CONTROL CURRENT	MW 12M	-----
	TROUBLE TESTS				
	169-726-701 (2/0)	3.03	DC OUTPUT SWITCH ELECTRICAL TESTS	TT	-----
		3.04	DC OUTPUT SWITCH TEMPERATURE RISE TESTS	TT	-----
▶	169-727-311 (1/0)	4.01	(4.01 - 4.08) TROUBLE LOCATING PROCEDURES	TT	-----
▶		5.01	(5.01 - 5.06) COMPONENT CHECKING PROCEDURES)	TT	-----
▶	169-727-312 (3/0)	4.05	FLOAT AND CHARGE VOLTAGE ADJUSTMENT	TT	-----
▶		4.06	MAXIMUM CURRENT LIMIT ADJUSTMENT	TT	-----
▶		4.07	LOW CURRENT LIMIT ADJUSTMENT	TT	-----
▶		4.08	MINIMUM LOAD SIGNAL ADJUSTMENT	TT	-----
	28.52 RECTIFIERS, KS; KS-19424 L1-L3				
	FOR ALL UNITS				
	169-728-301 (3/0)	4.02	INSPECT CONTACTOR AND RELAY CONTACTS ADJMT AND CONDITION	MW 12M	-----
		4.03	CHECK OUTPUT CURRENT (AM1) AND TEST CURRENT (AM2) AMMETERS	MW 12M	-----
		4.04	(A) CHECK CONTROLS	MW 12M	-----
		4.04	(B-D) CHECK FLOAT VOLTAGE ADJUSTMENT	MW 12M	-----
		4.04	(E-G) CHECK OVERCHARGE VOLTAGE ADJUSTMENT	MW 12M	-----
		4.05	CHECK HIGH CURRENT SHUTDOWN	MW 12M	-----
		4.06	CHECK MAXIMUM (DROOP) CURRENT	MW 12M	-----
		4.07	CHECK LOW CURRENT PLANT SIGNAL	MW 12M	-----
		4.08	CHECK RECTIFIER SHUTDOWN (PLANT SIGNAL)	MW 12M	-----

## 28.53 RECTIFIERS, KS; KS-19412 L1

FOR ALL UNITS

## SECTION 169-001-012

169-729-301	(2/0)	4.02	CHECK OUTPUT VOLTAGE (NO LOAD)	MW 3M	-----
28.54 RECTIFIERS, KS; KS-19700 L1					
FOR ALL UNITS					
169-732-301	(1/0)	4.01	CHECK OUTPUT VOLTMETER	MW 12M	-----
		4.02	(1-10) CHECK ANTI-HUNT ADJUSTMENT	MW 12M	-----
		4.02	(11-16) CHECK HIGH CURRENT ALARM AND SHUTDOWN ADJUSTMENT	MW 12M	-----
		4.02	(17-18) CHECK LOW CURRENT ALARM	MW 12M	-----
		4.02	(19-24) CHECK MAXIMUM CURRENT ADJUSTMENT	MW 12M	-----
		4.02	(25-30) CHECK OUTPUT RIPPLE VOLTAGE	MW 12M	-----
		4.03	CHECK FUSE ALARMS	MW 12M	-----
28.55 RECTIFIERS, KS; KS-19790 L11,L12					
FOR ALL UNITS					
169-730-301	(3/0)	4.10	SHUTDOWN BY BLOWN DC OUTPUT ALM OR OUTPUT CAP (F1 ALM AND F2 ALM) FUSES	MW 12M	-----
		4.11	CHECK SHUTDOWN BY TRIPPED CKT BRKR	MW 12M	-----
		4.12	CHECK SHUTDOWN BY HIGH VOLTAGE CONDITION	MW 12M	-----
		4.13	CHECK SHUTDOWN TR GROUND SIGNAL FROM PLANT	MW 12M	-----
		4.14	CHECK SHUTDOWN BY CIRCUIT PACK MALFUNCTION	MW 12M	-----
		4.15	CHECK SHUTDOWN BY THYRISTOR FAILURE DETECTOR CKT	MW 12M	-----
		4.16	CHECK ANTI-HUNT 1 NETWORK ADJMT (AS A LAST RESORT)	MW *	-----
		4.17	CHECK ANTI-HUNT 2 NETWORK ADJMT (AS REQUIRED)	MW *	-----
TROUBLE TESTS					
169-730-301	(3/0)	4.05	OUTPUT VOLTAGE ADJUSTMENT	TT	-----
		4.07	CURRENT LIMIT FULL LOAD ADJUSTMENT	TT	-----
		4.08	CURRENT LIMIT PARTICAL LOAD ADJUSTMENT	TT	-----
		5.03	TROUBLE CONDITION CHART	TT	-----
169-730-311	(1/0)	4.01	(4.01 - 4.09) TROUBLE LOCATING PROCEDURES	TT	-----
		5.01	(5.01 - 5.06) COMPONENT CHECKING PROCEDURES	TT	-----
169-730-701	(1/0)	3.02	DC OUTPUT (S3) SWITCH ELECTRICAL TEST	TT	-----
		3.03	DC OUTPUT (S3) SWITCH TEMPERATURE RISE TEST	TT	-----
		3.06	CLEAN DC OUTPUT (S3) SWITCH	TT	-----
		3.07	LUBRICATE DC OUTPUT (S3) SWITCH	TT	-----
28.56 RECTIFIERS, KS; KS-19791 L11,L12					
FOR ALL UNITS					
169-730-302	(3/0)	4.01	CLEAN VENTILATING PASSAGES	MW 12M	-----
		4.07	CHECK SHUTDOWN FEATURE-DC OUTPUT (S2) SWITCH INTERLOCK	MW 12M	-----
		4.08	CHECK SHUTDOWN FEATURE-CIRCUIT BREAKER CB1 (AND CB2 IF PROVIDED)	MW 12M	-----
		4.09	CHECK SHUTDOWN FEATURE-CIRCUIT PACK PLUG-IN CONNECTIONS	MW 12M	-----

