

# **Engineering Documents**

**Bally**

# **GALAXY**

Revision 2 - 4/4/18 - added probability unit diagram

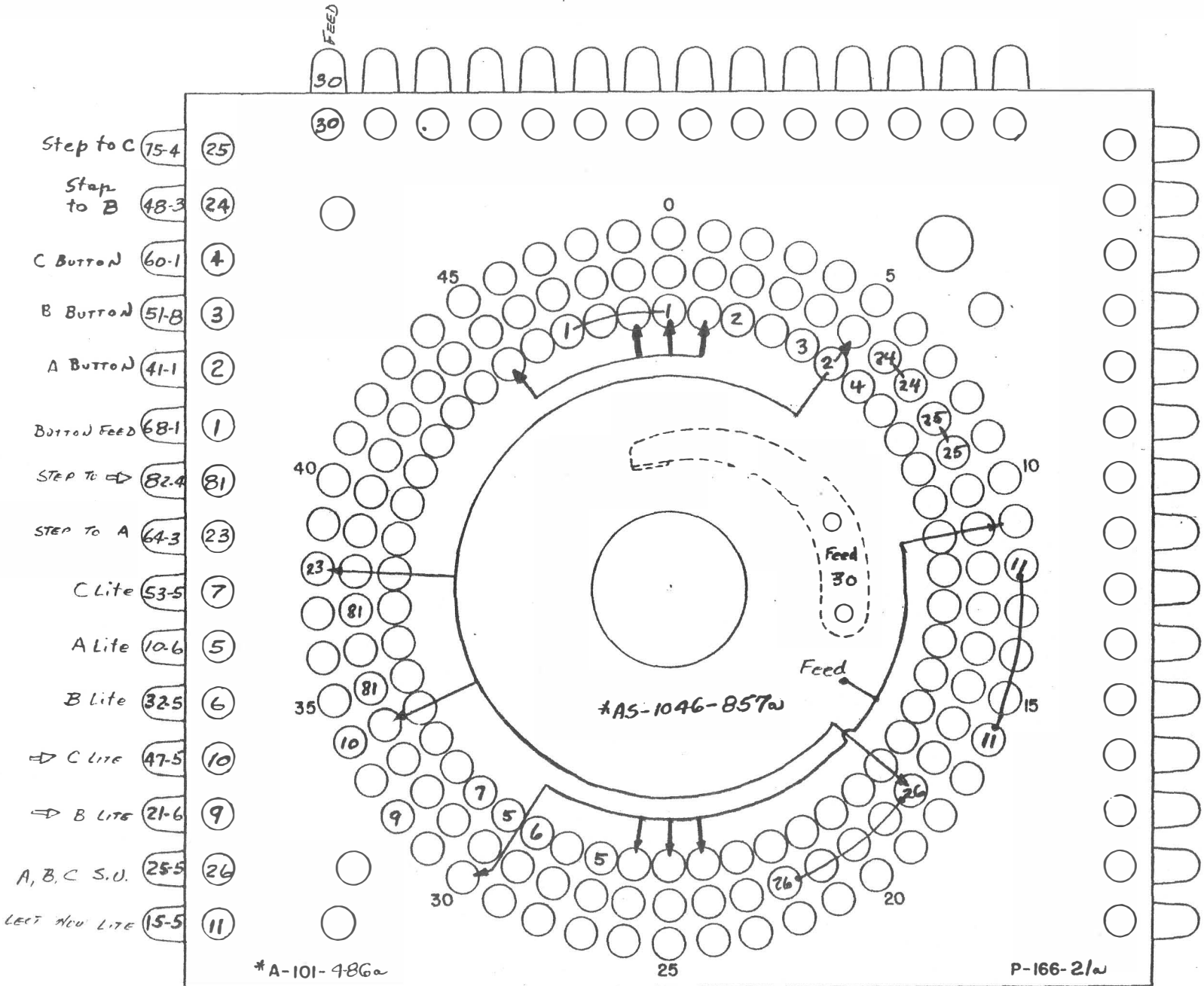
*This is not the normal Bally game manual for Galaxy. While I think that manual exists, I've been told it didn't ship with the machines, so it's pretty hard to find.*

