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NOTE: *FOR INFORMATION ONLY. CONTRACTOR MAY AT HIS OPTION DEVIATE FROM THESE PROCESS DETAILS

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	(U) NOTE-49 ADDED.	14 MAR 66	JLG JM R

(A)

- NOTES:
- LIQUID STAKE WITH LOCKTITE GRADE C (9) AS SUPPLIED BY AMERICAN SEALANTS CO. HARTFORD 6 CONN. OR EQUAL.
 - PART MAY BE SUPPLIED BY CENTRAL SCREW CO. PHILADELPHIA, PA. OR EQUAL.
 - PART SHALL BE .032 THK., .147 ID., .312 OD, CRES TYPE 302. FINISH: E300 PER SPEC MIL-F-14072
 - PART SHALL BE .060 THK., .343 ID., .750 OD, CRES TYPE 302. FINISH: E300 PER SPEC MIL-F-14072
 - PART SHALL BE .031 THK., .128 ID., .239 OD, CRES TYPE 302. FINISH: E300 PER SPEC MIL-F-14072
 - PART SHALL BE 3/8 LG, 3-56 NF-2A, FINISH, M262A OR M264A PER SPEC. MIL-F-14072.
 - PART SHALL BE 1/2 LG, 4-40 NC-2A, FINISH, M262A OR M264A PER SPEC. MIL-F-14072.
 - PART SHALL BE 3/16 LG, 4-40 NC-2A, FINISH, M262A OR M264A PER SPEC. MIL-F-14072.
 - PART MAY BE SUPPLIED BY UNITED SCREW & BOLT CORP., CHICAGO, ILL. OR EQUAL.
 - PART SHALL BE 3/16 SQ. x .067 THK., STEEL. FINISH, M262 PER SPEC MIL-F-14072.
 - POSITION BEVEL GEAR (70) & (71) ON COUNTER DRIVE WITH MIN. AMOUNT OF TORQUE AND BACKLASH.
 - POSITION CAM ASSY AS SHOWN IN DIAGRAM, SEE SHEET 3, AND TIGHTEN ALL CLAMPS.
 - LOAD ALL SPRING LOADED GEAR ASSYS TO WITHIN ONE TOOTH OF POSITION SHOWN IN DETAIL (A) SHEET 3.
 - CENTER ALL ADJUSTABLE GEAR ASSYS ON MATING GEARS.
 - CLAMP SCREW (85) TO BE TIGHTENED WITHIN A RANGE OF 6-8 INCH LBS.
 - CLAMP SCREW (86 & 87) TO BE TIGHTENED WITHIN A RANGE OF 8-10 INCH LBS.
 - CENTER PINS IN SLOT ON CLUTCH GEAR (65).
 - REMOVE SPACER ON GEAR ASSY (67) WHEN ASSEMBLING INTERMITTENT SWITCH DRIVE.
 - OVER TRAVEL OF KC DRIVE (62) TO BE CENTERED WITHIN ±5 KC (COUNTER READING).
 - APPLY LUBRICANT (83) PER SPEC. MIL-L-7870 TO ALL BEARINGS & TOOTH PINION BORE (8) & SHAFT (35).
 - GEAR (50) MUST BE LOADED BY TURNING THE GEARS TO BRING THE ENDS OF THE SPRING TOWARD EACH OTHER.
 - ADJUST GEAR (49) FOR MIN BACKLASH & TORQUE.
 - MAX. TORQUE REQUIRED TO TURN KC DRIVE SHAFT (61) BETWEEN STOPS SHALL NOT EXCEED 24 INCH OZ.
 - MAX. TORQUE REQUIRED TO TURN MC DRIVE (62) BETWEEN STOPS SHALL NOT EXCEED 2 INCH LB WITH DETENT SPRING REMOVED.
 - DETENT SPRING SHALL BE ADJUSTED TO POSITION THAT WILL REQUIRE A TORQUE OF 6 TO 8 1/2 INCH LB TO TURN MC SHAFT OUT OF DETENT POSITION.
 - LUBRICATE SCREWS 85, 86 & 87 WITH GREASE (90) PER SPEC MIL-G-7421.
 - LIQUID STAKE TRIMMERNUT WITH LOCKTITE (91) AFTER ADJUSTING GEAR FOR MIN TORQUE & BACKLASH BY POSITIONING TRIMMER. SEE NOTE 1.