169-730-302	(3/0)	4.10	CHECK SHUTDOWN FEATURE-DC OUTPUT FUSES F1 AND F2 OUTPUT CAPACITOR FUSES F3 AND F4	MW 12M	-----
		4.11	CHECK SHUTDOWN FEATURE-RELAY POWER FUSES F5, F7, AND F8	MW 12M	-----
		4.12	CHECK SHUTDOWN FEATURE-PLANT TR LEAD	MW 12M	-----
		4.13	CHECK SHUTDOWN FEATURE-PLANT HV LEAD	MW 12M	-----
		4.14	CHECK ALARM FEATURE-RFA LEAD	MW 12M	-----
		4.15	CHECK ALARM FEATURE- CA-CB LEADS	MW 12M	-----
169-730-702	(2/0)	3.01	INSPECT S2 SWITCH	MW 6M	-----
TROUBLE TESTS					
169-730-302	(3/0)	4.03	OUTPUT VOLTAGE ADJUSTMENT	TT	-----
		4.04	FULL LOAD CURRENT LIMIT ADJUSTMENT	TT	-----
		4.05	PARTIAL LOAD CURRENT LIMIT ADJUSTMENT	TT	-----
169-730-312	(2/0)	4.01	(4.01 - 4.07) TROUBLESHOOTING PROCEDURES	TT	-----
169-730-702	(2/0)	3.02	S2 SWITCH ELECTRICAL TEST	TT	-----
		3.03	S2 SWITCH TEMPERATURE RISE TEST	TT	-----
		3.06	CLEAN S2 SWITCH	TT	-----
		3.07	LUBRICATE S2 SWITCH	TT	-----
28.57 RECTIFIERS, KS; KS-19792 L11,L12					
FOR ALL UNITS					
169-731-301	(2/2)	4.04	CLEAN VENTILATING PASSAGES	MW 12M	-----
		4.11	CHECK SHUTDOWN FEATURE-DC OUTPUT (S1) SWITCH INTERLOCK	MW 12M	-----
		4.12	CHECK SHUTDOWN FEATURE-CIRCUIT BREAKERS (CB601, CB602, AND CB603)	MW 12M	-----
		4.13	CHECK SHUTDOWN FEATURE-CIRCUIT BREAKERS (CB604)	MW 12M	-----
		4.14	CHECK SHUTDOWN FEATURE-OVERLOAD CHECK	MW 12M	-----
		4.15	CHECK SHUTDOWN FEATURE-DC OUTPUT ALARM (F1A) FUSE	MW 12M	-----
		4.16	CHECK SHUTDOWN FEATURE-PLANT TR LEAD	MW 12M	-----
		4.17	CHECK SHUTDOWN FEATURE-PLANT HV LEAD	MW 12M	-----
169-731-701	(2/0)	3.01	TEST S1 SWITCH	MW 12M	-----
		3.02	(A) CLEAN AND LUBRICATE S1 SWITCH (ALTERNATE (A) WITH (B) OR (C) EVERY 6 MONTHS)	MW 6M	-----
		3.02	(B) CLEAN AND LUBRICATE COPPER S1 SWITCH (ALTERNATE (A) WITH (B) OR (C) EVERY 6 MONTHS)	MW 6M	-----
		3.02	(C) CLEAN AND LUBRICATE SILVER PLATED S1 SWITCH (ALTERNATE (A) WITH (B) OR (C) EVERY 6 MONTHS)	MW 6M	-----
TROUBLE TESTS					
169-731-301	(2/2)	4.02	CONTACTOR AND RELAYS	TT	-----
		4.08	OUTPUT VOLTAGE ADJUSTMENT	TT	-----
		4.09	FULL LOAD CURRENT LIMIT ADJUSTMENT	TT	-----
		4.10	PARTIAL LOAD CURRENT LIMIT ADJUSTMENT	TT	-----

SECTION 169-001-012

♦	169-731-311 (2/0)	4.01 (4.01 - 4.10)	TROUBLE LOCATING PROCEDURES	TT	-----
♦	169-731-701 (2/0)	3.03	(A) ALIGN S1 SWITCH	TT	-----
♦		3.03	(B) CHECK S1 SWITCH CONTACT	TT	-----
♦		3.03	(C) ADJUST S1 SWITCH CLIP	TT	-----
♦		3.03	(D) CHECK S1 SWITCH CONTACT PRESSURE	TT	-----
♦		4.01 (4.01 - 4.02)	CLEAN S2 SWITCH	TT	-----

28.58 RECTIFIERS, KS; KS-19793 L11,L12

FOR ALL UNITS

	169-731-302 (3/0)	4.04	CKT CHECKS AND ADJMT	MW 12M	-----
		4.05	CHECK TEST MODE OUTPUT VOLTAGE	MW 12M	-----
♦		4.08	CHECK HV SHUTDOWN AND LOCKOUT	MW 12M	-----
♦		4.09	CHECK TR SHUTDOWN	MW 12M	-----
♦		4.10	CHECK AC INPUT FUSE MONITOR CIRCUIT	MW 12M	-----
♦		4.11	CHECK FUSE ALARM CIRCUIT	MW 12M	-----
♦		4.12	CHECK PRINTED CIRCUIT INTERLOCK	MW 12M	-----
	169-731-702 (1/0)	3.02	INSPECT S2 & S3 SWITCHES	MW 6M	-----

TROUBLE TESTS

	169-731-302 (3/0)	4.02	INSPECT CONTACTOR AND RELAY CONTACTS ADJMT AND CONDITION	TT	-----
♦		4.06	CHECK FULL-LOAD CURRENT-LIMIT SETTING	TT	-----
♦		4.07	(E) PARTIAL-LOAD CURRENT-LIMIT CHECK AND SETTING	TT	-----
		5.03	ADJUSTMENT OF R247 AND R248 CP1 (OR WHEN A NEW CP1 IS INSTALLED)	TT	-----
♦	169-731-312 (2/1)	4.01 (4.01 - 4.08)	TROUBLESHOOTING PROCEDURES	TT	-----
	169-731-702 (1/0)	3.03	SWITCH TEMPERATURE RISE TEST	TT	-----
		3.06	CLEAN DC OUTPUT (S3) SWITCH	TT	-----
		3.07	CLEAN & ADJUST AC TAP (S2) SWITCH	TT	-----
		3.08	LUBRICATE DC OUTPUT (S3) SWITCH	TT	-----
		3.09	LUBRICATE AC TAP (S2) SWITCH	TT	-----

