

EQUIPMENT TEST LIST

SWITCHES

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		1.01 This section provides an index and informa- tion access system to locate the standard tests applicable to equipment listed in the preceding table of contents. Test classification and frequency of peri- odic 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.	

NOTICE

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

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.

16.0 SWITCHES

16.1 SWITCHES; KNIFE

FOR ALL UNITS

030-740-701 (8/0)	2.01	CLEAN & LUBRICATE	MW	12M	-----
	2.02	INSPECT SWITCH BLADES	MW	12M	-----
	2.03	INSPECT CROSSBARS (MULTIPOLE SWITCHES)	MW	12M	-----
	2.04	CHECK HANDLE MTG	MW	12M	-----
	2.05	CHECK MOUNTING OF SWITCHES	MW	12M	-----
	2.06	INSPECT CLIPS & TONGUES	MW	12M	-----
	2.09	CHECK VOLTAGE DROP	MW	12M	-----
	2.10	LUBRICATE LINKAGES	MW	12M	-----
	2.15	CHECK ROTOR ARM & STA CONTACTS ALNMT	MW	12M	-----

OPTIONAL FEATURES

KS-15820

030-740-701 (8/0)	2.12	CHECK ROTOR OPRN	MW	12M	-----
	2.13	CHECK MICROSWITCH OPRN	MW	12M	-----

KS-19392

030-740-701 (8/0)	2.12	CHECK ROTOR OPRN	MW	12M	-----
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KS-19468

030-740-701 (8/0)	2.12	CHECK ROTOR OPRN	MW	12M	-----
	2.14	CHECK MICROSWITCH OPRN	MW	12M	-----

TROUBLE TESTS

030-740-701 (8/0)	2.07	CONTACT AREA	TT		-----
	2.11	TEMPERATURE	TT		-----

KS-5412 & KS-5329-01

030-740-701 (8/0)	2.08	(A-D) CONTACT PRESSURE	TT		-----
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KS-15820

030-740-701 (8/0)	2.08	(F) CONTACT PRESSURE	TT		-----
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16.2 SWITCHES; KS-5078 PALMER CONTR MASTER SW

FOR ALL UNITS

030-741-701 (3/0)	2.01	CHECK VOLTAGE RELAYS OPERATION	MW	6M	-----
	2.02	CHECK CONTACT ARM, ASSOCD LEVER & ARMTR FREEDOM OF MVMT	MW	6M	-----
	2.03	CHECK POSITION OF CONTACT ARMS & CONTACTS	MW	6M	-----
	2.04	CHECK POSITION OF LEVER	MW	6M	-----
	2.05	INSPECT CONDITION OF CONTACTS	MW	6M	-----
	2.06	INSPECT MAGNET FACE CONDITION	MW	6M	-----
	2.07	CHECK TIME DELAY RELAY OPERATION	MW	6M	-----
	2.08	CHECK LOCATION OF ALUMINUM DISC	MW	6M	-----
	2.09	CHECK FREEDOM OF GEARS	MW	6M	-----
	2.10	CHECK FREEDOM OF TILTING ARM	MW	6M	-----

030-741-701 (3/0)	2.11	INSPECT MOUNTING OF MERCURY SWITCH	MW 6M	-----
	2.12	INSPECT CONDITION & ADJUSTMENT OF MAIN CONTACTS	MW 6M	-----
	2.13	CHECK CONTR SW CLRNCs	MW 6M	-----
	2.14	CHECK FREEDOM OF MOVING PARTS	MW 6M	-----
	2.15	CHECK OPRN OF SWITCHES W/O TRIPPING & LATCH MECHANISM	MW 6M	-----
	2.16	CHECK OPRN OF SWITCHES WITH TRIPPING & LATCH MECHANISM	MW 6M	-----
	2.17	CHECK CONTACT NOISE	MW 6M	-----
	2.18	SW ROUTING OPRN TEST	MW 6M	-----
	2.19	CHECK TEMPERATURE	MW 6M	-----
16.3 SWITCHES; EMER LTNG REL SW KS-5189 TYPE				
FOR ALL UNITS				
030-742-701 (4/0)	2.01	CHECK UNDERVOLTAGE RELAY CONTACTS AND BRUSH ARM	MW 12M	-----
	2.05	CHECK UNDERVOLTAGE DEVICE & CONTACTOR MECHANISM MAIN CONTACTS	MW 12M	-----
	2.06	CHECK UNDERVOLTAGE DEVICE CONTACTS & BRUSH ARM	MW 12M	-----
	2.07	CHECK CONTACTOR MECHANISM	MW 12M	-----
OPTIONAL FEATURES				
KS-5189-03 (ASCO TYPE)				
030-742-701 (4/0)	2.03	CHECK SINGLE-PHASE UNDERVOLTAGE MONITOR OPERATION	MW 12M	-----
	2.04	CHECK THREE-PHASE UNDERVOLTAGE MONITOR OPERATION	MW 12M	-----
	2.10	CHECK 909 & 920-TYPE CONTACTORS FOR PROPER OPERATION	MW 12M	-----
TROUBLE TESTS				
030-742-701 (4/0)	2.02	CHECK UNDERVOLTAGE RELAY OPERATION	TT	-----
	2.08	CHECK UNDERVOLTAGE DEVICE & CONTACTOR MECHANISM OPERATION	TT	-----
KS-5189-03 (ASCO TYPE)				
030-742-701 (4/0)	2.11	CHECK 909 & 920-TYPE CONTACTOR TEMPERATURE	TT	-----
16.4 SWITCHES; PALMER MASTER SW				
FOR ALL UNITS				
030-743-701 (1/0)	3.21	PERFORM POWER FAILURE ROUTINE	MW 3M	-----
	3.31	CHECK MAGNET SWITCH OPRN & ADJMT	MW 60M	-----
	3.32	CHECK VOLTAGE RELAY OPRN & ADJMT	MW 60M	-----
16.5 SWITCHES; MAN OPRD ROTARY SW				
FOR ALL UNITS				
030-744-701 (10/0)	2.01	INSPECT SWITCH MOUNTING	MW 12M	-----
	2.02	CHECK OPERATION	MW 12M	-----
	2.03	CLEAN & INSPECT CONTACT SURFACES	MW 12M	-----
	2.04	CHECK OPRG TEMPERATURE	MW 12M	-----