*I was outbid on one on ebay a number of years ago, and the buyer wanted more loot for a photocopy of it than he paid for the original (around \$25, if I remember right). I declined.*

*So what you are looking at is engineering documents from Bally. Most of the information that is normally in the manual appears to be here, along with a number of diagrams that were never in the manuals.*

*If you locate a Galaxy manual, please contact me via  
<http://bingo.cdyn.com/>*

W 1194b  
ABC Stepper



ABC Stepper

5 Steps  
2/28/78  
2-7-78

#1143

**Bally** MANUFACTURING CORP.  
2640 BELMONT AVE.  
CHICAGO ILL.

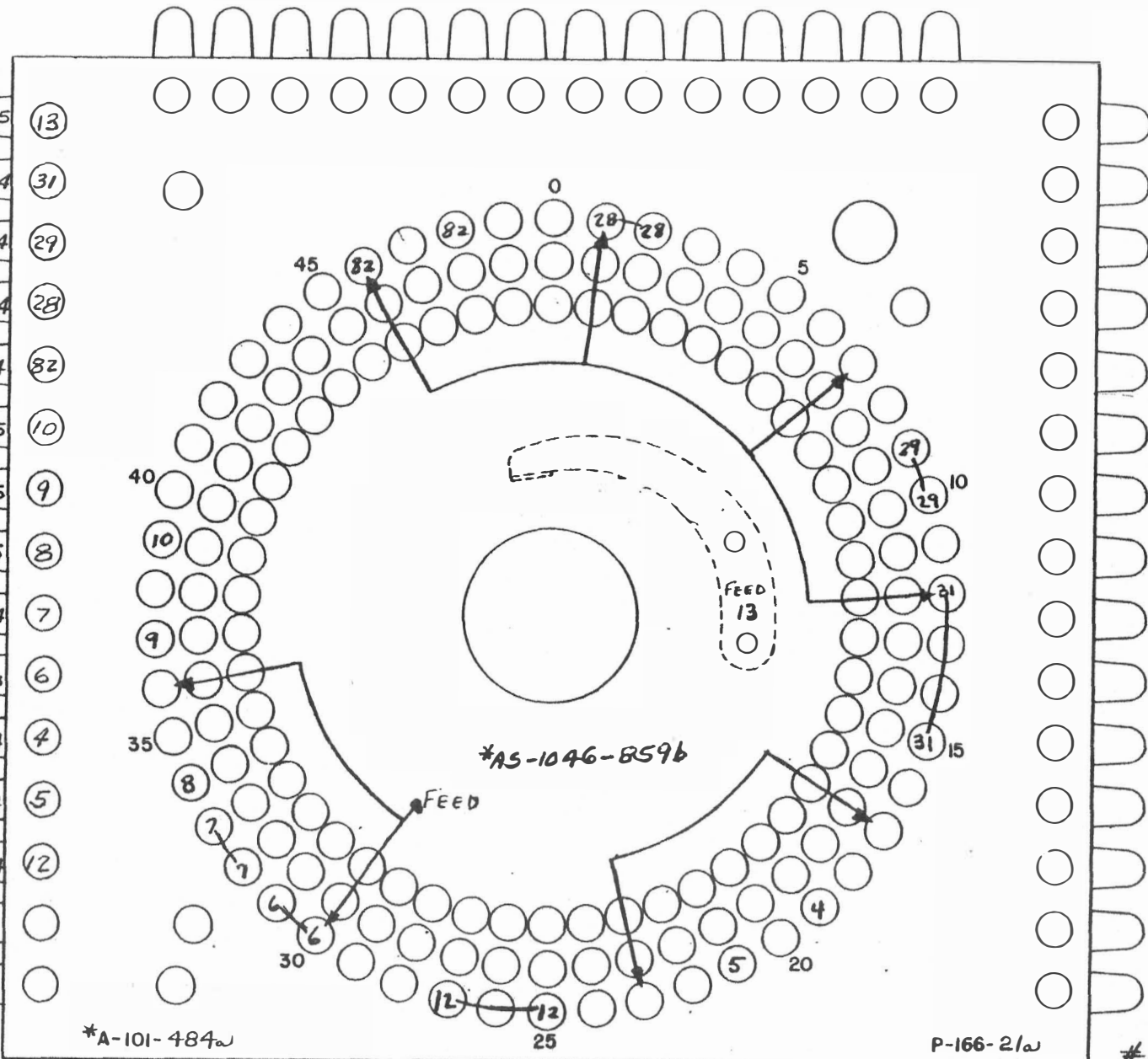
CONTACT PLATE WIRING

ABC STEPPER

DR. BY	AP'D BY	DATE
		W-1194b

W 764-23  
 Selection  
 Feature

- LITE FEED (15-5) (13)
- SEL. FEAT S.U. (78-4) (31)
- STEP TO A/S (63-4) (29)
- STEP TO B/S (48-4) (28)
- ARROW STEP (62-4) (82)
- 2<sup>ND</sup> ARROW LITE (31-5) (10)
- 1<sup>ST</sup> ARROW LITE (27-5) (9)
- A/S LITE (41-5) (8)
- B/S LITE (83-4) (7)
- B/A LITE (67-3) (6)
- B/S TRIP RE. (64-4) (4)
- A/S TRIP RE. (47-4) (5)
- TRIP RE. FEED (38-4) (12)



\*A-101-484w

P-166-2/w

AFTER WIRING - WIRE  
 BRUSH RIVET HEADS.