28.59 RECTIFIERS, KS; KS-20039 L11,L12,L23 & L24

FOR ALL UNITS

	169-735-301 (3/0)	4.02	INSPECT RELAY CONTACT ADJMT AND EROSION	MW 12M	-----
		4.03	CLEAN, TEST & ADJUST AC TAP (S2) & DC OUTPUT (S3) SWITCH	MW 12M	-----
		4.04	CHECK VOLTAGE REGULATION & CURRENT LIMIT ADJMT	MW 12M	-----
		4.05	CHECK OUTPUT VOLTAGE ADJMT	MW 12M	-----
		4.08	CHECK CURRENT LIMIT FULL LOAD ADJMT	MW 12M	-----
		4.10	CHECK RECTIFIER SHUTDOWNS IN TEST MODE	MW 12M	-----
		4.11	CHECK BLOWN DC OUTPUT ALM (F1 ALM) OR OUTPUT CAPACITOR (F2 ALM) FUSE SHUTDOWN	MW 12M	-----
		4.12	CHECK TRIPPED CKT BRKR SHUTDOWN	MW 12M	-----
		4.13	CHECK PLANT HIGH-VOLTAGE SHUTDOWN	MW 12M	-----

169-735-301 (3/0)	4.14	CHECK PLANT TR GROUND SIGNAL SHUTDOWN	MW 12M	-----
	4.15	CHECK CKT PACK MLFCTN SHUTDOWN	MW 12M	-----
	4.16	CHECK THYRISTOR FAILURE DETECTOR CKT SHUTDOWN	MW 12M	-----
	4.18	CHECK ANTI-HUNT 2 NETWORK ADJMT	MW 12M	-----
OPTIONAL FEATURES				
KS-20039, L23 & L24				
169-735-301 (3/0)	4.06	CHECK HIGH-VOLTAGE MONITOR ADJMT	MW 12M	-----
	4.07	CHECK HIGH-VOLTAGE MONITOR TEST	MW 12M	-----
TROUBLE TESTS				
169-735-301 (3/0)	4.17	ANTI-HUNT 1 NETWORK ADJMT	TT	-----
◆ 169-735-311 (1/0)	4.01	(4.01 - 4.08) TROUBLE LOCATING PROCEDURES	TT	-----
◆	5.01	(5.01 - 5.06) COMPONENT CHECKING PROCEDURES	TT	-----
KS-20039, L11 & L12				
169-735-301 (3/0)	4.09	CURRENT LIMIT PARTIAL LOAD ADJMT	TT	-----
28.60 RECTIFIERS, KS; KS-20040 L11,L12				
FOR ALL UNITS				
169-731-701 (2/0)	3.01	TEST S1 SWITCH	MW 12M	-----
◆	3.02	(A) CLEAN AND LUBRICATE S1 SWITCH (ALTERNATE (A) WITH (B) OR (C) EVERY 6 MONTHS)	MW 6M	-----
◆	3.02	(B) CLEAN AND LUBRICATE COPPER S1 SWITCH (ALTERNATE (A) WITH (B) OR (C) EVERY 6 MONTHS)	MW 6M	-----
◆	3.02	(C) CLEAN AND LUBRICATE SILVER PLATED S1 SWITCH (ALTERNATE (A) WITH (B) OR (C) EVERY 6 MONTHS)	MW 6M	-----
169-736-301 (5/0)	4.02	CHECK DC OVERLOAD SHUTDOWN	MW 12M	-----
	4.05	CHECK TR SHUTDOWN	MW 12M	-----
	4.06	CHECK HIGH VOLTAGE FAILURE	MW 12M	-----
	4.07	CHECK RECTIFIER FAILURE ALARM	MW 12M	-----
	4.08	CHECK OUTPUT FILTER FUSES	MW 6M	-----
TROUBLE TESTS				
◆ 169-731-701 (2/0)	3.03	(A) S1 SWITCH ADJMT	TT	-----
◆	3.03	(B) S1 SWITCH CONTACT	TT	-----
◆	3.03	(C) S1 SWITCH CLIP ADJMT	TT	-----
◆	3.03	(D) S1 SWITCH CONTACT PRESSURE	TT	-----
◆	4.01	(4.01 - 4.02) S2 SWITCH	TT	-----
◆ 169-736-301 (5/0)	4.03	FULL LOAD CURRENT LIMIT SETTING	TT	-----
◆	4.04	PARTIAL LOAD CURRENT LIMIT SETTING	TT	-----
◆ 169-736-311 (2/0)	4.01	(4.01 - 4.10) TROUBLE LOCATING PROCEDURES	TT	-----
28.61 RECTIFIERS, KS; KS-20489 L11,L12				
FOR ALL UNITS				
169-741-301 (2/2)	4.02	CLEAN VENTILATING PASSAGES	MW 12M	-----
	4.05	CHECK ACCURACY OF OUTPUT VOLTAGE (M2) VOLTMETER	MW 12M	-----

SECTION 169-001-012

◆	169-741-301 (2/2)	4.10	CHECK FUSE ALARMS	MW 12M	-----
◆		4.15	CHECK AC FUSE MONITOR	MW 12M	-----
	169-741-701 (2/0)	3.01	(B) INSPECT S3 SWITCH	MW 6M	-----

OPTIONAL FEATURES, SELECT NO MORE THAN ONE CATEGORY

◆	RECTIFIER USED IN A POWER PLANT				
◆	169-741-301 (2/2)	4.06	CHECK OUTPUT VOLTAGE	MW 3M	-----
◆		4.11	CHECK TRANSFER (TR) SHUTDOWN (302B PLANT ONLY)	MW 12M	-----
◆		4.12	CHECK PLANT CONTROLLED (HV) SHUTDOWN AND LOCKOUT	MW 12M	-----