030-744-701 (10/0)	2.05	INSPECT SW FOR CLEANLINESS	MW 12M	-----
16.6 SWITCHES; STUD TYPE ROTARY SW USED AS POT, ART LN OR ATTN				
FOR ALL UNITS				
030-765-701 (1/0)	2.01	CLEAN & LUBRICATE CONTACT SURFACES, DETENT PLATE & SHAFT	MW 12M	-----
	2.02	CHECK CONTACT SPRINGS ALNMT	MW 12M	-----
	2.03	CHECK PRESSURE OF CONTACT SPRINGS	MW 12M	-----
	2.04	CHECK PRESSURE OF DETENT SPRINGS	MW 12M	-----
16.7 SWITCHES; STUD TYPE ROTARY SW OF 212-TYPE INPUT TRNSF				
FOR ALL UNITS				
030-765-702 (2/0)	2.01	CLEAN & LUBRICATE CONTACT SURFACES	MW 12M	-----
	2.02	CHECK CONTACT SPRINGS ALNMT	MW 12M	-----
	2.03	CHECK PRESSURE OF CONTACT SPRINGS	MW 12M	-----
	2.04	CHECK PRESSURE OF DETENT ROLLER	MW 12M	-----
16.8 SWITCHES; STUD TYPE ROTARY SW, RHEO & POT				
FOR ALL UNITS				
030-765-703 (1/0)	2.01	CLEAN & LUBRICATE CONTACT SURFACES, DETENT PLT, DETENT STUD & SHAFT	MW 12M	-----
	2.02	CHECK CONTACT SPRINGS ALNMT	MW 12M	-----
	2.03	CHECK CONTACT SPRINGS PRESSURE	MW 12M	-----
	2.04	CHECK DETENT SPRING PRESSURE	MW 12M	-----
16.9 SWITCHES; D-159393 CAM SWG UNIT & ASSOCD MOT GEN				
FOR ALL UNITS				
030-767-701 (6/1)	2.01	CLEAN CAM SWG UNIT & CONTACTS	MW 6M	-----
	2.02	(A1, A2) LUBRICATE CAM SHAFT BEARINGS & DIFF GEAR BEARINGS AND GEAR TEETH	MW 3M	-----
	2.02	(A3 - A5 & B1 - B5) LUBRICATE UPPER GEAR BOX THRUST BRKT, MOTOR GEN BALL	MW 6M	-----
	2.04	CHECK ALIGNMENT OF COUPLING SHAFT W/GEAR BOX SHAFTS	MW 12M	-----
OPTIONAL FEATURES				
LOW SPEED CAM SPRING ASSEMBLIES				
030-767-701 (6/1)	2.05	CHECK RELATION BETWEEN CAM & CAM SHOE	MW 12M	-----
	2.06	CHECK CONTACT ALNMT	MW 12M	-----
	2.07	CHECK CAM SHOE PRESSURE ON CAM	MW 12M	-----
	2.08	CHECK OUTER CONTACT SPRING POSITION	MW 12M	-----
	2.09	CHECK CONTACT SEPARATION	MW 12M	-----
	2.10	CHECK CONTACT PRESSURE	MW 12M	-----
HIGH-SPEED CAM SPRING ASSEMBLIES				
030-767-701 (6/1)	2.11	CHECK RELATION BETWEEN CAM & CAM SHOE	MW 12M	-----
	2.12	CHECK CONTACT ALNMT	MW 12M	-----
	2.13	CHECK CAM SHOE PRESSURE ON CAM	MW 12M	-----
	2.14	CHECK UPPER CONTACT SPRING POSITION	MW 12M	-----