 - REMOVE END PLAY IN ASSYS (61) & (62) BY SHIMMING WITH WASHERS (1) & (28). MAX END PLAY .004 WITH 5 LB. FRONT TO REAR THRUST LOAD ON SHAFT.
 - REMOVE END PLAY TO A MAX OF 1/64 IN ASSEMBLIES (40) WITH WASHER (29).
 - REMOVE END PLAY TO A MAX OF 1/64 ON ALL CAM SHAFT ASSYS WITH WASHERS (1) & (28).
 - REMOVE PIN IN ASSY (61), ASSEMBLED PLATE (64) AND SET PIN WITH .030 TO .050 EXTENDING ABOVE SHAFT.
 - STOP ASSY ARE TO WITHSTAND A REPEATED TORQUE OF 72 IN. LBS.
 - ALL RETAINING RINGS ARE TO BE ASSEMBLED WITH BURR SIDE AWAY FROM BEARING SURFACE.
 - REMOVE END PLAY TO A MAX OF 1/64 WITH WASHERS (1) & (28) IN ASSY (24).
 - LUBRICATE DETENT (13) WITH GREASE, ITEM 113.
 - IN ALL SPLIT BALLOONS TOP FIGURE IS MATERIAL LIST ITEM INDICATOR & BOTTOM FIGURE IS QUANTITY.
 - SUGGESTED TIMING PROCEDURE:
 - PLACE DIFFERENTIAL IN A DETENT POSITION
 - POSITION CAMS AS SHOWN
 - POSITION INTERMITTENT SWITCH DRIVE AS SHOWN. (SEE SHEET 3).
 - POSITION COUNTER AS SHOWN (7+ .000 MC).
 - TIGHTEN ALL CLAMPS WITH THE EXCEPTION OF CLAMP ON DRIVE GEAR (35) & DRIVE GEAR (66).
 - RESET GEAR TRAIN UNTIL COUNTER READS 00+000
 - TURN MC DRIVE SHAFT (62) C.C.W. TO STOPS RETURN SHAFT CW APPROX 30° MESH & CENTER MC GEARS & TIGHTEN CLAMPS.
 - TURN KC DRIVE SHAFT (61) C.W. TO STOPS MESH GEAR & TIGHTEN CLAMP TURN GEAR THRU TO STOPS CCW TO DETERMINE OVER TRAVEL. CENTER OVERTRAVEL BY RESETTING KC GEAR.
 - LOADED SPRING ON DRIVE GEAR (25) SHOULD NOT EXTEND OUTSIDE OF CAM AREA. AS SHOWN.
 - TRIMMER ASSY MAY BE SUPPLIED UNATTACHED TO GEAR TRAIN.
 - SHIMS MAY BE USED UNDER GEAR ASSY (11) TO OBTAIN BETTER MESH
 - REMOVE ENDPLAY TO A MAX OF .012 IN ASSY (50) WITH WASHER (29). ASSEMBLE WASHERS TO OBTAIN THE BEST MESH BETWEEN ASSYS (16) & (50).
 - WASHER (105) (106) & (107) MAY BE USED TO REMOVE END PLAY IN ADDITION TO WASHERS SPECIFIED IN NOTES.
 - INSERTS (30) AND (73) TO BE DELETED IN NEXT ASSEMBLY.
 - REMOVE BUSHING ON STOP ASSYS (61) & (62) WHEN ASSEMBLING.
 - PART SHALL BE .010 THK., .437 I.D., .687 O.D., CRES TYPE 302. FINISH E300 SPEC MIL-F-4072.
 - LIQUID STAKE WITH LOCKTITE GRADE K (112) AS SUPPLIED BY AMERICAN SEALANTS CO. HARTFORD 6, CONN. OR EQUAL.
 - PART SHALL BE 5/16 LG., 6-32 NC-2A, CRES TYPE 303, FINISH E300 PER SPEC. MIL-F-14072.
 - COAT RUBBER STAMPING OR SILK SCREEN WITH FUNGUS RESISTANT VARNISH (114) PER SPEC. MIL-V-173, TYPE I. AND TO MEET THE REQUIREMENTS OF SPEC. MIL-M-13231.
 - REVISION 1954 OF ASA SHOULD BE APPLICABLE TO THE SCREWS HEADS OF ITEMS 85, 86, & 87.