◆	RECTIFIER NOT USED IN A POWER PLANT				
◆	169-741-301 (2/2)	4.07	CHECK OUTPUT VOLTAGE	MW 3M	-----

TROUBLE TESTS

◆	169-741-301 (2/2)	4.03	AC INPUT CONTACTOR (ST3)	TT	-----
◆		4.08	FULL LOAD CURRENT LIMIT	TT	-----
◆		4.09	PARTIAL LOAD CURRENT LIMIT	TT	-----
◆		4.13	AC INPUT VOLTAGE MONITOR	TT	-----
◆		4.14	HIGH VOLTAGE MONITOR	TT	-----
◆	169-741-311 (2/1)	4.01	(4.01 - 4.08) TROUBLE LOCATING PROCEDURES	TT	-----
◆	169-741-701 (2/0)	3.02	S3 SWITCH ELECTRICAL TESTS	TT	-----
		3.03	S3 SWITCH TEMPERATURE RISE TEST	TT	-----
◆		3.05	CLEAN AND LUBRICATE S3 SWITCH	TT	-----
◆		3.06	CLEAN ROTATING ARM-CENTER CONNECTION	TT	-----
		3.08	INSPECT, ADJUST, AND LUBRICATE S3 SWITCH (MUST FOLLOW DISASSEMBLY PROCEDURE)	TT	-----
		3.10	PREVENTIVE MAINTENANCE OF S3 SWITCH	TT	-----

28.62 RECTIFIERS, KS; KS-20489 L21,L22

FOR ALL UNITS

	169-741-301 (2/2)	4.02	CLEAN VENTILATING PASSAGES	MW 12M	-----
		4.05	CHECK ACCURACY OF OUTPUT VOLTAGE (M2) VOLTMETER	MW 12M	-----
◆		4.10	CHECK FUSE ALARM	MW 12M	-----
◆		4.14	CHECK HIGH VOLTAGE MONITOR	MW 12M	-----
◆		4.15	CHECK AC FUSE MONITOR	MW 12M	-----
	169-741-701 (2/0)	3.01	(B) INSPECT S3 SWITCH	MW 6M	-----

OPTIONAL FEATURES, SELECT NO MORE THAN ONE CATEGORY

◆	RECTIFIER USED IN A POWER PLANT				
◆	169-741-301 (2/2)	4.06	CHECK OUTPUT VOLTAGE	MW 3M	-----
◆		4.11	CHECK TRANSFER SHUTDOWN (TR) (302B PLANT ONLY)	MW 12M	-----
◆		4.12	CHECK PLANT CONTROLLED (HV) SHUTDOWN AND LOCKOUT	MW 12M	-----

◆	RECTIFIER NOT USED IN A POWER PLANT				
◆	169-741-301 (2/2)	4.07	CHECK OUTPUT VOLTAGE	MW 3M	-----

## TROUBLE TESTS

◆	169-741-301 (2/2)	4.03	AC INPUT CONTACTOR (ST3)	TT	-----
◆		4.08	FULL LOAD CURRENT LIMIT	TT	-----
◆		4.13	AC INPUT VOLTAGE MONITOR	TT	-----
◆	169-741-311 (2/1)	4.01	(4.01 - 4.08) TROUBLE LOCATING PROCEDURES	TT	-----
◆	169-741-701 (2/0)	3.02	S3 SWITCH ELECTRICAL TESTS	TT	-----
		3.03	S3 SWITCH TEMPERATURE RISE TEST	TT	-----
◆		3.05	CLEAN AND LUBRICATE S3 SWITCH	TT	-----
◆		3.07	DISASSEMBLY OF THE S3 SWITCH	TT	-----
		3.08	INSPECT, ADJUST, AND LUBRICATE S3 SWITCH (MUST FOLLOW DISASSEMBLY PROCEDURE)	TT	-----
		3.10	PREVENTIVE MAINTENANCE OF S3 SWITCH	TT	-----

## 28.63 RECTIFIERS, KS; KS-20490 L11,L12

## FOR ALL UNITS

◆	169-742-301 (2/0)	4.01	CLEAN VENTILATING PASSAGES	MW 12M	-----
◆		4.02	INSPECT AC TAP (ST2) AND AC INPUT CONTACTOR (ST3)	MW 12M	-----
◆		4.04	CHECK ACCURACY OF OUTPUT VOLTAGE (M2) VOLTMETER	MW 12M	-----
◆		4.10	SHUTDOWN FEATURE-DC OUTPUT (S1) SWITCH INTERLOCK	MW 12M	-----
◆		4.11	SHUTDOWN FEATURE-CIRCUIT BREAKER CB1	MW 12M	-----
◆		4.12	SHUTDOWN FEATURE-CIRCUIT BREAKER CB2	MW 12M	-----
◆		4.13	SHUTDOWN FEATURE-DC OUTPUT ALARM (F2) FUSE AND OUTPUT VOLTAGE (F3) FUSE	MW 12M	-----
◆	169-742-701 (1/1)	3.02	PERFORM DC OUTPUT (S1) SWITCH ELECTRICAL TEST	MW 6M	-----
◆		3.03	PERFORM DC OUTPUT (S1) SWITCH TEMPERATURE RISE TEST	MW 6M	-----

## OPTIONAL FEATURES, SELECT NO MORE THAN ONE CATEGORY

◆	RECTIFIER USED IN A POWER PLANT				
◆	169-742-301 (2/0)	4.05	CHECK OUTPUT VOLTAGE	MW 3M	-----
◆		4.14	CHECK PLANT HV LEAD SHUTDOWN FEATURE	MW 12M	-----
◆	RECTIFIER NOT USED IN A POWER PLANT				
◆	169-742-301 (2/0)	4.06	CHECK OUTPUT VOLTAGE	MW 3M	-----