030-767-701 (6/1)	2.15	CHECK CONTACT PRESSURE	MW 12M	-----
	2.16	CHECK CONTACT SEPARATION	MW 12M	-----
	2.17	CHECK UPPER GEAR BOX SHAFT END PLAY	MW 12M	-----
	2.18	CHECK SWITCHING OF INTERVAL & SYNC OF TERMINALS	MW 12M	-----
	2.19	CHECK RELATION BETWEEN HIGH & LOW SPEED CAMS	MW 12M	-----
	2.20	CHECK TIMING OF HIGH-SPEED CAMS	MW 12M	-----
16.10 SWITCHES; AECC 25 & 80 AMP CTR EMP CELL SW				
FOR ALL UNITS				
030-780-701 (2/0)	2.01	(M1, M2) LUBRICATE MOTOR BEARINGS & OIL CUPS	MW 6M	-----
	2.01	(M3) LUBRICATE WORM & WORM WHEEL	MW 2M	-----
	2.01	(M4) LUBRICATE SW SHAFT BEARING	MW W	-----
	2.02	INSPECT SW MOUNTING	MW 6M	-----
	2.03	CHECK SW SHAFT & ARM ASSEMBLY FREEDOM OF OPERATION	MW 6M	-----
	2.04	CHECK SW SHAFT ENDPLAY	MW 6M	-----
	2.05	CHECK SWITCH ARM & STOP PIN CLRNC	MW 6M	-----
OPTIONAL FEATURES				
MAIN CONTACT BRUSH				
030-780-701 (2/0)	2.06	CHECK CONTACT SURFACE	MW 6M	-----
	2.07	CHECK MAIN CONTACT PRESSURE	MW 6M	-----
	2.08	CHECK MAIN CONTACT BRUSH FREEDOM OF MOVEMENT	MW 6M	-----
AUXILIARY CONTACT BRUSH				
030-780-701 (2/0)	2.09	CHECK AUX CONTACT SURFACE	MW 6M	-----
	2.10	CHECK AUX CONTACT BRUSH POINT OF CONTACT	MW 6M	-----
ADJUSTABLE CONTACT BRUSH				
030-780-701 (2/0)	2.11	CHECK ADJBL CONTACT SURFACE	MW 6M	-----
	2.12	CHECK ADJBL CONTACT BRUSH POINT OF CONTACT	MW 6M	-----
MAIN & INTERMEDIATE CONTACTS				
030-780-701 (2/0)	2.13	CHECK MAIN & INTERMEDIATE CONTACT SURFACE	MW 6M	-----
	2.14	CHECK MAIN & INTERMEDIATE CONTACT HEIGHT	MW 6M	-----
AUXILIARY CONTACTS				
030-780-701 (2/0)	2.15	CHECK AUX CONTACT SURFACE	MW 6M	-----
	2.16	CHECK AUX CONTACT HEIGHT	MW 6M	-----
ADJUSTABLE CONTACT STUD				
030-780-701 (2/0)	2.17	CHECK ADJBL CONTACT STUD CONTACT SURFACE	MW 6M	-----
	2.18	CHECK CAM WORM WHEEL COLLAR	MW 6M	-----
LIMIT SPRING ASSEMBLIES				
030-780-701 (2/0)	2.19	CHECK LIMIT SPRING ASSEMBLY CONTACT SURFACE	MW 6M	-----
	2.20	CHECK LIMIT SPRINGS CONTACT ALNMT	MW 6M	-----
	2.21	CHECK LIMIT SPRINGS CONTACT SEPARATION	MW 6M	-----
	2.22	CHECK CAM OPERATION	MW 6M	-----

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030-780-701 (2/0)	2.23	CHECK WORM & WORM WHEEL ALIGNMENT	MW 6M	-----
	2.24	CHECK WORM & WORM WHEEL FREEDOM OF MOVEMENT	MW 6M	-----
	2.25	CHECK MOTOR BRUSH LENGTH	MW 6M	-----
	2.26	CHECK MOTOR BRUSH FIT	MW 6M	-----
	2.27	CHECK MOTOR BRUSH PRESSURE	MW 6M	-----
	2.28	CHECK MOTOR COMMUTATOR SURFACE	MW 6M	-----
	2.29	CHECK MOTOR ARMTR NOISE & VIBRATION	MW 6M	-----
	2.30	CHECK TEMPERATURE OPERATION LIMITS	MW 6M	-----