DIRECTION OF ROTATION

4. STEPS

#1143

2/28/78  
 2-7-78

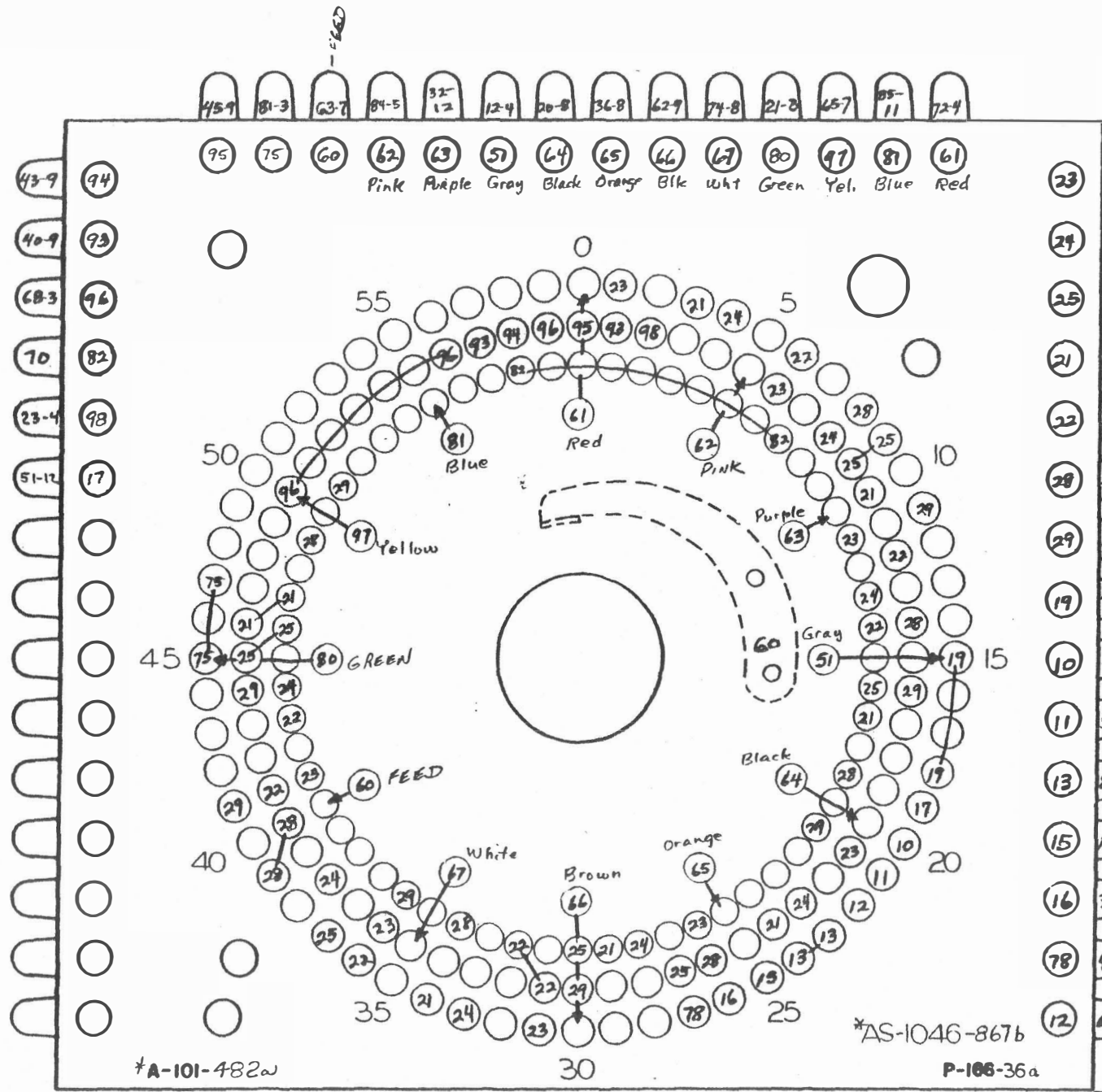
**Bally** MANUFACTURING CORP.  
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CONTACT PLATE WIRING

SELECTION FEATURE

DR. BY	AP'D BY	DATE	W-764
	WMB	4/2/78	

Feature Program



- 23 64-3 Step to A
- 24 48-3 Step to B
- 25 78-4 Step to C
- 21 12-8 Diagonals Trip
- 22 54-4 Ball Return Trip
- 28 48-4 Step to B/5
- 29 63-4 Step to A/5
- 19 75-3
- 10 45-3
- 11 56-3
- 13 83-3 Prob. Factor Selection
- 15 15-4
- 16 34-4
- 78 47-3
- 12 62-3

\*A-101-482a

\*AS-1046-867b

P-186-36a

AFTER WIRING - WIRE BRUSH RIVET HEADS.