## TROUBLE TESTS

◆	169-742-301 (2/0)	4.07	FULL LOAD CURRENT LIMIT ADJMT	TT	-----
◆		4.08	PARTIAL LOAD CURRENT LIMIT ADJMT	TT	-----
◆		4.09	HIGH VOLTAGE MONITOR ADJMT	TT	-----
◆	169-742-311 (2/0)	4.01	(4.01 - 4.07) TROUBLE-LOCATING PROCEDURES	TT	-----
◆	169-742-701 (2/0)	3.05	CLEAN AND LUBRICATE DC OUTPUT (S1) SWITCH CONTACTS	TT	-----

## 28.64 RECTIFIERS, KS; KS-20490 L21,L22

## FOR ALL UNITS

◆	169-742-301 (2/0)	4.01	CLEAN VENTILATING PASSAGES	MW 12M	-----
---	-------------------	------	----------------------------	--------	-------

SECTION 169-001-012

◆	169-742-301 (2/0)	4.02	INSPECT TAP (ST2) AND AC INPUT CONTACTOR (ST3)	MW 12M	-----
◆		4.04	CHECK ACCURACY OF OUTPUT VOLTAGE (M2) VOLTMETER	MW 12M	-----
◆		4.10	SHUTDOWN FEATURE-DC OUTPUT (S1) SWITCH INTERLOCK	MW 12M	-----
◆		4.11	SHUTDOWN FEATURE-CIRCUIT BREAKER CB1	MW 12M	-----
◆		4.12	SHUTDOWN FEATURE-CIRCUIT BREAKER CB2	MW 12M	-----
◆		4.13	SHUTDOWN FEATURE-DC OUTPUT ALARM (F2) FUSE AND OUTPUT VOLTAGE (F3) FUSE	MW 12M	-----
◆	169-742-701 (2/0)	3.02	PERFORM DC OUTPUT (S1) SWITCH ELECTRICAL TEST	MW 6M	-----
◆		3.03	PERFORM DC OUTPUT (S1) SWITCH TEMPERATURE RISE TEST	MW 6M	-----

OPTIONAL FEATURES, SELECT NO MORE THAN ONE CATEGORY

◆	RECTIFIER USED IN A POWER PLANT				
◆	169-742-301 (2/0)	4.05	CHECK OUTPUT VOLTAGE	MW 3M	-----
◆		4.14	CHECK PLANT HV LEAD SHUTDOWN FEATURE	MW 12M	-----

RECTIFIER NOT USED IN A POWER PLANT

◆	169-742-301 (2/0)	4.06	CHECK OUTPUT VOLTAGE	MW 3M	-----
---	-------------------	------	----------------------	-------	-------

TROUBLE TESTS

◆	169-742-301 (2/0)	4.07	FULL LOAD CURRENT LIMIT ADJMT	TT	-----
◆		4.09	HIGH VOLTAGE MONITOR ADJMT	TT	-----
◆	169-742-311 (2/0)	4.01	(4.01 - 4.07) TROUBLE LOCATING PROCEDURES	TT	-----
◆	169-742-701 (2/0)	3.05	CLEAN AND LUBRICATE DC OUTPUT (S1) SWITCH CONTACTS	TT	-----

28.65 RECTIFIERS, KS; KS-20491 L21-L24

SELECT ONLY ONE CATEGORY

LORAIN PRODUCTS CORPORATION

◆	169-743-301 (5/0)	4.04	CHECK RELAY CONTACT CONDITION	MW 12M	-----
◆		4.06	CHECK OUTPUT VOLTAGE ADJUSTMENT	MW 12M	-----
◆		4.07	CHECK CURRENT LIMIT ADJUSTMENT	MW 12M	-----
◆		4.08	CHECK OVERVOLTAGE SHUTDOWN ADJMT	MW 12M	-----
◆		4.09	CHECK TR SHUTDOWN	MW 12M	-----
◆		4.10	CHECK HV SHUTDOWN	MW 12M	-----
◆		4.11	CHECK OVERVOLTAGE SHUTDOWN AND LOCKOUT	MW 12M	-----
◆		4.12	CHECK AUTOMATIC RESTART	MW 12M	-----

ITT-NORTH ELECTRIC COMPANY

◆	169-743-302 (2/0)	4.04	CHECK RELAY CONTACT CONDITION & ADJMT	MW 12M	-----
◆		4.06	CHECK OUTPUT VOLTAGE ADJMT	MW 12M	-----
◆		4.07	CHECK CURRENT LIMIT ADJMT	MW 12M	-----
◆		4.10	CHECK TR SHUTDOWN	MW 12M	-----
◆		4.11	CHECK HV SHUTDOWN	MW 12M	-----
◆		4.12	CHECK REMOTE RECYCLE	MW 12M	-----