16.11 SWITCHES; KS-15610 & KS-15624 SGL MOT-DRVN SW PNL

FOR ALL UNITS

030-785-701 (9/0)	4.01	(A) CHECK AUTOMATIC OPERATION OF SWITCH TO GROUP 1 POSITION	MW 3M	-----
	4.01	(B) CHECK AUTOMATIC OPERATION OF SWITCH TO GROUP 2 POSITION	MW 12M	-----
	4.01	(C & D) CHECK OPRN OF SW USING RAISE AND LOWER KEYS	MW 12M	-----
	4.01	(E) CHECK MANUAL SW OPRN	MW 12M	-----
	4.02	(A) INSPECT & LUBRICATE MAIN, AUX & KNIFE SW CONTACTS, & DRIVE MECH	MW 12M	-----
	4.02	(B) INSPECT & LUBRICATE DRIVING SCREWS & EXPOSED GEARS	MW 12M	-----
	4.03	CHECK CONDITION OF BEARINGS	MW 12M	-----
	4.04	CHECK MOUNTING OF CONTACTS	MW 6M	-----
	4.05	CHECK CONDITION OF CONTACTS, CLIPS & BLADE	MW 6M	-----
	4.06	CHECK ENGAGEMENT OF MOVABLE & STATIONARY MAIN & KNIFE SWITCH CONTACTS	MW 12M	-----
	4.07	CHECK ARCING CONTACT FOLLOW	MW 6M	-----
	4.08	CHECK ARCING CONTACT CLEARANCE	MW 12M	-----
	4.09	CHECK ARCING CONTACT ALIGNMENT	MW 12M	-----
	4.10	CHECK VOLTAGE DROP ACROSS MAIN CONTACTS	MW 6M	-----
	4.11	CHECK MOTOR NOISE & VIBRATION	MW 6M	-----
	4.13	CHECK MOTOR TORQUE	MW 6M	-----
	4.16	CHECK MOTOR BRUSHES	MW 6M	-----
	4.18	CHECK ALIGNMENT OF CONTROL RAILS & CONTROL BRUSH SLIDING CONTACTS	MW 12M	-----
	4.19	CHECK CONTACT PRESSURE & FREEDOM OF MOVEMENT OF CONTROL CONTACTS-BRUSH	MW 12M	-----
	4.20	CHECK MOUNTING OF LIMIT SWITCHES & OFF-NORMAL SW	MW 12M	-----
	4.21	CHECK LIMIT SWITCHES OPRN	MW 12M	-----
	4.22	CHECK OFF-NORMAL SWITCH OPRN	MW 12M	-----
	4.23	CHECK STRUTHERS-DUNN 166BxB100 RELAY REQTS	MW 12M	-----
	4.24	CHECK CELL SHORTING (CURRENT LIMITING) RESISTORS	MW 12M	-----
	4.25	CHECK NORMAL OPRN TEMPERATURE	MW 12M	-----

TROUBLE TESTS

030-785-701 (9/0)	4.12	MOTOR VOLTAGE & CURRENT REQ	TT	-----
	4.14	CONDITION OF MOTOR COMMUTATOR SURFACE	TT	-----
	4.15	MOTOR COMMUTATION	TT	-----
	4.17	POSITION OF CONTROL RAILS	TT	-----

16.12 SWITCHES; KS-15847 TYPE MOT-DRVN SW

FOR ALL UNITS

030-786-701 (4/1)	2.01	(A) LUBRICATE CAM & STATIONARY CONTACT SURFACES	MW 3M	-----
	2.01	(B) CLEAN & LUBRICATE SPEED REDCR	MW 36M	-----
	2.01	(C) LUBRICATE EXPOSED GEARS	MW 12M	-----
	2.01	(D) LUBRICATE UPPER & LOWER CAMSHAFT BEARINGS	MW 6M	-----
	2.03	CHECK CONDITION OF CAM CONTACTS A & STATIONARY CONTACTS B	MW 6M	-----
	2.04	CHECK CONTACT FOLLOW	MW 6M	-----
	2.05	CHECK VOLTAGE DROP BETWN STATIONARY & CAM CONTACTS	MW 6M	-----
	2.06	CHECK NOISE & VIBRATION	MW 6M	-----
	2.07	CHECK MOTOR VOLTAGE & CURRENT REQ	MW 6M	-----
	2.08	CHECK MOTOR TORQUE	MW 6M	-----
	2.09	CHECK CONDITION OF MOTOR COMMUTATOR SURFACE	MW 12M	-----
	2.10	CHECK MOTOR COMMUTATION	MW 12M	-----
	2.11	CHECK MOTOR BRUSHES	MW 12M	-----
	2.12	CHECK WARD-LEONARD RELAY REQTS	MW 12M	-----

2.13 CHECK MTG & OPRN OF AUXILIARY SWITCHES

MW 12M

2.14 CHECK OPRN TEMPERATURE

MW 6M

16.13 SWITCHES; KS-5502 & KS-15836 TYPE MOT-DRVN SW

FOR ALL UNITS

030-787-701 (7/0)	2.01	(A) CLEAN & LUBRICATE MAIN & AUX CONTACTS & KNIFE SW BLADES	MW 6M	-----
	2.01	(B & D) CLEAN & LUBRICATE MOTOR BEARINGS, GEAR CASE, GEAR CASE PINION & CRANKSHAFT GEAR	MW 36M	-----
	2.01	(C) LUBRICATE CRANKSHAFT BEARINGS, GEAR CASE PINION BEARING & LINKAGE BEARING LUBRICATION ITEM C	MW 12M	-----
	2.02	CHECK CONDITION OF MOTOR BEARINGS	MW 12M	-----
	2.03	INSPECT MOUNTING OF KNIFE SWITCH CONTACTS	MW 12M	-----
	2.04	CHECK CONDITION OF KNIFE SWITCH BLADES & CONTACT CLIPS	MW 12M	-----
	2.05	CHECK ENGAGEMENT OF KNIFE SWITCH BLADES & CONTACT CLIPS	MW 12M	-----
	2.06	CHECK VOLTAGE DROP BETWN KNF SW HNG CONTACT & MAIN CONTACT	MW 3M	-----
	2.07	CHECK MOTOR NOISE & VIBRATION	MW 12M	-----
	2.08	CHECK MOTOR VOLTAGE & CURRENT REQ	MW 12M	-----
	2.09	CHECK MOTOR TORQUE	MW 3M	-----