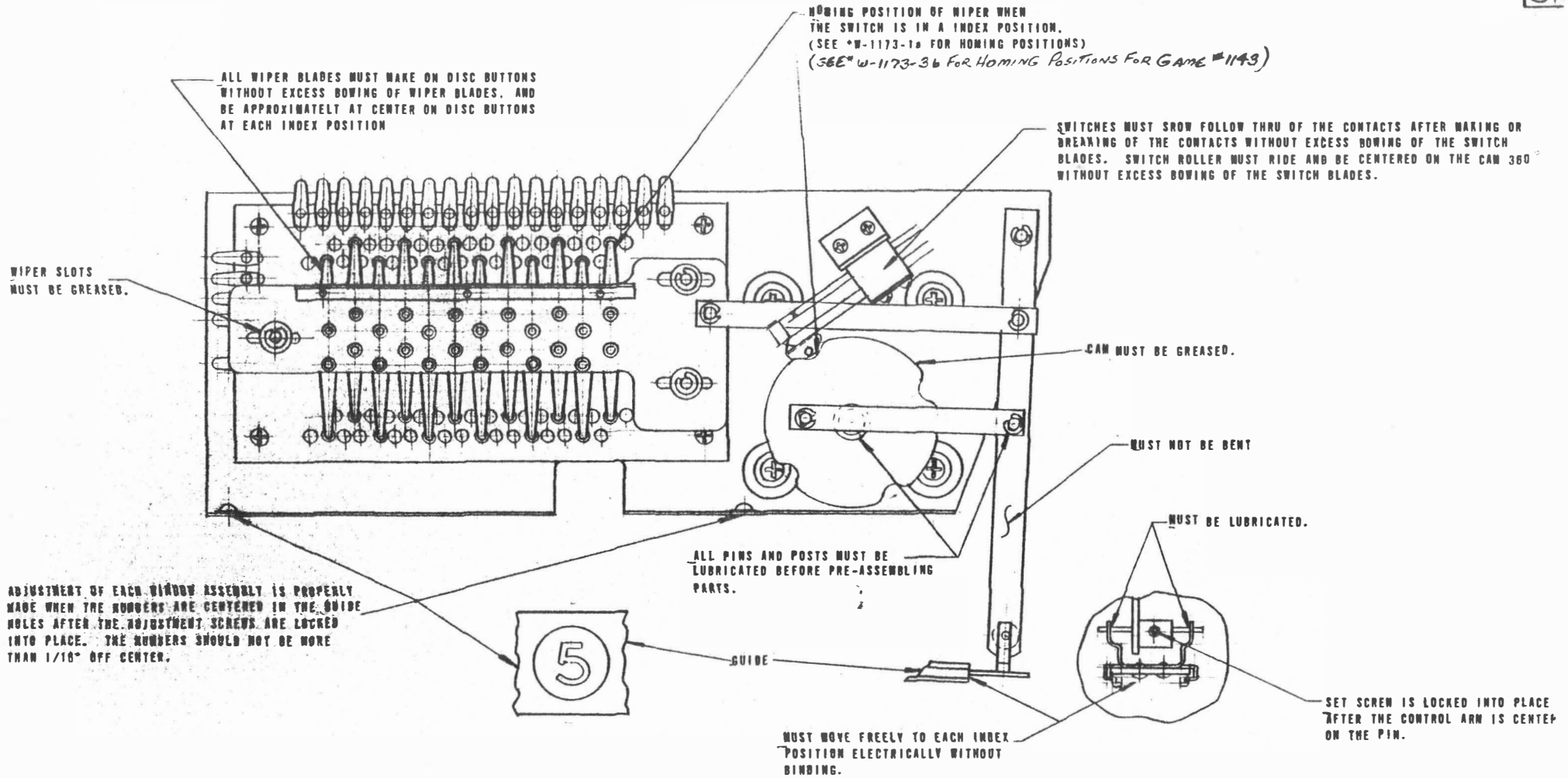
DIRECTION OF ROTATION

12 Steps 3/14/78 WGP

**MANUFACTURING CORP.**  
 2840 BELMONT AVE.  
 CHICAGO ILL.  
**CONTACT PLATE WIRING**







5K-416-75b

24 HOLE CARD UNIT

ALL DESIGN OPERATIVE AND PROCESS DATA PERTAINING TO THE ARTICLE SHOWN IN THIS DRAWING IS THE PROPERTY OF BALLY MANUFACTURING CO. CHICAGO, ILL. THIS INFORMATION IS DISCLOSED IN CONFIDENCE AND IS NOT TO BE REPRODUCED, COPIED, OR DISSEMINATED IN ANY MANNER WITHOUT THE EXPRESS CONSENT OF THE OWNERS. THE PRICE OF THIS DRAWING IS \$1.00 PER COPY. IT IS NOT TO BE RETURNED TO THE OWNER. IT IS TO BE DESTROYED UPON DEMAND.


