

**EQUIPMENT TEST LIST**  
**REGULATORS**

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3.7 J87324A . . . . .	4	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.	
3.8 KS-5016, KS-5117 & KS-5468 . . . . .	4	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.	
3.9 CENTRIFUGAL TYPE-AUTOMATIC . . . . .	5	1.03 Comments on this section should be made by following the instructions in Bell System Practices (BSP), Section 000-010-015.	
3.10 KS-5580 (ELECTRONIC TYPE GVD) . . . . .	6	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.	
3.11 GE TYPE TA, FORM B2 . . . . .	6	1.05 Section 010-300-011 provides Equipment Test List instructions.	
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**NOTICE**

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SECTION 024-001-013

3.0 REGULATORS

3.1 REGULATORS; 100A E/W KS-5511 MOTOR

SELECT ONLY ONE CATEGORY

KS-5511 MOTOR (TYPE 892B)

024-405-701 (2/0) 2.06 CHECK INDICATING WHEEL SETTING MW 12M -----

KS-5511 MOTOR (TYPE 892C)

024-405-702 (2/0) 2.07 CHECK INDICATING WHEEL SETTING MW 12M -----

KS-5511 MOTOR (TYPE 892D OR RECOND 892C)

024-405-703 (4/0) 2.02 LUBRICATE MOTOR BEARINGS MW 60M -----

2.09 CHECK INDICATING WHEEL SETTING MW 12M -----

TROUBLE TESTS

KS-5511 MOTOR (TYPE 892B)

024-405-701 (2/0) 2.01 CLEANING TT -----

2.02 MOTOR BRUSH SPRING PRESSURE TT -----

2.03 MOTOR MOVEMENT TT -----

2.04 POSITION OF LATCH TT -----

2.05 CONDENSER TORQUE TT -----

2.07 GEAR BIND & BACK LASH TT -----

KS-5511 MOTOR (TYPE 892C)

024-405-702 (3/0) 2.01 CLEANING TT -----

2.02 TOP MOTOR BRUSH SPRING PRESSURE TT -----

2.03 MOTOR SHAFT END PLAY AND BOTTOM MOTOR BRUSH  
SPRING FOLLOW TT -----

2.04 MOTOR MOVEMENT TT -----

2.05 POSITION OF LATCH TT -----

2.06 CONDENSER TORQUE TT -----

2.08 GEAR BIND AND BACK LASH TT -----

KS-5511 MOTOR (TYPE 892D OR RECOND 892C)

024-405-703 (4/0) 2.01 CLEANING TT -----

2.03 TOP MOTOR BRUSH SPRING PRESSURE TT -----

2.04 BOTTOM MOTOR BRUSH SPRING PRESSURE TT -----

2.05 MOTOR MOVEMENT TT -----

2.06 POSITION OF LATCH TT -----

2.07 TRACKING, GEAR BIND & BACKLASH TT -----

2.08 CAPACITOR TORQUE TT -----

3.2 REGULATORS; KS-2749

FOR ALL UNITS

024-408-701 (3/1) 2.01 (A) CLEAN MOTOR & ASSOCD SPRING CONTACTS MW 12M -----

2.01 (B) CLEAN & LUBRICATE PEN CRG ROD MW 12M -----

2.01 (C) CLEAN & LUBRICATE SLIDE WIRE MW 12M -----

2.01 (D) CLEAN & REFILL PEN (OR AS REQD) MW 3M -----

024-408-701 (3/1)	2.01 (E) CLEAN DIAL SWITCH CONTACTS	MW 12M	-----
	2.02 (A) LUBRICATE MOTOR BALL BEARING GREASE CUPS	MW 3M	-----
	2.02 (B) LUBRICATE SHAFT BEARINGS, SOCKET & PIVOT BEARINGS, WORM & GEAR DRIVES, AND CAM BEARING SURFACES (OR EVERY 336 HRS CONTS OPRN)	MW 12M	-----
	2.04 CHECK MOUNTING	MW 12M	-----
	2.08 CHECK LEVER ARMS	MW 12M	-----
	2.09 CHECK OVERSTEP ALARM OPRG	MW 12M	-----
	2.16 CHECK LIMITING POSITION ALARM OPRG	MW 12M	-----
	2.20 CHECK SIZE OF BITE	MW 12M	-----
	2.21 CHECK DRIFT	MW 12M	-----
	2.22 CHECK HUNTING	MW 12M	-----
	2.23 CHECK DIFFERENTIAL RELAY ALARM OPRG	MW 12M	-----
	2.24 CHECK NO-VOLTAGE ALARM OPRG	MW 12M	-----
	2.25 CHECK DIAL SWITCH CONTACT ALARM OPRG	MW 12M	-----