QTY	ITEM REQ'D	PART NO.	DESCRIPTION	MATL	MATL SPEC	NOTES
	114	AS REQ'D	VARNISH			48
	113	AS REQ'D	MOLYKOTE TYPE G			35
	112	AS REQ'D	LOCKTITE GRADE A			46
	111	1	MS35216-39	SCREW		FF-6-92
	110	1	SM-D-343600-8	WASHER, FLAT		2 & 45
	109	4	SM-B-178739	ROLLER		
	108	1	SM-B-283251	RING - RETAINER		33
	107	6	SM-B-178483-5	WASHER		42
	106	6	SM-B-283253	WASHER		42
	105	6	SM-B-283252	WASHER		42
	104	7	MS35338-80	WASHER		FF-W-84
	103	18	MS35338-21	WASHER		FF-W-84
	102	11	MS35338-79	WASHER		FF-W-84
	101	7	MS35216-40	SCREW		FF-6-92
	100	2	MS35216-26	SCREW		
	99	7	MS35216-25	SCREW		
	98	2	SM-D-343600-10	SCREW HEX. HD.		47
	97	2	MS35216-23	SCREW		
	96	2	MS35216-22	SCREW		
	95	4	MS35216-13	SCREW		
	94	3	MS35216-12	SCREW		
	93	5	MS35200-39	SCREW		
	92	11	MS35200-25	SCREW		FF-5-92
	91	AS REQ'D	LOCKTITE GRADE C			1 & 27
	90	AS REQ'D	LUBRICANT			2 & 35
	89	AS REQ'D	LUBRICANT			20
	88	11	SM-D-343600-9	NUT-4-40NC-2B		9 & 10
	87	5	-6	SCREW-SOCKET, 6 FLUTE	ASA B18.3	8, 16 & 49
	86	6	-5	SCREW-SOCKET, 6 FLUTE	ASA B18.3	7, 15 & 49
	85	3	-4	SCREW-SOCKET, 6 FLUTE	ASA B18.3	6 & 49
	84	1	-3	WASHER-LOCK #5 MED		2 & 5
	83	1	-2	WASHER-FLAT		2 & 4
	82	2	SM-D-343600-7	WASHER-FLAT #6		2 & 3
	81	1	MS16633-1025	RING-RETAINING		33
	80	1	MS16633-1018	RING-RETAINING		33
	79	5	MS16633-1012	RING-RETAINING		33
	78	1	SM-B-283171-3	RING-RETAINER		33
	77	1	SM-B-283171-2	RING-RETAINER		33
	76	1	SM-B-283171-1	RING-RETAINER		33
	75	2	SM-B-283169	SCREW-SET		
	74	1	SM-C-249195	COUNTER-MECHANICAL		
	73	1	SM-B-249186	INSERT-KNOB		43
	72	1	SM-B-283173	RING, RETAINING		33
	71	1	SM-B-248932	GEAR SPUR		
	70	1	SM-D-343612	PLATE ASSY-FRONT		
	69	1	SM-C-343601	PLATE ASSY-CAM		
	68	1	SM-C-248977	PLATE ASSY-REAR		
	67	1	SM-C-248970	GEAR ASSY, SWITCH		18
	66	1	SM-C-248968	PLATE ASSY-LOCKING		37
	65	1	SM-C-248967	GEAR ASSY-CLUTCH		
	64	1	SM-C-248966	PLATE ASSY-AUX GEAR		
	63	1	SM-C-248962	TRIMMER ASSY-R.F.		40
	62	1	SM-C-343598	STOP ASSY R.F.		24, 37, 44
	61	1	SM-C-343597	STOP ASSY		28, 31, 34
	60	1	SM-C-248953	SHAFT ASSY-CAM		30
	59	2	SM-B-248933	SHAFT ASSY-CAM		30
	58	1	SM-B-248937	SHAFT ASSY-CAM		30
	57	1	SM-B-248936	SHAFT ASSY-CAM		30
	56	1	SM-B-248935	SHAFT ASSY-CAM		30
	55	1	SM-B-248932	GEAR ASSY-MC		37
	54	2	SM-B-248947	BRACKET-CAM PLATE		
	53	1	SM-B-343534	PLATE ASSY-CAM		