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030-787-701 (7/0)	2.10	CHECK CONDITION OF MOTOR COMMUTATOR SURFACE	MW 12M	-----
	2.11	CHECK MOTOR COMMUTATION	MW 12M	-----
	2.12	CHECK MOTOR BRUSHES	MW 12M	-----
	2.13	CHECK CONDITION OF CAM SWITCHES	MW 12M	-----
	2.14	CHECK OPERATION OF CAM SWITCHES	MW 12M	-----
	2.15	CHECK CONDITION OF LIMIT SWITCHES	MW 12M	-----
	2.16	CHECK OPERATION OF LIMIT SWITCHES	MW 12M	-----
	2.17	CHECK OPRN TEMPERATURE	MW 3M	-----
	2.18	CHECK RESISTANCE OF MOTOR FIELD WINDINGS	MW 12M	-----

16.14 SWITCHES; KS-5452 EM CELL MOT DRVN ROT SW

FOR ALL UNITS

030-789-701 (1/0)	2.01	(A, C, D, F & G) LUBRICATE OIL CUPS, DIRN CONT RING, DIRN CONT MECH, UNIV JT & UP AND LOW MAIN CONTACTS	MW 3M	-----
	2.01	(B) LUBRICATE WASTE PACKED BEARINGS	MW 6M	-----
	2.01	(E) CLEAN & LUBRICATE WORM & WORM GEAR	MW 12M	-----
	2.02	CHECK MOTOR VOLTAGE & CURRENT REQ	MW 12M	-----
	2.03	CHECK MOTOR BEARINGS	MW 12M	-----
	2.04	CHECK MOTOR BRUSHES	MW 3M	-----
	2.05	CHECK MOTOR TORQUE	MW 3M	-----
	2.06	CHECK CONDITION OF MOTOR COMMUTATOR SURFACE	MW 3M	-----
	2.07	CHECK MOTOR COMMUTATION	MW 3M	-----
	2.08	CHECK MOTOR NOISE & VIBRATION	MW 3M	-----
	2.09	CHECK OPRN TEMPERATURE	MW 6M	-----
	2.10	CHECK CAM SWITCH OPRN	MW 12M	-----
	2.11	CHECK LIMIT SWITCHES OPRN	MW 12M	-----
	2.12	CHECK MAIN CONTACTS & LAMINATED BRUSHES	MW 12M	-----
	2.13	CHECK CENTERING OF LAMINATED BRUSHES ON CONTACTS	MW 12M	-----
	2.14	CHECK DIRECTION CONTROL MAGNETS OPRN	MW 12M	-----
	2.15	CHECK BRAKE MAGNETS OPRN	MW 12M	-----
	2.16	CHECK WORM & WORM GEAR ENDPLAY	MW 12M	-----

16.15 SWITCHES; KS-5312 EM CELL & AUTO SW TR SW

FOR ALL UNITS

030-790-701 (1/1)	2.01	INSPECT SW MOUNTING	MW 12M	-----
	2.02	CLEANING CONTACTS & REMOVING BUILDUPS	MW 12M	-----
	2.03	CHECK CONTACT ALNMT	MW 12M	-----
	2.07	CHECK OPRG MECH FREEDOM OF OPERATION	MW 12M	-----
	2.08	CHECK SW ELECTRICAL REQUIREMENTS	MW 12M	-----
	2.09	CHECK OPRN TEMPERATURE	MR 12M	-----

OPTIONAL FEATURES, SELECT NO MORE THAN ONE CATEGORY

KS-5312 EM CELL SW

030-79-701	(1/1)	2.06	(A) CHECK CONTACT PRESSURE & FOLLOW	MW 12M	-----
030-790-701	(1/1)	2.04	(A) CHECK CONTACT SEQ	MW 12M	-----
AUTO SW CO 119S8C TR SW					
030-790-701	(1/1)	2.04	(C & D) CHECK CONTACT SEQ	MW 12M	-----
		2.05	(B) CHECK SOL PLNGR & AUX CONTACT ADJMT	MW 12M	-----
		2.06	(C) CHECK CONTACT PRESSURE & FOLLOW	MW 12M	-----
AUTO SW CO BULTN 905, 907 & 908 SW					
030-790-701	(1/1)	2.04	(B) CHECK CONTACT SEQ	MW 12M	-----
		2.05	(A) CHECK SOL PLNGR & AUX CONTACT ADJMT	MW 12M	-----
		2.06	(B) CHECK CONTACT PRESSURE & FOLLOW	MW 12M	-----
16.16 SWITCHES; A & B TYPE SEQUENCE SWITCH					
FOR ALL UNITS					
030-801-501	(2/0)	1.03	SLIPPING DRIVES TEST	MW 6M	-----
030-801-701	(6/0)	2.01	CLEAN CAMS	MW 18M	-----
		2.02	CHECK 'A' CAM ROLLER FREEDOM OF OPRN	MW 12M	-----
		2.03	(E) LUBRICATE CAM ROLLER BEARINGS	MW 6M	-----
OPTIONAL FEATURES					
NONMETALLIC BEARING					
030-801-701	(6/0)	2.03	(C) LUBRICATE INDEX WHEEL END CAM-SHAFT BEARING	MW 12M	-----
METALLIC BEARING					
030-801-701	(6/0)	2.03	(B) LUBRICATE DRIVEN DISC END CAM-SHAFT BEARING	MW 12M	-----
		2.03	(D) LUBRICATE INDEX WHEEL END CAM-SHAFT BEARING	MW 12M	-----
SPLIT CONTACT SPRINGS					
030-801-701	(6/0)	2.20	(A & B) CHECK SPECIAL SPG ADJMT	MW 12M	-----
NONSPLIT CONTACT SPRINGS					
030-801-701	(6/0)	2.14	CHECK PARALLELISM OF CONTACT PRTN OF CONTACT SPG WH FACE OF CAMS	MW 12M	-----
18-POSITION SEQ SW					
030-801-701	(6/0)	2.19	CTRG OF CONTACT SPG ON CAMS	MW 12M	-----
20-POSITION SEQ SW WO 'A' CAMS					
030-801-701	(6/0)	2.21	CHECK 'B' SPG CLRNC	MW 12M	-----
TROUBLE TESTS					
030-801-701	(6/0)	2.05	CAM SHAFT ENDPLAY	TT	-----
		2.06	PNTR LOCN	TT	-----
		2.07	DRVN DISC & SEQ SW FRAME GAP	TT	-----
		2.08	DRG DISC & DRVN DISC GAP	TT	-----
		2.09	DRG DISC VERT LOCN TO DRVN DISC	TT	-----
		2.10	DRG DISC & POLE PC GAP	TT	-----
		2.11	DRIVE PULL	TT	-----
		2.12	'A' CAM-ROLLER PRESSURE	TT	-----