## TROUBLE TESTS

024-408-701 (3/1)	2.05 GALVANOMETER COIL POSITION, SUSPENSION TENSION, BALANCE, CLAMPING NUT, POINTER & ZERO ADJMT	TT	-----
	2.06 CAM/SHAFT TIGHTNESS	TT	-----
	2.07 CLUTCH ARM, DISC & CORKS	TT	-----
	2.10 MOTOR	TT	-----
	2.11 REDUCTION GEARS	TT	-----
	2.12 DIAL SWITCH	TT	-----
	2.13 SLIDE WIRE	TT	-----
	2.15 BRIDGE BALANCE	TT	-----
	2.17 PEN CARRIAGE	TT	-----
	2.18 BRIDGE POTENTIAL	TT	-----
	2.19 POINTER LAG	TT	-----

## 3.3 REGULATORS; J2 CARRIER

## FOR ALL UNITS

◆	024-410-701 (3/0)	2.01 (A) LUBRICATE TELECHRON MOTORS	MW 24M	-----
◆		2.01 (B) LUBRICATE DRIVE MECHANISM	MW 12M	-----
		2.04 CHECK DIAL RIBBON POSITION	MW 6M	-----
		2.05 CHECK STOP RING POSITION	MW 6M	-----
◆		2.06 CHECK RELATION BETWEEN CONDENSER PLATES & DIAL SETTING	MW 12M	-----
		2.07 CHECK STOP SPRING POSITION	MW 6M	-----
◆		2.08 CHECK TIGHTNESS OF AUX SHAFT GEAR & COUNTER SHAFT IDLER GEAR	MW 12M	-----
◆		2.09 CHECK TIGHTNESS OF FLEX COUPLING ON AUX SHAFT	MW 12M	-----
◆		2.10 CHECK SLOPE & FLAT DIAL BACKLASH & GEAR BIND	MW 12M	-----
◆		2.11 CHECK MOTOR WORM SHAFT ENDPLAY	MW 12M	-----

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024-410-701	(3/0)	2.12	CHECK CLEARANCE BETWEEN MULTIJAW COUPLING SECTIONS	MW 12M	-----
3.4 REGULATORS; 101 & 102-TYPE					
FOR ALL UNITS					
024-406-701	(3/0)	2.03	CHECK CLUTCH PIN REQMT	MW 12M	-----
		2.05	CHECK REGULATOR ROLLER ARM ROLLER REQD	MW 12M	-----
		2.07	CHECK ROLLER ARM/STUD CLRNC	MW 12M	-----
		2.12	CHECK MOTOR BRUSH LENGTH	MW 12M	-----
OPTIONAL FEATURES					
101-TYPE					
024-406-701	(3/0)	2.09	(B) CHECK CTRG OF ROLLERS & INDICATOR ADJMT	MW 12M	-----
102-TYPE					
024-406-701	(3/0)	2.09	(A) CHECK CTRG OF ROLLERS & INDICATOR ADJMT	MW 12M	-----
TROUBLE TESTS					
024-406-701	(3/0)	2.01	REGULATOR CONTACTS CLEANING	TT	-----
		2.04	ASSEMBLY TIGHTNESS	TT	-----
		2.06	CONTACT SPRING CLRNC	TT	-----
		2.08	ROLLER ARM TENSION	TT	-----
		2.10	DRIVING MECH FREEDOM MVMT	TT	-----
		2.11	MASTER CONTROLLER & DRIVE UNIT ALNMT	TT	-----
		2.13	MOTOR BRUSH PRESSURE	TT	-----
3.5 REGULATORS; J86246A & J86246B					
FOR ALL UNITS					
024-443-301	(3/0)	4.01	(A) CHECK 20 HZ OUTPUT VOLTAGE	MW 12M	-----
		4.01	(B) CHECK PLT CUR READING	MW 12M	-----
		4.01	(C) CHECK T & T1 TRANSFORMER SECONDARY VOLTAGES	MW 12M	-----
		4.01	(D) CHECK ELECTRON TUBES	MW 12M	-----
3.6 REGULATORS; J86727E					
FOR ALL UNITS					
024-447-301	(1/0)	3.01	CHECK RINGING VOLTAGE	MW M	-----
		3.02	CHECK RINGING TRANSFER CKT	MW 6M	-----
		3.03	CHECK HIGH VOLTAGE TRANSFER CKT ADJMT	MW 6M	-----
3.7 REGULATORS; J87324A					
FOR ALL UNITS					
024-449-301	(2/0)	4.02	CHECK VOLTAGE ALARM CIRCUIT	MW 12M	-----
TROUBLE TESTS					
024-449-301	(2/0)	4.01	(A) POSITIVE OUTPUT ADJMT	TT	-----
		4.01	(B) NEGATIVE OUTPUT VOLTAGE ADJMT	TT	-----
3.8 REGULATORS; KS-5016, KS-5117 & KS-5468					
FOR ALL UNITS					
024-460-701	(4/0)	2.01	(B) LUBRICATE RHEOSTAT DRIVE MOTOR BEARING WICK OILERS	MW 6M	-----