QTY	ITEM REQ'D	PART NO.	DESCRIPTION	MATL	MATL SPEC	NOTES
	52	1	SM-B-248945	GEAR ASSY		
	51	1	SM-B-248944	GEAR ASSY		
	50	1	SM-B-248943	GEAR ASSY		21 & 41
	49	1	SM-B-248942	GEAR ASSY		
	48	1	SM-B-248941	POST ASSY-GEAR		
	47	1	SM-B-248939	GEAR ASSY-SPUR		
	46	1	SM-B-248938	GEAR ASSY		
	45	1	SM-B-248935	BUSHING-HELICAL GEAR		
	44	1	SM-B-248934	CLAMP HELICAL GEAR		
	43	4	SM-B-248924	POST		
	42	1	SM-B-248914	GEAR-SPUR		
	41	1	SM-B-248907	GEAR-SPUR		
	40	1	SM-B-248902	GEAR-SPUR		
	39	1	SM-B-248900	BUSHING-GEAR		
	38	1	SM-B-248896	GEAR-SPUR		
	37	1	SM-B-248895	HUB-DIAL		
	36	3	SM-B-248888	BUSHING-GEAR		
	35	1	SM-B-248885	SHAFT-TRIMMER		
	34	1	SM-B-248884	GEAR-HELICAL		
	33	2	SM-B-248880	POST-LONG		
	32	4	SM-B-248879	POST-SHORT		
	31	1	SM-B-248877	SLEEVE-SHAFT		
	30	1	SM-B-248865	INSERT-BUSHING		43
	29	4	SM-B-248829-1	WASHER		29 & 41
	28	10	SM-B-248824	WASHER		30, 34 & 28
	27	1	SM-C-179063	GEAR		
	26	1	SM-B-178977	GEAR ASSY		
	25	2	SM-C-178957	GEAR ASSY		
	24	1	SM-B-178935	GEAR ASSY		34
	23	1	SM-C-178931	GEAR		
	22	1	SM-C-178930	GEAR		
	21	1	SM-B-178913	GEAR ASSY		
	20	2	SM-B-178912	GEAR ASSY		34 & 300
	19	2	SM-B-178907	POST		
	18	4	SM-B-178906	POST		
	17	1	SM-B-178901	SHAFT		
	16	1	SM-C-343591	GEAR ASSY		
	15	1	SM-B-178830	SCREW		
	14	2	SM-B-178829	SPRING		
	13	1	SM-C-178828	SPRING		25
	12	6	SM-B-178785	SPRING		
	11	1	SM-B-178752	GEAR ASSY		40
	10	2	SM-B-178707	GEAR		11
	9	1	SM-B-178702	GEAR		
	8	1	SM-B-178701	GEAR		
	7	1	SM-C-178700	GEAR		
	6	3	SM-B-343586	CLAMP		
	5	1	SM-B-178491	INSULATOR		
	4	5	SM-B-178486	CLAMP		
	3	1	SM-B-178483-2	WASHER		
	2	6	SM-B-178414	CLAMP		
	1	8	SM-B-178411	WASHER		28, 30 & 4

REQ'D	PART NO.	DESCRIPTION	MATL	MATL SPEC	NOTES
LIST OF MATERIAL					
UNLESS OTHERWISE SPECIFIED					
DIMENSIONS ARE IN INCHES					
TOLERANCES ON FRACTIONS DECIMALS ANGLES					
± ± ±					
DRAWN BY: <i>[Signature]</i>					
CHECKED BY: <i>[Signature]</i>					
CHIEF DRAFTS: <i>[Signature]</i>					
ENG APPROVAL: <i>[Signature]</i>					
APPLICATION		DATE 28 SEPT 59		SCALE <i>[Symbol]</i>	
STEWART-WARNER ELECTRONICS 42428-PC-59			SIGNAL CORPS		
REVIEWED: <i>[Signature]</i>			APPROVED: <i>[Signature]</i>		
DEPARTMENT OF THE ARMY SIGNAL CORPS ENGINEERING LABORATORIES			FORT MONMOUTH NEW JERSEY		
TRAIN ASSY, GEAR					
SM-D-343600 SHEET 1 OF 3 SHEETS					