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030-801-701 (6/0)	2.13	(B) CONTACT SPG PRESSURE	TT	-----
	2.15	CLRNC BETWN ADJ CONTACT SPG & SPG-FRAMEWORK	TT	-----
	2.16	CONTACT SPG INNER SURFACE & CAMS METAL PARTS CLRNC	TT	-----
	2.17	CONTACT SPG VERTICAL LOCN	TT	-----
	2.18	'A' SPG CLRNC	TT	-----
	2.22	SPIDER SPG COND	TT	-----
	2.23	MTG SCREWS & SEQ SW FRAME CLRNC	TT	-----

SPLIT CONTACT SPRINGS

030-801-701 (6/0)	2.13	(A) CONTACT SPG PRESSURE	TT	-----
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16.17 SWITCHES; 202-TYPE

TROUBLE TESTS

030-710-701 (2/0)	2.01	CLEAN SWITCH & CONTACTS	TT	-----
	2.02	COVER FIT	TT	-----
	2.03	SPG ASSEMBLY MTG	TT	-----
	2.04	SPG ASSEMBLY TYTNS	TT	-----
	2.05	CONTACT & SPG ALNMT	TT	-----
	2.06	SPG TANG POSITION	TT	-----
	2.07	CAM SHAFT FREEDOM OF MVMT	TT	-----
	2.08	CAM SHAFT BRKT POSITION	TT	-----
	2.09	CONTACT SEPN	TT	-----
	2.10	BACK STOP STRIP CLMPG SCREWS TYTNS	TT	-----
	2.11	DRAWBAR LOCG SPG TENSION	TT	-----
	2.12	CONTACT SPG TENSION	TT	-----
	2.13	STRNS OF SPGS	TT	-----
	2.14	ADJ SPGS SEPN	TT	-----
	2.15	OPRG PRESSURE	TT	-----

16.18 SWITCHES; 211 & 212-TYPE

TROUBLE TESTS

030-711-701 (2/0)	2.01	CLEAN SWITCH & CONTACTS	TT	-----
	2.02	COVER FIT	TT	-----
	2.03	SW ASSEMBLY TYTNS	TT	-----
	2.04	SHAFT & ROLLER FREEDOM OF MVMT	TT	-----
	2.05	CONTACT ALNMT	TT	-----
	2.06	SPG TANG POSITION	TT	-----
	2.07	LG CONTACT SPG TANG CLRNC	TT	-----
	2.08	STRNS OF SPGS	TT	-----
	2.09	CONTACT SEPN	TT	-----
	2.10	CONTACT SPG CLRNC	TT	-----
	2.11	DRAWBAR LOCG SPG TENSION	TT	-----
	2.12	CONTACT SPG TANG PRESSURE	TT	-----