TROUBLE TESTS

## LORAIN PRODUCTS CORPORATION

◆ 169-743-311 (2/0) 4.01 (4.01 - 4.08) TROUBLE LOCATING PROCEDURES TT -----

## ITT-NORTH ELECTRIC COMPANY

◆ 169-743-302 (2/0) 4.08 OVERVOLTAGE SHUTDOWN ADJMT TT -----

◆ 4.09 OVERVOLTAGE SHUTDOWN ADJMT TT -----

◆ 169-743-312 (1/0) 4.01 (4.01 - 4.11) TROUBLE LOCATING PROCEDURES TT -----

28.66 RECTIFIERS, KS; KS-20493 L21,L22

## SELECT ONLY ONE CATEGORY

## LORAIN PRODUCTS CORPORATION

169-745-301 (4/0) 4.02 CHECK RECT OUTPUT FLOAT VOLTAGE MW 12M -----

4.04 CHECK RELAY CONTACT CONDITION MW 12M -----

4.07 CHECK CURRENT LIMITING ADJMT MW 12M -----

4.08 CHECK OVERVOLTAGE SHUTDOWN ADJMT MW 12M -----

4.09 CHECK TR SHUTDOWN MW 12M -----

4.10 CHECK HB SHUTDOWN MW 12M -----

4.11 CHECK OVERVOLTAGE SHUTDOWN AND LOCKOUT MW 12M -----

4.12 CHECK AUTOMATIC RESTART MW 12M -----

## ITT-NORTH ELECTRIC COMPANY

◆ 169-745-302 (2/0) 4.06 CHECK OUTPUT VOLTAGE ADJMT MW 12M -----

◆ 4.08 CHECK CURRENT LIMIT ADJMT (EARLY PRODUCTION MODELS) MW 12M -----

◆ 4.09 CHECK CURRENT LIMIT ADJMT (LATER PRODUCTION MODELS) MW 12M -----

◆ 4.10 CHECK OVERVOLTAGE SHUTDOWN ADJMT MW 12M -----

◆ 4.11 CHECK OVERVOLTAGE SHUTDOWN SETTING (END CELL) MW 12M -----

◆ 4.12 CHECK TR SHUTDOWN MW 12M -----

◆ 4.13 CHECK HV SHUTDOWN MW 12M -----

◆ 4.14 CHECK AUTOMATIC RESTART MW 12M -----

## TROUBLE TESTS

## LORAIN PRODUCTS CORPORATION

◆ 169-745-301 (4/0) 4.06 OUTPUT VOLTAGE ADJMT TT -----

◆ 169-745-311 (2/0) 4.01 (4.01 - 4.08) TROUBLE LOCATING PROCEDURES TT -----

## ITT-NORTH ELECTRIC COMPANY

◆ 169-745-312 (2/0) 4.01 (4.01 - 4.09) TROUBLE LOCATING PROCEDURES TT -----

◆ 5.01 (5.01 - 5.07) COMPONENT CHECKING PROCEDURES TT -----

◆ 28.67 RECTIFIERS, KS; KS-21113 L1,L2

## SELECT ONLY ONE CATEGORY

## LORAIN PRODUCTS CORPORATION

169-746-301 (1/0) 4.01 CLEAN AIR FILTER MW 6M -----

◆ 4.05 CHECK OUTPUT VOLTAGE ADJUSTMENT MW 12M -----

◆ 4.06 CHECK CURRENT LIMITING ADJUSTMENT MW 12M -----

◆ 4.08 CHECK HV SHUTDOWN MW 12M -----

169-746-301 (1/0)	4.09	CHECK AUTO START	MW 12M	-----
ITT-NORTH ELECTRIC COMPANY				
169-746-302 (2/1)	4.01	CLEAN AIR FILTER	MW 6M	-----
	4.02	CHECK POWER PLANT OUTPUT VOLTAGE	MW M	-----
	4.04	CHECK CONDITION OF RELAY CONTACTS	MW 12M	-----
	4.05	CHECK OUTPUT VOLTAGE ADJUSTMENT	MW 12M	-----
	4.06	CHECK CURRENT LIMITING ADJUSTMENT	MW 12M	-----
WARREN COMMUNICATIONS COMPANY				
169-746-304 (1/0)	4.02	CLEAN AIR FILTER	MW 6M	-----
	4.03	CHECK OUTPUT VOLTAGE ADJUSTMENT	MW 12M	-----
	4.04	CHECK CURRENT LIMITING ADJUSTMENT	MW 12M	-----
	4.05	CHECK PWB INTERLOCK	MW 12M	-----
	4.06	CHECK AC MONITOR	MW 12M	-----
	4.07	CHECK FUSE ALARMS	MW 12M	-----
	4.08	CHECK HV SHUTDOWN	MW 12M	-----
	4.09	CHECK FAN FAIL SHUTDOWN	MW 12M	-----
ACME ELECTRIC COMPANY				
169-746-303 (1/0)	4.02	CLEAN VENTILATING PASSAGES	MW 12M	-----
	4.03	CLEAN AIR FILTER	MW 6M	-----
	4.04	CHECK OUTPUT FLOAT VOLTAGE	MW 12M	-----
	4.07	CHECK OUPTUT VOLTAGE ADJMT	MW 12M	-----
	4.08	CHECK PWB INTERLOCK	MW 12M	-----
	4.09	CHECK FUSE ALARM	MW 12M	-----
	4.10	CHECK AC MONITOR	MW 12M	-----
	4.11	CHECK INTERNAL HV MONITOR	MW 12M	-----
28.68 RECTIFIERS, KS; KS-5663 L8, L9, L10				
FOR ALL UNITS				
169-445-301 (1/0)	4.01	CLEAN VENTILATING PASSAGES	MW 12M	-----
	4.02	CHECK DC OUTPUT VOLTAGE	MW 3M	-----
	4.03	CHECK DIODES	MW 6M	-----
TROUBLE TESTS				
169-445-301 (1/0)	5.01	DEFECTIVE DIODE REPLCMT	TT	-----
	5.02	TROUBLE TEST CHART	TT	-----
28.69 RECTIFIERS, KS; KS-15668 L1-L3				
FOR ALL UNITS				
169-465-301 (3/0)	1.05	CLEAN VENTILATING PASSAGES	MW 12M	-----
	4.01	(A&B) CHECK OUTPUT VOLTAGE	MW 3M	-----
	4.01	(C) CHECK VENTILATING PASSAGES	MW 12M	-----
	4.01	(D) INSPECT AND CHECK RELAY CONTACTS	MW 12M	-----
TROUBLE TESTS				
169-465-301 (3/0)	5.01	(5.01 - 5.03) CHECK OUTPUT VOLTAGE	TT	-----