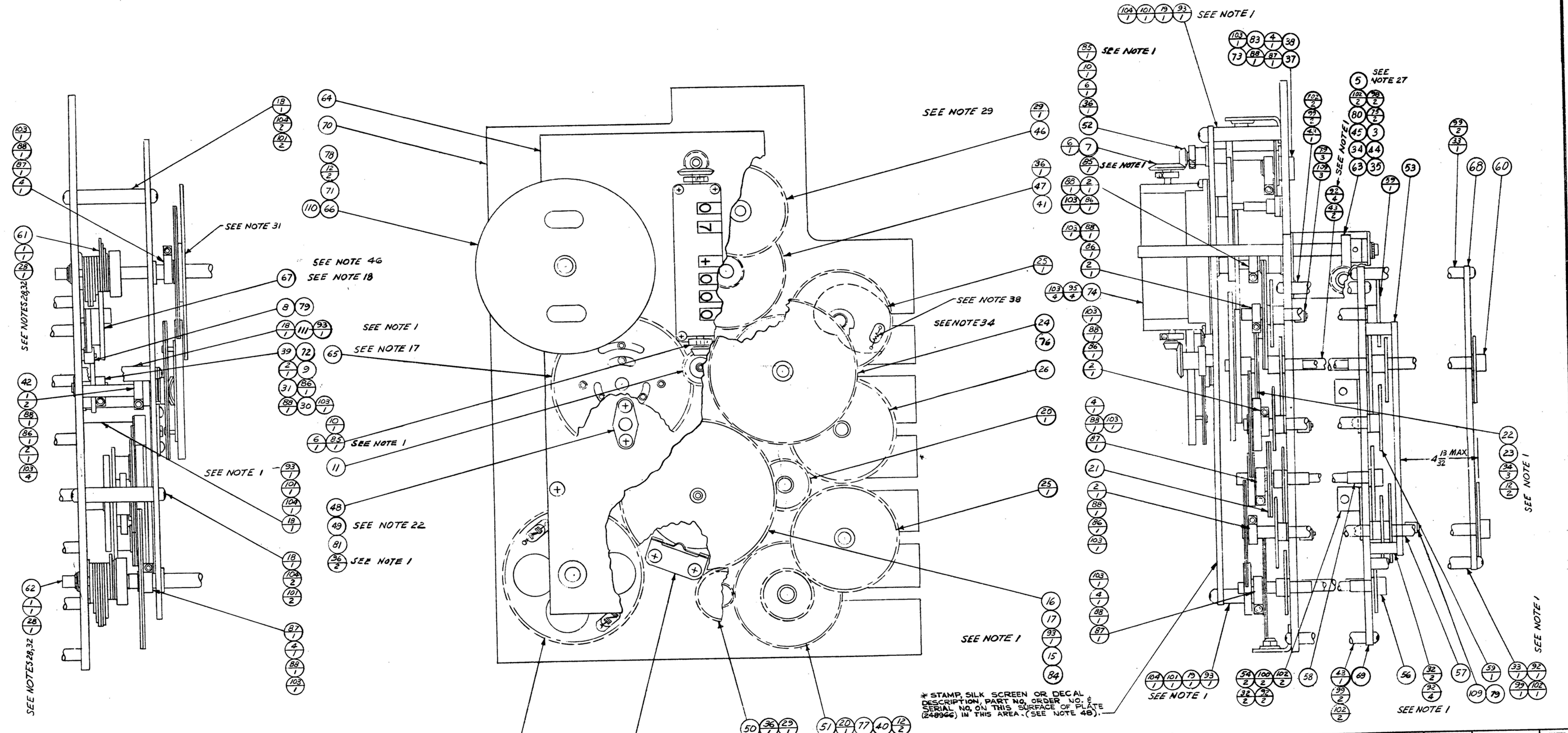
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REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A		14 MAR 66	JLG JM RPB



* STAMP SILK SCREEN OR DECAL DESCRIPTION, PART NO, ORDER NO, & SERIAL NO, ON THIS SURFACE OF PLATE (249966) IN THIS AREA. (SEE NOTE 48).