024-460-701	(4/0)	2.01	(C) CLEAN & REFILL RHEOSTAT DRIVE MOTOR BEARING WICK OILERS	MW 24M	-----
		2.01	(D) LUBRICATE MOTOR-DRIVEN RHEOSTAT GREASE CUPS	MW 3M	-----
		2.01	(E) LUBRICATE EXPOSED GEARS	MW M	-----
		2.01	(F) LUBRICATE RHEOSTAT CONTACTS	MW M	-----
		2.03	CHECK RHEOSTAT DRIVE MOTOR BRUSH LENGTH	MW 12M	-----
		2.04	CHECK RHEOSTAT DRIVE MOTOR BRUSH FIT	MW 12M	-----
		2.05	CHECK CONDITION OF COMMUTATOR SURFACES	MW 12M	-----
		2.06	CHECK FREEDOM OF ROTATING PARTS	MW 6M	-----
		2.07	(2.07 - 2.09) CHECK RHEOSTAT MOTOR CONTACTORS OPRG	MW 12M	-----
		2.10	(2.10 - 2.12) CHECK RHEOSTAT CONTACTS	MW 12M	-----
		2.13	CHECK BACKLASH IN RHEOSTAT GEARING & CONTACT ARM	MW 12M	-----
		2.14	CHECK RHEOSTAT LIMIT SWITCH CLOSURE	MW 12M	-----

## TROUBLE TESTS

024-460-701	(4/0)	2.02	RHEOSTAT DRIVE MOTOR BRUSH HOLDER CLRNC	TT	-----
		2.15	OPRG SEQUENCE	TT	-----
		2.16	TEMPERATURE LIMITS	TT	-----
		2.17	GENERATOR FIELD RHEOSTAT SETTING	TT	-----

## 3.9 REGULATORS; CENTRIFUGAL TYPE-AUTOMATIC

## FOR ALL UNITS

024-462-701	(9/0)	2.01	(A) LUBRICATE MOTOR BEARINGS	MW 6M	-----
		2.01	(B) CLEAN & REPACK MOTOR BEARINGS	MW 36M	-----
		2.03	CHECK OUTPUT VOLTAGE	MW 12M	-----
		2.06	CHECK FREEDOM OF ROTATING PARTS	MW 12M	-----
		2.09	CHECK MOTOR & COLLECTOR RING BRUSH LENGTH	MW 12M	-----
		2.10	CHECK MOTOR & COLLECTOR RING BRUSH FIT	MW 12M	-----
		2.11	CHECK MOTOR & COLLECTOR RING BRUSH PRESSURE	MW 12M	-----
		2.17	CHECK MOTOR NOISE & VIBRATION	MW 6M	-----
		2.18	(A) CHECK TEMPERATURE	MW 6M	-----

## OPTIONAL FEATURES

## MOTORS E/W SEALED BEARINGS

024-462-701	(9/0)	2.01	(C) CHECK BEARINGS FOR NOISE	MW 12M	-----
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## REGULATORS E/W KS-5293 OR KS-5293-01 MOTORS

024-462-701	(9/0)	2.19	REPLACE BALLAST LAMP	MW 12M	-----
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## REGULATORS E/W DC GENERATORS

024-462-701	(9/0)	2.20	(B) CHECK NO-LOAD & FULL-LOAD PERCENT CONTACT OPRN	MW 12M	-----
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## TROUBLE TESTS