REMOVE ALL BURRS

TOLERANCES ON DIMENSIONS UNLESS OTHERWISE SPECIFIED FRACTIONS

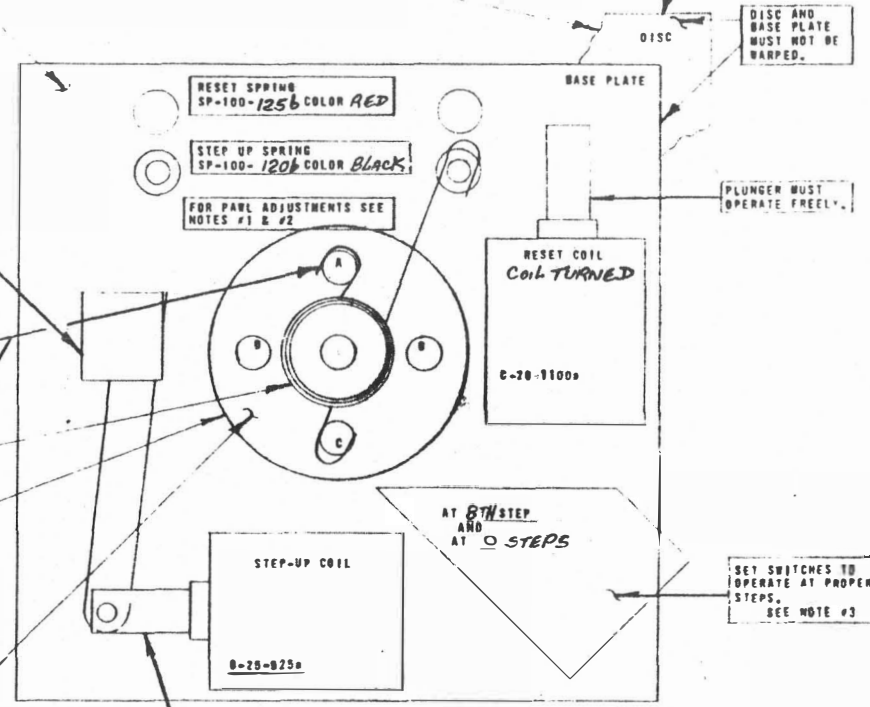
DR. BY RGM/T	DATE 1-18-77	Bally MANUFACTURING CO 2640 BELMONT AVENUE CHICAGO, ILLINOIS
CR. BY MGP	DATE 1/19/77	
AP'D BY	DATE	JAN 19 1977
AP'D BY S C	DATE 7-3-77	NAME

(FRONT SIDE) IF USED FEED WIPER CONTACT MUST CLEAR CENTER HUB OF SLIP RING ASSEMBLY WITHOUT EXCESS BOWING OF FEED WIPER.

FRONT SIDE - IF USED CABLE SPRING MUST REMAIN PARALLEL TO THE DISC ON THE OUTSIDE OF THE WIPER ARM, AND NEVER BETWEEN THE WIPER ARM AND DISC. WHEN STEPPING UP THE UNIT, CABLE CLIP MUST BE TIGHT.

(IF FUSED) SWITCH CONTACTS MUST BE BROKEN FOR A NORMALLY CLOSED SWITCH AND OPEN FOR A NORMALLY OPEN SWITCH AT REST POSITION.

NOTE #3 ALL SWITCHES MUST SHOW FOLLOW THRU AFTER SWITCH CONTACTS ARE MADE OR BEFORE BREAKING OF SWITCH CONTACTS WITHOUT EXCESS BOWING OF SWITCH BLADES. TRANSFER SWITCHES MUST BREAK BEFORE MAKE BETWEEN CONTACTS. SWITCHES MUST NOT RUB ON RATCHET.