REQD	PART NO.	DESCRIPTION	MATL.	MATL SPEC	NOTES
LIST OF MATERIAL					

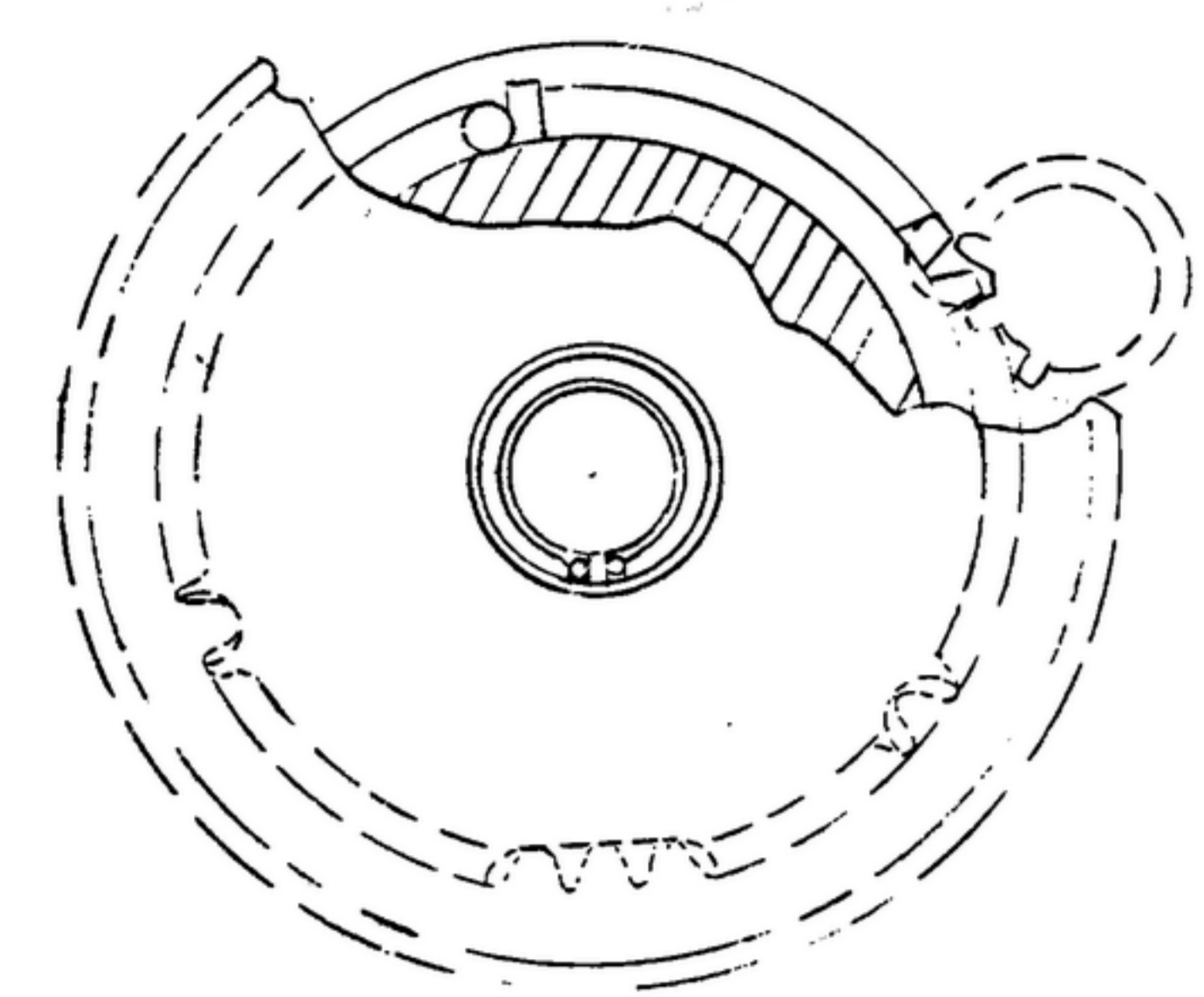
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES ± 1/64 ± .005 ± —		STEWART-WARNER ELECTRONICS 42428-PC-59 SIGNAL CORPS		TRAIN ASSY, GEAR		DEPARTMENT OF THE ARMY SIGNAL CORPS ENGINEERING LABORATORIES FORT MONMOUTH NEW JERSEY	
DRAWN BY <i>P. J. ...</i> CHECKED BY <i>P. J. ...</i> CHIEF DRAFTS <i>P. J. ...</i> ENG APPROVAL <i>P. J. ...</i>		REVIEWED <i>PME</i> APPROVED <i>PME</i> DATE 23 SEPT 59 SCALE <i>1/4"</i>					
APPLICATION		NEXT ASSY USED ON		SM-D-343600 SHEET 2		WHEN REFERRING TO THIS DRAWING STATE DRAWING NO., APPLICABLE ISSUE SYMBOL, IF ANY, AND DATE.	