030-711-701 (2/0)	2.13	CONTACT SEQ	TT	-----
16.19 SWITCHES; 216 & 217-TYPE				
TROUBLE TESTS				
030-712-701 (3/0)	2.01	CLEAN SWITCH & CONTACTS	TT	-----
	2.02	SW ASSEMBLY MTG TYTNS	TT	-----
	2.03	CONTACT ALNMT	TT	-----
	2.04	OPRG SPG TENSION	TT	-----
	2.05	OPRG SPG & ASSOCD STATIONARY SPG CLRNC	TT	-----
	2.06	CONTACT SEPN	TT	-----
	2.07	FR CONTACT MAKE	TT	-----
16.20 SWITCHES; 223-TYPE COAXIAL				
TROUBLE TESTS				
030-713-701 (5/0)	4.01	(4.01 - 4.05) SWITCH CLEANING	TT	-----
223A, 223B & 223C SWITCHES				
030-713-701 (5/0)	5.04	OPR & RLS CURRENT TEST	TT	-----
	5.05	TRMSN TEST	TT	-----
	5.06	IF RETURN LOSS TEST	TT	-----
	5.07	CROSSTALK TEST	TT	-----
	5.08	OPRG TIME TEST	TT	-----
223D & 223E SWITCHES				
030-713-701 (5/0)	6.01	BLK MAGNET ADJMT	TT	-----
	6.02	INSN & ISLNT LOSS TEST	TT	-----
	6.03	RTN LOSS MEASMT	TT	-----
	6.04	BRDG TIME TEST	TT	-----
16.21 SWITCHES; 300, 301, 302 & 303 TYPE				
TROUBLE TESTS				
030-715-701 (7/0)	2.01	CLEAN SWITCH & CONTACTS	TT	-----
	2.02	SWITCH & SW PARTS MTG	TT	-----
	2.03	(2.03 - 2.12) SELG UNIT REQTS	TT	-----
	2.13	(2.13 - 2.21) SELG OFF-NORMAL CONTACT SPGS REQTS	TT	-----
	2.22	(2.22 - 2.32) VERTICAL UNIT REQTS	TT	-----
	2.33	(2.33 - 2.42) HLDG OFF-NORMAL CONTACT SPGS REQTS	TT	-----
16.22 SWITCHES; 304, 305, 306, 307, 308, 314, 315 & 318-TYPE				
TROUBLE TESTS				
030-717-701 (6/0)	2.01	CLEAN SWITCH & CONTACTS	TT	-----
	2.02	SWITCH & SW PARTS MTG	TT	-----
	2.03	(2.03 - 2.12) SELG UNIT REQTS	TT	-----
	2.13	(2.13 - 2.21) SELG OFF-NORMAL CONTACT SPGS REQTS	TT	-----
	2.22	(2.22 - 2.31) VERTICAL UNIT REQTS	TT	-----

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030-717-701	(6/0)	2.32	(2.32 - 2.40) HLDG OFF-NORMAL CONTACT SPGS REQTS	TT	-----
16.23 SWITCHES; 324, 325, 328, 334 & 338-TYPE					
TROUBLE TESTS					
030-720-701	(9/0)	2.01	CLEAN SWITCH & CONTACTS	TT	-----
		2.02	SWITCH & SW PARTS MTG	TT	-----
		2.03	(2.03 - 2.12) SELG UNIT REQTS	TT	-----
		2.13	(2.13 - 2.21) SELG OFF-NORMAL CONTACT SPGS REQTS	TT	-----
		2.22	(2.22 - 2.32) VERTICAL UNIT REQTS	TT	-----
		2.33	(2.33 - 2.42) HLDG OFF-NORMAL CONTACT SPGS REQTS	TT	-----
16.24 SWITCHES; SMALL CROSSBAR					
TROUBLE TESTS					
030-721-701	(6/3)	3.01	INSPECT SWITCH & CONTACTS	TT	-----
		3.02	SWITCH & SW PARTS MTG	TT	-----
		3.03	(3.03 - 3.05) SELG UNIT REQTS	TT	-----
		3.06	(3.06 - 3.12) CTRG UNIT REQTS	TT	-----
		3.13	(3.13 - 3.23) SELG OFF-NORMAL ASSEMBLY REQTS	TT	-----
		3.24	(3.24 - 3.35) VERTICAL UNIT REQTS	TT	-----
		3.36	(3.36 - 3.42) HLDG OFF-NORMAL CONTACT SPGS REQTS	TT	-----
16.25 SWITCHES; 4-TYPE FOOT SW					
TROUBLE TESTS					
030-760-701	(3/1)	2.01	CLEAN SWITCH & CONTACTS	TT	-----
		2.02	KEY BUTTON & PLNGR MVMT	TT	-----
		2.03	CONTACT ALNMT	TT	-----
		2.04	CONTACT SEPN	TT	-----
		2.05	SPG CLRNC	TT	-----
		2.06	CONTACT PRESSURE	TT	-----
		2.07	CONTACT FOLLOW	TT	-----
		2.08	FLEX CONTACT SPG POSITION	TT	-----
		2.09	PLNGR SPGS/HARD RUBBER PLNGR POSITION RLTN	TT	-----
		2.10	PLNGR SPG PRESSURE	TT	-----
		2.11	CONTACT SEQ	TT	-----
		2.12	PLNGR OPR PRESSURE	TT	-----
16.26 SWITCHES; PRI LINE, SEC LINE & OUT TRK PLNGR TYPE					
TROUBLE TESTS					
030-761-701	(2/1)	2.01	CLEAN SWITCH & CONTACTS	TT	-----
		2.02	BK CONTACT SPGS FORM	TT	-----
		2.03	BK CONTACT SPG & BK CONTACT CLRNC	TT	-----
		2.04	PLNGR ROLLER MVMT	TT	-----
		2.05	PLNGR STRTNS	TT	-----