(IF USED) ADJUST STEP-UP ARM SWITCHES TO OPERATE NEAR END OF STROKE. SEE NOTE #3  
 1-1/2 TURNS OF BLACK SPRING FOR GAME #1143  
 COIL SPRING NUMBER OF TURNS 3  
 TURNS START AT C COLOR SILVER

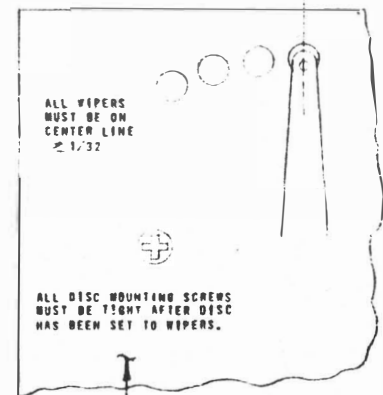
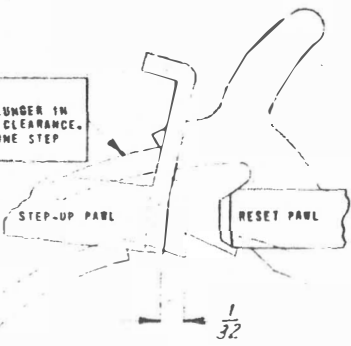
RATCHET MUST BE GREASED ON TEETH USED.

WIPER MUST RETURN TO RESET POSITION  
 (1) FROM 1st STEP.  
 (2) WITH UNIT IN RESET POSITION TURN WIPER BY HAND. WIPER MUST NOT HANG UP AS THE WIPER IS SLOWLY RESET.  
 (3) WITH STEP UP PLUNGER IN RESET PAWL MUST CLEAR STEP UP PAWL.  
 (4) STEP-UP PAWL MUST CLEAR RATCHET AT RESET POSITION.

PLUNGER MUST OPERATE FREELY

UNIT CAN TAKE 8 STEPS

NOTE #1 CHECK UNIT ON FIRST STEP WITH STEP-UP PLUNGER IN STEP-UP PAWL SHOULD HAVE AT LEAST 1/32" CLEARANCE. CHECK TO MAKE SURE THE UNIT TAKES ONLY ONE STEP AT A TIME.



ALL WIPERS MUST BE CHECKED FOR ROW & POSITION BEFORE ASSEMBLING ON UNIT.

STEP UP PAWL MUST NOT RUB ON BASE PLATE. AREA MUST BE GREASED.

ROLL (IF USED) MUST MOVE FREELY.