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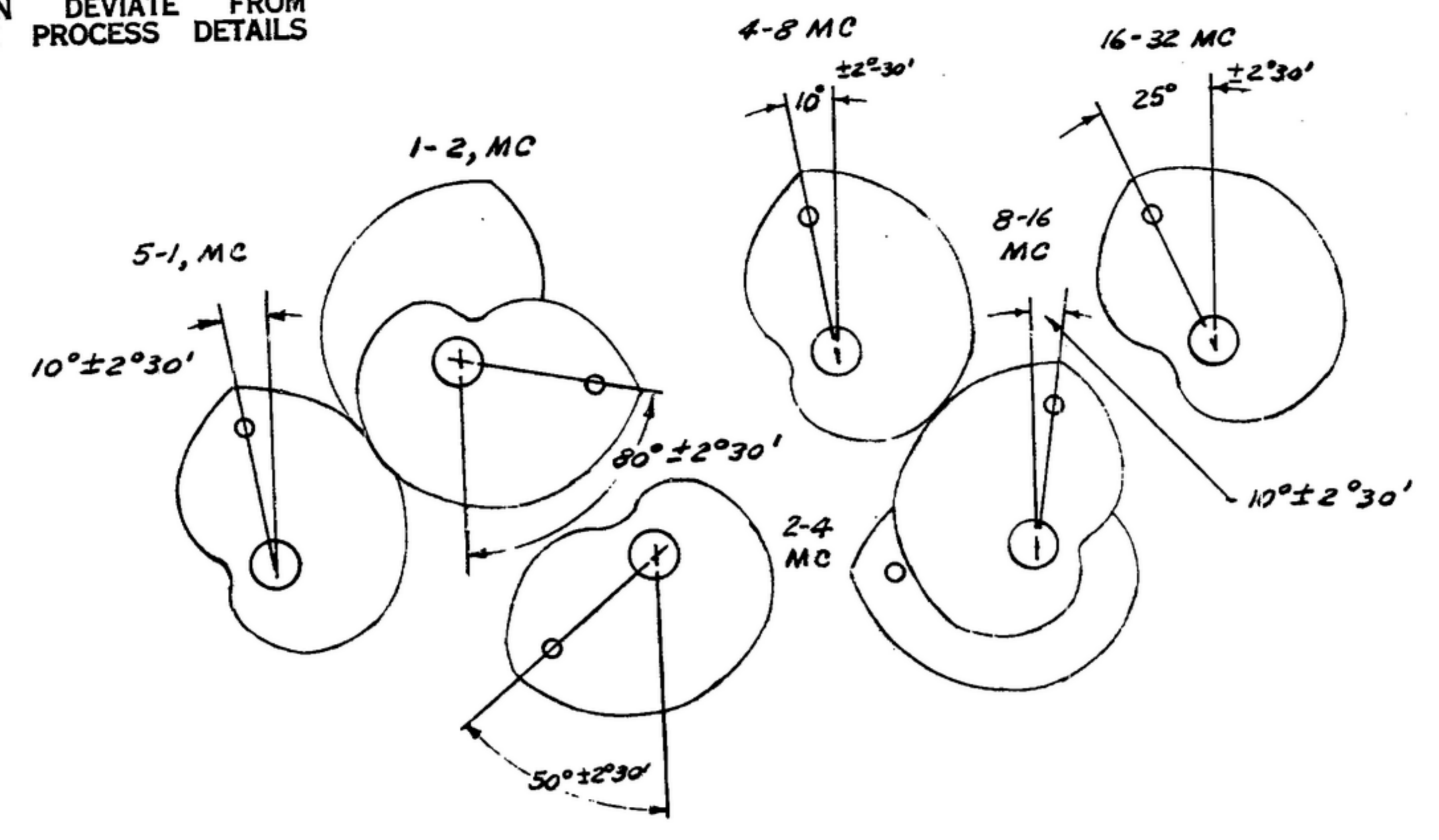
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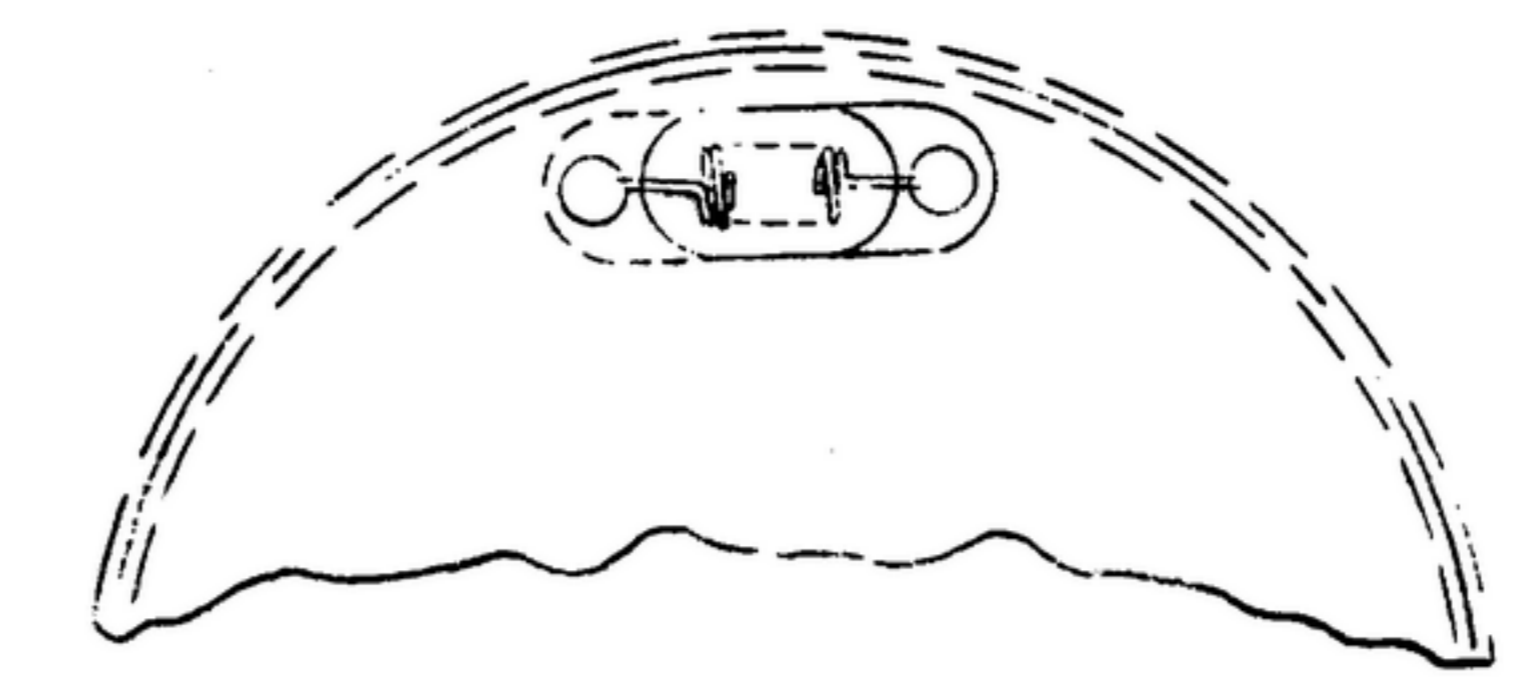
REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A		14 MAR 59	JIC JMR RPD