◆	169-465-301 (3/0)	5.04	(5.04 - 5.05) SELENIUM RECTIFIER STACK RPLCMT	TT	-----
		5.06	SILICON DIODE RPLCMT	TT	-----
		5.07	TROUBLE TEST CHART	TT	-----
	28.70 RECTIFIERS, KS; KS-19921 L1				
	FOR ALL UNITS				
	169-466-301 (1/0)	4.01	(B&C) CHECK RECTIFIER OPERATION	MW 6M	-----
		5.01	(A) CHECK AC INPUT VOLTAGE	MW 6M	-----
	TROUBLE TESTS				
◆	169-466-301 (1/0)	5.02	(5.02 - 5.06) RECTIFIER FAILURE	TT	-----
	28.71 RECTIFIERS, KS; KS-20121 L1-L4				
	FOR ALL UNITS				
	169-467-301 (2/0)	4.01	INSPECT RELAY CONTACT ADJMT AND CONDITION	MW 12M	-----
		4.03	(1) CHECK OUTPUT VOLTAGE	MW 3M	-----
		4.03	(10) CHECK LOW VOLTAGE ALARM	MW 12M	-----
		4.03	(5) CHECK DC OUTPUT FUSE FAILURE ALARM	MW 12M	-----
	OPTIONAL FEATURES				
	KS-20121 L3 & L4				
	169-467-301 (2/0)	4.03	(7) CHECK HV SHUTDOWN	MW 12M	-----
	28.72 RECTIFIERS, KS; KS-21090				
	FOR ALL UNITS				
	169-472-301 (2/0)	1.04	CLEAN VENTILATING PASSAGES	MW 12M	-----
◆		4.02	(1) CHECK NEGATIVE 48-VDC OUTPUT ADJMT	MW 3M	-----
		4.02	(5) CHECK OVERVOLTAGE ADJMT	MW 3M	-----
	TROUBLE TESTS				
◆	169-472-301 (2/0)	5.01	(5.01 - 5.02) TROUBLE TEST CHART	TT	-----
	28.73 RECTIFIERS, KS; KS-21091				
	FOR ALL UNITS				
	169-472-302 (2/0)	1.04	CLEAN VENTILATING PASSAGES	MW 12M	-----
		4.02	(1) CHECK NEG 48 VDC OUTPUT ADJMT	MW 3M	-----
		4.02	(5) CHECK NEG 48 VDC OUTPUT OVERVOLTAGE ADJMT	MW 3M	-----
		4.03	(1) CHECK POS 48 VDC OUTPUT ADJMT	MW 3M	-----
		4.03	(5) CHECK POS 48 VDC OUTPUT OVERVOLTAGE ADJMT	MW 3M	-----
	TROUBLE TESTS				
◆	169-472-302 (2/0)	5.01	(5.01 - 5.02) TROUBLE TEST CHART	TT	-----
	28.74 RECTIFIERS, KS; KS-21195				
	FOR ALL UNITS				
	169-472-303 (1/0)	1.04	CLEAN VENTILATING PASSAGES	MW 12M	-----
		4.01	CHECK OUTPUT VOLTAGE	MW 3M	-----
	28.75 RECTIFIERS, KS; KS-21421 L1,L2				
	SELECT ONLY ONE CATEGORY				
	KS-21421 L1				

## SECTION 169-001-012

169-472-304 (1/0)	4.02	CHECK DC OUTPUT VOLTAGE ADJMT	MW 3M	-----
	4.04	CHECK OVERVOLTAGE ADJMT	MW 3M	-----

## KS-21421 L2

169-472-304 (1/0)	4.03	CHECK DC OUTPUT VOLTAGE ADJMT	MW 3M	-----
	4.05	CHECK OVERVOLTAGE ADJMT	MW 3M	-----

## 28.76 RECTIFIERS, KS; KS-21520

## SELECT ONLY ONE CATEGORY

## LORAIN PRODUCTS CORP

169-748-301 (1/0)	4.05	CHECK OUTPUT VOLTAGE ADJMT	MW 12M	-----
	4.06	CHECK CURRENT LIMIT FULL LOAD SET POINT AND ADJMT	MW 12M	-----
	4.07	CHECK PARTIAL LOAD CURRENT LIMIT SET POINT AND ADJMT (L11 AND L12 ONLY)	MW 12M	-----
	4.08	CHECK INTERNAL HV MONITOR ADJMT	MW 12M	-----
	4.10	(4.09 - 4.10) CHECK SIMULATED TR SHUTDOWN AND ALARM	MW 12M	-----
	4.11	(4.09 & 4.11) CHECK SIMULATED PLANT HV SHUTDOWN AND REMOTE RECYCLE	MW 12M	-----
	4.12	CHECK FUSE ALARMS	MW 12M	-----
	4.13	RECTIFIER DISCD FROM BAT UNDER LOAD OPERATION	MW 12M	-----
	4.14	CHECK LOAD CARRYING BOLTS	MW 12M	-----
169-748-501 (1/0)	3.01	CLEAN RECTIFIER CABINET INTERIOR	MW 12M	-----
	4.01	PRFPG DC OUTPUT (S1) SWITCH FOR TEST (AND PRIOR TO TESTS)	MW 12M	-----
	4.02	DC OUTPUT (S1) SWITCH ELECTRICAL TEST	MW 12M	-----
	4.03	CLEAN, LUBRICATE & ADJ DC OUTPUT SWITCH	MW 12M	-----
	5.01	CHECK BOLTED ELECTRICAL CONNECTIONS	MW 12M	-----

## WARREN COMMUNICATIONS

169-748-302 (1/1)	4.02	INSPECT RELAYS FOR CONTACT ADJMT AND EROSION	MW 12M	-----
	4.04	CHECK CKT BOARD INTERLOCK	MW 12M	-----
	4.05	CHECK OUTPUT VOLTAGE ADJMT	MW 12M	-----
	4.06	CHECK CURRENT LIMIT FULL LOAD SET POINT AND ADJMT	MW 12M	-----
	4.07	CHECK PARTIAL LOAD CURRENT LIMIT SET POINT AND ADJMT	MW 12M	-----
	4.08	CHECK LO RELAY OPRN AND ADJMT	MW 12M	-----
	4.09	CHECK HV MONITOR DIVIDER	MW 12M	-----
	4.10	CHECK HV MONITOR CKT	MW 12M	-----
	4.11	CHECK HV SHUTDOWN AND REMOTE START CKT	MW 12M	-----
	4.12	CHECK RECT FAILURE ALARM	MW 12M	-----
	4.13	CHECK AC VOLTAGE MONITOR TEST INDR CKT	MW 12M	-----
	4.14	CHECK TR SHUTDOWN CKT	MW 12M	-----
	4.15	CHECK LOAD CARRYING BOLTS	MW 12M	-----
169-748-502 (1/0)	3.01	CLEAN RECTIFIER CABINET INTERIOR	MW 12M	-----