024-462-701	(9/0)	2.02	SPEED & ROTATION	TT	-----
		2.04	COND OF BEARINGS	TT	-----

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024-462-701 (9/0)	2.05	MOTOR ARMATURE END PLAY	TT	-----
	2.07	ARMATURE & POLE FACE AIR GAP	TT	-----
	2.08	BRUSH HOLDERS	TT	-----
	2.12	CUMMUTATOR & COLLECTOR RING SURFACES	TT	-----
	2.13	COMMUTATION	TT	-----
	2.14	ROTATING CONTACT POLARITY	TT	-----
	2.15	CONTACT LENGTH	TT	-----
	2.16	(2.16.1) MOVABLE CONTACT ECCENTRICITY	TT	-----
	2.16	CONTACT SURFACES	TT	-----
	2.18	(B) TEMPERATURE	TT	-----
REGULATORS E/W AC GENERATOR & MKD RHEOSTAT				
024-462-701 (9/0)	2.18	(A) NO-LOAD & FULL LOAD PERCENT CONTACT OPRN	TT	-----
3.10 REGULATORS; KS-5580 (ELECTRONIC TYPE GVD)				
FOR ALL UNITS				
024-464-301 (2/0)	2.04	CHECK VOLTAGE & CURRENT RHEOSTAT ADJUSTMENT	MW 12M	-----
	2.05	REPLACE GRID BATTERIES	MW 12M	-----
	2.06	CHECK TRANSFORMER PRIMARY VOLTAGE TAP CONNECTIONS	MW 12M	-----
	2.07	CHECK CEMF MOTOR BRUSHES	MW 12M	-----
	2.08	LUBRICATE BALL BEARINGS	MW 60M	-----
	2.09	CHECK CONDITION OF COMMUTATOR SURFACES	MW 12M	-----
3.11 REGULATORS; GE TYPE TA, FORM B2				
FOR ALL UNITS				
024-480-701 (2/0)	2.01	CHECK VOLTAGE REGULATION	MW 12M	-----
	2.02	CHECK PIVOT BEARING, MAGNET COIL MOVABLE CORE & DASHPOTS LARGE PISTON FREEDOM OF OPERATION	MW 12M	-----
	2.03	(A) CLEAN DASHPOT	MW 12M	-----
	2.03	(B) CHECK DASHPOT OIL CUSHIONING	MW 12M	-----
	2.03	(C) CHANGE DASHPOT OIL	MW 36M	-----
	2.03	(D & E) AIR CUSHIONING	MW 6M	-----
	2.04	CHECK CONDITION OF MAIN CONTACT SURFACES	MW 6M	-----
	2.05	CHECK MAIN CONTACT ADJMT & ALNMT	MW 6M	-----
	2.06	CHECK MAGNET COIL MOVABLE CORE ADJMT	MW 12M	-----
3.12 REGULATORS; GE TYPE TA-125, FORM L				
FOR ALL UNITS				
024-481-701 (2/0)	2.01	CHECK VOLTAGE REGULATION	MW 12M	-----
	2.02	CHECK FREEDOM OF OPERATION	MW 12M	-----
	2.03	CHECK DASHPOT OIL CONDITION	MW 12M	-----
	2.04	CHECK MAIN & RELAY CONTACT SURFACES	MW 12M	-----
	2.05	CHECK MAIN CONTACTS ADJMT & ALNMT	MW 12M	-----
	2.06	CHECK DC MAGNETS MOVABLE CORE & MULTIPLE SPRINGS ADJMT	MW 12M	-----