INTERMITTENT SWITCH DRIVE
VIEW FROM FRONT IN 7+000 MC
POSITION SEE NOTE 37C SCALE 2/1



CAM POSITIONS VIEWED FROM REAR WITH 2 REAR
PLATES REMOVED IN 7+000 MC POSITION. SEE NOTE 12



DETAIL A
SEE NOTE 13
GEARS SHOWN IN LOADED
POSITION SCALE 2/1

REQD	PART NO.	DESCRIPTION	MATL	MATL SPEC	NOTES
LIST OF MATERIAL					

UNLESS OTHERWISE SPECIFIED		STEWART-WARNER-ELECTRONICS		TRAIN ASSY GEAR	DEPARTMENT OF THE ARMY SIGNAL CORPS ENGINEERING LABORATORIES FORT MONMOUTH NEW JERSEY
DIMENSIONS ARE IN INCHES		42428-PC-59			
TOLERANCES ON FRACTIONS DECIMALS ANGLES		SIGNAL CORPS			
± — ± — ± —		REVIEWED PME			
DRAWN BY <i>[Signature]</i>		APPROVED		SM-D-343600 SHEET 3	
CHECKED BY <i>[Signature]</i>		PME			
CHIEF DRAFTS <i>[Signature]</i>		DATE 24 SEPT 59			
NEXT ASSY USED ON		ENG APPROVAL <i>[Signature]</i>		SCALE 1/1	
APPLICATION		WHEN REFERRING TO THIS DRAWING STATE DRAWING NO., APPLICABLE ISSUE SYMBOL, IF ANY, AND DATE.			