169-748-502	(1/0)	4.01	PRFPG DC OUTPUT (S1) SWITCH FOR TEST (AND PRIOR TO TESTS)	MW 12M	-----
		4.02	PERFORM DC OUTPUT (S1) SWITCH ELECTRICAL TEST	MW 12M	-----
		4.03	CLEAN AND LUBRICATE DC OUTPUT SWITCH	MW 12M	-----
		5.01	CHECK BOLTED ELECTRICAL CONNECTIONS	MW 12M	-----
TROUBLE TESTS					
LORAIN PRODUCTS CORP					
169-748-311	(1/0)	4.01	(4.01 - 4.19) TROUBLE LOCATING PROCEDURES	TT	-----
		5.01	(5.01 - 5.06) COMPONENT CHECKING PROCEDURES	TT	-----
WARREN G-V COMMUNICATIONS					
169-748-312	(1/0)	4.01	(4.01 - 4.08) TROUBLESHOOTING PROCEDURES	TT	-----
		5.01	(5.01 - 5.09) COMPONENT CHECKING PROCEDURES	TT	-----
28.77 RECTIFIERS, KS; KS-5789					
FOR ALL UNITS					
169-663-301	(1/0)	2.06	CHECK OUTPUT VOLTAGE ADJMT	MW 3M	-----
		2.07	(2.07 - 2.08) CHECK GRID CURRENT	MW 3M	-----
		3.01	CHECK ELECTRON TUBES	MW 12M	-----
28.78 RECTIFIERS, KS; KS-19790 L21,L22					
FOR ALL UNITS					
169-730-301	(3/0)	4.02	INSPECT RELAY CONTACT ADJMT & EROSION (EXCEPT CAPSULATED MB-TYPE RELAY)	MW 12M	-----
		4.03	CLEAN, TEST, AND ADJUST AC TAP (S2) AND DC OUTPUT (S3) SWITCHES	MW 6M	-----
		4.05	CHECK OUTPUT VOLTAGE ADJUSTMENT	MW 12M	-----
		4.06	HIGH VOLTAGE MONITOR TEST & ADJMT	MW 12M	-----
		4.07	CHECK CURRENT LIMIT FULL LOAD ADJUSTMENT	MW 12M	-----
		4.10	SHUTDOWN BY BLOWN DC OUTPUT ALM OR OUTPUT CAP (F1 ALM AND F2 ALM) FUSES	MW 12M	-----
		4.11	CHECK SHUTDOWN BY TRIPPED CKT BRKR	MW 12M	-----
		4.12	CHECK SHUTDOWN BY HIGH VOLTAGE CONDITION	MW 12M	-----
		4.13	CHECK SHUTDOWN TR GROUND SIGNAL FROM PLANT	MW 12M	-----
		4.14	CHECK SHUTDOWN BY CKT PACK MALFUNCTION	MW 12M	-----
		4.15	CHECK SHUTDOWN BY THYRISTOR FAILURE DETECTOR CKT	MW 12M	-----
		4.16	CHECK ANTI-HUNT 1 NETWORK ADJMT (AS A LAST RESORT)	MW *	-----
		4.17	CHECK ANTI-HUNT 2 NETWORK ADJMT (AS REQUIRED)	MW *	-----
TROUBLE TESTS					
169-730-301	(3/0)	5.03	TROUBLE CONDITION CHART	TT	-----
169-730-311	(1/0)	4.01	(4.01 - 4.09) TROUBLE LOCATING PROCEDURES	TT	-----
		5.01	(5.01 - 5.06) COMPONENT CHECKING PROCEDURES	TT	-----
28.79 RECTIFIERS; KS-21522 L11, L12, L21 & L22					
FOR ALL UNITS					
169-749-301	(1/0)	3.01	CLEAN RECTIFIER CABINET INTERIOR	MW 12M	-----

SECTION 169-001-012

169-749-301 (1/0)	4.01	PRFPG DC OUTPUT (S1) SWITCH FOR TEST (AND PRIOR TO TESTS)	MW 12M	-----	(
	4.02	DC OUTPUT (S1) SWITCH ELECTRICAL TEST	MW 12M	-----	
	4.05	INSPECT RELAYS FOR CONTACT ADJMT & EROSION	MW 12M	-----	
	4.06	PERFORM DUST FILTER MTCE	MW 6M	-----	
	4.08	CHECK OUTPUT VOLTAGE ADJMT	MW 3M	-----	(
▶	4.10	CHECK FULL LOAD CURRENT LIMITING ADJMT	MW 12M	-----	
▶	4.12	CHECK SIMULATED TR SHUTDOWN & ALARM	MW 12M	-----	
▶	4.13	CHECK SIMULATED PLANT HV SHUTDOWN AND REMOTE RECYCLE	MW 12M	-----	
▶	4.14	CHECK MONITOR SHUTDOWN ADJMT	MW 12M	-----	
	4.15	CHECK FUSE ALARMS	MW 12M	-----	
	4.17	CHECK LOAD CARRYING BOLTS	MW 12M	-----	
▶	169-749-501 (1/0)	4.03	CLEAN AND LUBRICATE DC OUTPUT SWITCH	MW 12M	-----
		5.01	CHECK BOLTED ELECTRICAL CONNECTIONS	MW 12M	-----

OPTIONAL FEATURES

KS-21522 L11 & L12

169-749-301 (1/0)	4.11	PARTIAL LOAD CURRENT LIMITING CHECKS & ADJMT	MW 12M	-----
-------------------	------	--	--------	-------

TROUBLE TESTS

▶	169-749-311 (1/0)	5.01	(5.01 - 5.23) TROUBLE-LOCATING PROCEDURES	TT	-----
▶		6.01	(6.01 - 6.09) COMPONENT CHECKING PROCEDURES	TT	-----