024-481-701	(2/0)	2.07	CHECK AC MAGNETS MOVABLE CORE, UPPER LIMIT STOP & LOWER LIMIT STOP ADJMT	MW 12M	-----
		2.08	CHECK RELAY	MW 12M	-----
TROUBLE TESTS					
024-481-301	(1/0)	3.01	AC VOLTAGE FAILS TO BUILD UP	TT	-----
		3.02	AC VOLTAGE FALLS	TT	-----
		3.03	AC VOLTAGE FLUCTUATES	TT	-----
		3.04	AC VOLTAGE INCORRECT VALUE	TT	-----
		3.05	RELAY CONTACT ARCING	TT	-----
3.13 REGULATORS; CARBON TILTING PILE TYPE GDA-1M, GDA-30 & GDD-1M					
SELECT ONLY ONE CATEGORY					
AC REGULATOR GDA-1M					
024-482-701	(4/0)	2.02	(A) CHECK AC REGULATOR OPRN	MW 12M	-----
AC REGULATOR GDA-30					
024-482-701	(4/0)	2.02	(A) CHECK AC REGULATOR OPRN	MW 12M	-----
		2.03	CLEAN DUST FILTER	MW 12M	-----
DC REGULATOR GDD-1M					
024-482-701	(4/0)	2.02	(B - D) CHECK DC REGULATOR OPRN	MW 12M	-----
TROUBLE TESTS					
024-482-701	(4/0)	2.01	ARMATURE POSITION	TT	-----
3.14 REGULATORS; WESTINGHOUSE TYPE UV-AG					
FOR ALL UNITS					
024-485-301	(1/0)	1.04	CLEAN CONTACT SURFACES	MW 12M	-----
		2.03	REPL DASHPOT OIL	MW 12M	-----
3.15 REGULATORS; J86215A & KS-5695					
FOR ALL UNITS					
024-440-301	(2/0)	2.03	(B) CHECK OUTPUT VOLTAGE	MW 12M	-----
		2.03	(D) CHECK VARISTORS OUTPUT VOLTAGES	MW 12M	-----
3.16 REGULATORS; J86223					
FOR ALL UNITS					
024-442-301	(1/0)	3.01	CHECK VACUUM TUBES	MW 12M	-----
TROUBLE TESTS					
024-442-301	(1/0)	4.01	AC OUTPUT VOLTAGE NOT ADJBL	TT	-----
		4.04	TROUBLE CHART	TT	-----
		5.01	(5.01 - 5.06) POINT-TO-POINT VOLTAGES	TT	-----
3.17 REGULATORS; J86250A					
FOR ALL UNITS					
024-445-301	(5/0)	4.03	CHECK ELECTRON TUBES	MW 12M	-----
TROUBLE TESTS					
024-445-301	(5/0)	4.05	(4.05 - 4.06) SELENIUM RECTIFIER STACKS	TT	-----
		4.07	SILICON DIODES	TT	-----

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024-445-301 (5/0)	4.09	TROUBLE CHARTS	TT	-----
	4.10	(4.10 - 4.14) TROUBLE ANALYSIS	TT	-----
	5.01	POINT-TO-POINT VOLTAGES	TT	-----
3.18 REGULATORS; KS-5650				
FOR ALL UNITS				
024-465-301 (2/0)	2.04	OUTPUT VOLTAGE ADJMT (OR UPON SHIFTING FROM ONE VOLTAGE TO ANOTHER)	MW 12M	-----
	3.01	CHECK ELECTRON TUBES	MW 12M	-----
TROUBLE TESTS				
024-465-301 (2/0)	4.01	TROUBLE CHART	TT	-----
	4.08	SHORT LIFE OF ELECTRON TUBES	TT	-----
	5.01	(5.01 - 5.04) POINT-TO-POINT VOLTAGES	TT	-----
3.19 REGULATOR; KS-5655				
FOR ALL UNITS				
024-466-301 (3/0)	3.01	CHECK VACUUM TUBES	MW 12M	-----
TROUBLE TESTS				
024-466-301 (3/0)	4.01	TROUBLE CHART	TT	-----
	5.01	(5.01 - 5.04) POINT-TO-POINT VOLTAGES	TT	-----
3.20 REGULATOR; KS-15508				
FOR ALL UNITS				
024-470-301 (2/0)	2.13	CHECK OUTPUT VOLTAGE ADJMT	MW 12M	-----
TROUBLE TESTS				
024-470-301 (2/0)	2.14	BU1 ELEMENT	TT	-----
	2.15	THYRATRON TUBES	TT	-----
	2.16	RELAYS	TT	-----
	2.17	SENSITIVITY & OUTPUT VOLTAGE CONTROLS	TT	-----
	2.18	CONTROL UNIT	TT	-----
	2.19	MOTOR	TT	-----
	3.01	TROUBLE CHART	TT	-----
3.21 REGULATORS; KS-15908 L1 & L2				
FOR ALL UNITS				
024-471-301 (1/0)	5.01	CHECK GLOW-TYPE LAMPS ASSOCIATED WITH FUSES F4 - F7	MW 6M	-----
	5.02	CHECK OUTPUT VOLTAGE ADJMT	MW 12M	-----
TROUBLE TESTS				
024-471-301 (1/0)	6.01	TROUBLE CHART	TT	-----
3.22 REGULATORS; KS-20618				
TROUBLE TESTS				
024-490-301 (3/0)	4.01	(4.01 - 4.05) TROUBLESHOOTING PROCEDURES	TT	-----