030-761-701 (2/1)	2.06	PLNGR OSCN	TT	-----
	2.07	FANTAIL SLOT & PLNGR GUIDE SHAFT ENGMT	TT	-----
	2.08	PLNGR TIP & BK COMB TIP CLRNC	TT	-----
	2.09	SW FR/SHELF ANGLE	TT	-----
	2.10	FANTAIL SPCG	TT	-----
	2.11	PLNGR TIP & BK COMB STP CLRNC	TT	-----
	2.12	PLNGR/PLNGR GUIDE SHAFT RENGMT	TT	-----
	2.13	BK/ROD ANGLE	TT	-----
	2.14	BK SPCG	TT	-----
	2.15	PLNGR TIP & BK COMB TIP RELATION	TT	-----
	2.16	PLNGR DIRECTION	TT	-----
	2.17	PLNGR RSTG SPG POSITION	TT	-----
	2.18	PLNGR RSTG SPG ROLLER MVMT	TT	-----
	2.19	CLASS-OF-SERVICE CONTACT SPG GAUGING	TT	-----
	2.20	PLNGR ARMTR LEVER & PLNGR ARMTR LEVER BACKSTOP CLRNC	TT	-----
	2.21	PLNGR ARMTR STROKE	TT	-----
	2.22	PLNGR FREEDOM OF MVMT	TT	-----
	2.23	'B' RELAY ELECTRICAL REQTS	TT	-----
16.27 SWITCHES; SOLENOID TYPE MASTER				
FOR ALL UNITS				
030-762-701 (2/0)	2.34	LUBRICATE SWITCH	MW 3M	-----
	TROUBLE TESTS			
030-762-701 (2/0)	2.01	CLEAN SWITCH & CONTACTS	TT	-----
	2.02	RELAY REQTS	TT	-----
	2.03	(2.03 - 2.20) SWITCH ALNMT	TT	-----
	2.21	(2.21 - 2.29) DRG SPG REQTS	TT	-----
	2.30	(2.30 - 2.32) WIPER & BK REQTS	TT	-----
	2.33	JACK SPGS CLRNC	TT	-----
16.28 SWITCHES; SPG DRVN SEQUENCE SWITCH				
FOR ALL UNITS				
030-801-501 (2/0)	1.03	SLIPPING DRIVES TEST	MW 6M	-----
	TROUBLE TESTS			
030-802-701 (2/0)	2.01	CLEAN CAMS, SEQ SW FR, DRG MECH GEARS & DRG MECH PINIONS	MW 24M	-----
	2.02	(A) LUBRICATE PINION SHAFT BEARINGS, GOVERNOR BEARINGS, PINION TEETH, GOVERNOR FRICTION FACES, WORM WHEEL & MISC BEARINGS	MW M	-----
	2.02	(B) STIRRUP END CAM SHAFT BEARINGS	MW 6M	-----
	2.06	CHECK PARALLELISM OF CONTACT PRTN OF CONTACT SPG WH FACE OF CAMS	MW 12M	-----
TROUBLE TESTS				
030-802-701 (2/0)	2.04	CAM SHAFT ENDPLAY	TT	-----
	2.05	(A) CONTACT SPG PRESSURE	TT	-----

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030-802-701 (2/0)	2.07	CLRNC BETWN ADJ CONTACT SPG & SPG-FRAMEWORK	TT	-----
	2.08	CLRNC BETWN CONTACT SPG INNER SURFACE & RIVET HEADS	TT	-----
	2.09	CLRNC BETWN CONTACT SPG EDGES & CAMS NOTCHED OUT PORTIONS ADJ EDGES	TT	-----
	2.10	CONTACT SPGS & CAM EDGES LOCN	TT	-----
	2.11	PNTR ADJMT	TT	-----
	2.12	TRPG ARM OPRN	TT	-----
	2.13	TRPG ARM POSITION	TT	-----
	2.14	PAWL SPG TENSION	TT	-----
	2.15	OPRN SPEED	TT	-----

SPLIT CONTACTS SPRINGS

030-802-701 (2/0)	2.05	(B) CONTACT SPG PRESSURE	TT	-----
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16.29 SWITCHES; D-97286 & D-97299

TROUBLE TESTS

030-715-701 (7/0)	2.01	CLEAN SWITCH & CONTACTS	TT	-----
	2.02	SWITCH & SW PARTS MTG	TT	-----
	2.03	(2.03 - 2.12) SELG UNIT REQTS	TT	-----
	2.13	(2.13 - 2.21) SELG OFF-NORMAL CONTACT SPGS REQTS	TT	-----
	2.22	(2.22 - 2.32) VERTICAL UNIT REQTS	TT	-----
	2.33	(2.33 - 2.42) HLDG OFF-NORMAL CONTACT SPGS REQTS	TT	-----

16.30 SWITCHES; D-158890, D-158891 & D-159187

TROUBLE TESTS

030-715-701 (7/0)	2.01	CLEAN SWITCH & CONTACTS	TT	-----
	2.02	SWITCH & SW PARTS MTG	TT	-----
	2.03	(2.03 - 2.12) SELG UNIT REQTS	TT	-----
	2.13	(2.13 - 2.21) SELG OFF-NORMAL CONTACT SPGS REQTS	TT	-----
	2.22	(2.22 - 2.32) VERTICAL UNIT REQTS	TT	-----
	2.33	(2.33 - 2.42) HLDG OFF-NORMAL CONTACT SPGS REQTS	TT	-----