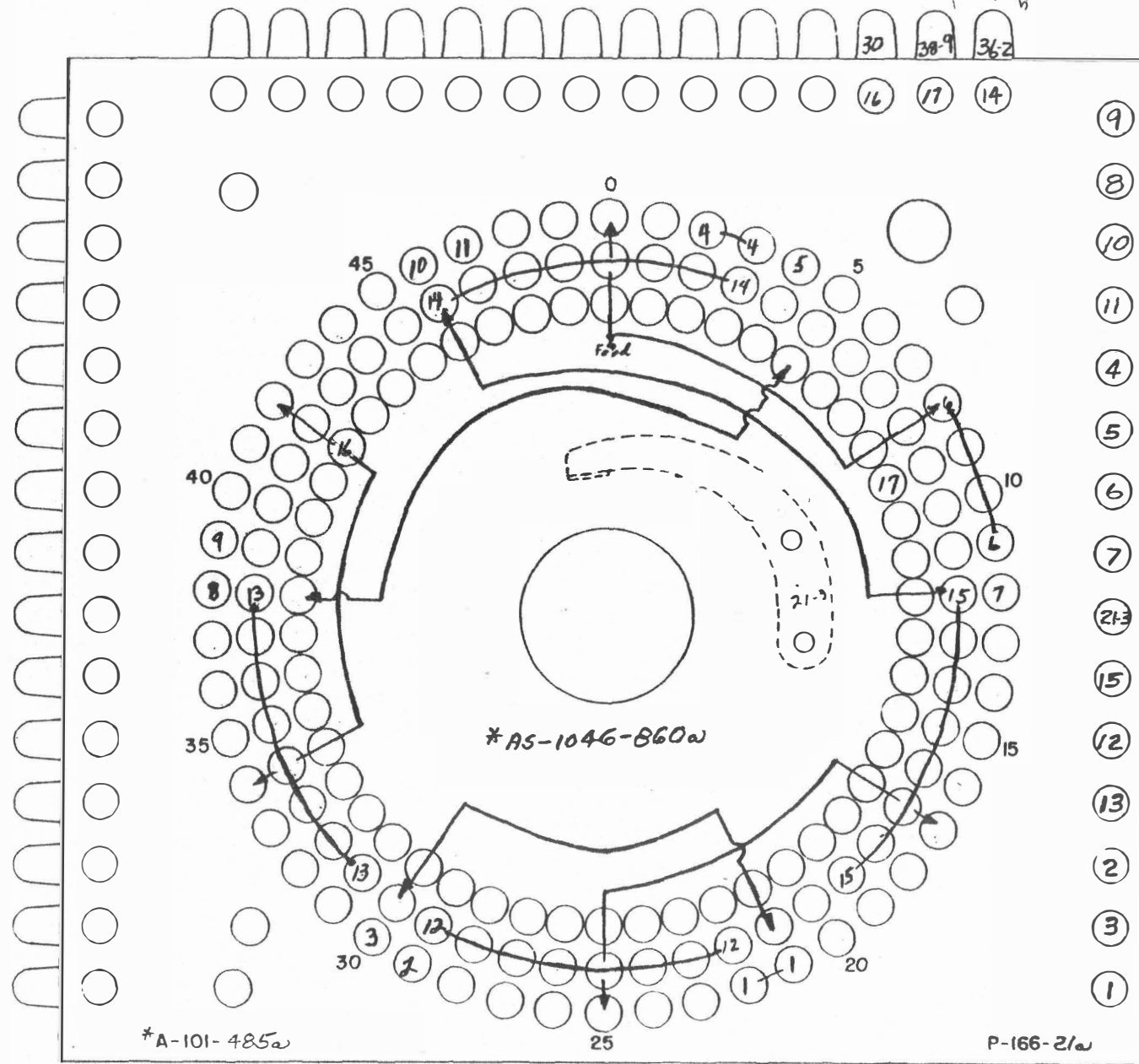
NOTE #2 CHECK UNIT ON FIRST STEP RESET PAWL MUST HAVE AT CLEARANCE.

SK-416-216

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REMOVE ALL BURRS		DR. BY MGL		DATE 3/25/78		Bally MANUFACTURING CORP. 2640 BELMONT AVENUE CHICAGO, ILLINOIS		#970	
TOLERANCES ON DIMENSIONS UNLESS OTHERWISE SPECIFIED FRACTIONS - DECIMALS - ANGLES -		CK. BY		DATE MAR 28 1978				TOTAL	
		AP'D BY		DATE 3-25-78		PRINT CONTROL		NAME	
		FINISH:				MATERIAL		TIMER UNIT	
								ASSEM. NO. USED ON/W	

1/4 SERIES WITH TIMER S.U. OPEN @ TOP



- 9 58-1 B/A
- 8 75-12 E
- 10 54-6 LDC TRIPS
- 11 74-7
- 4 18-3 SHUTTER CLOSING
- 5 61 BALL RETURN CKT.
- 6 82-1 TIMER S.U.
- 7 71-7 CONTROL
- 21-3 21-3 FEED
- 15 67-6 1/4 SERIES WITH TIMER S.U. OPEN @ TOP
- 12 41-11 LIFER MOTOR CKT OPEN @ 0°
- 13 38-3
- 2 51-5
- 3 32-3 } 8-4-B-5-AS  
Select-now Lifes
- 1 85-7

8-5 stop

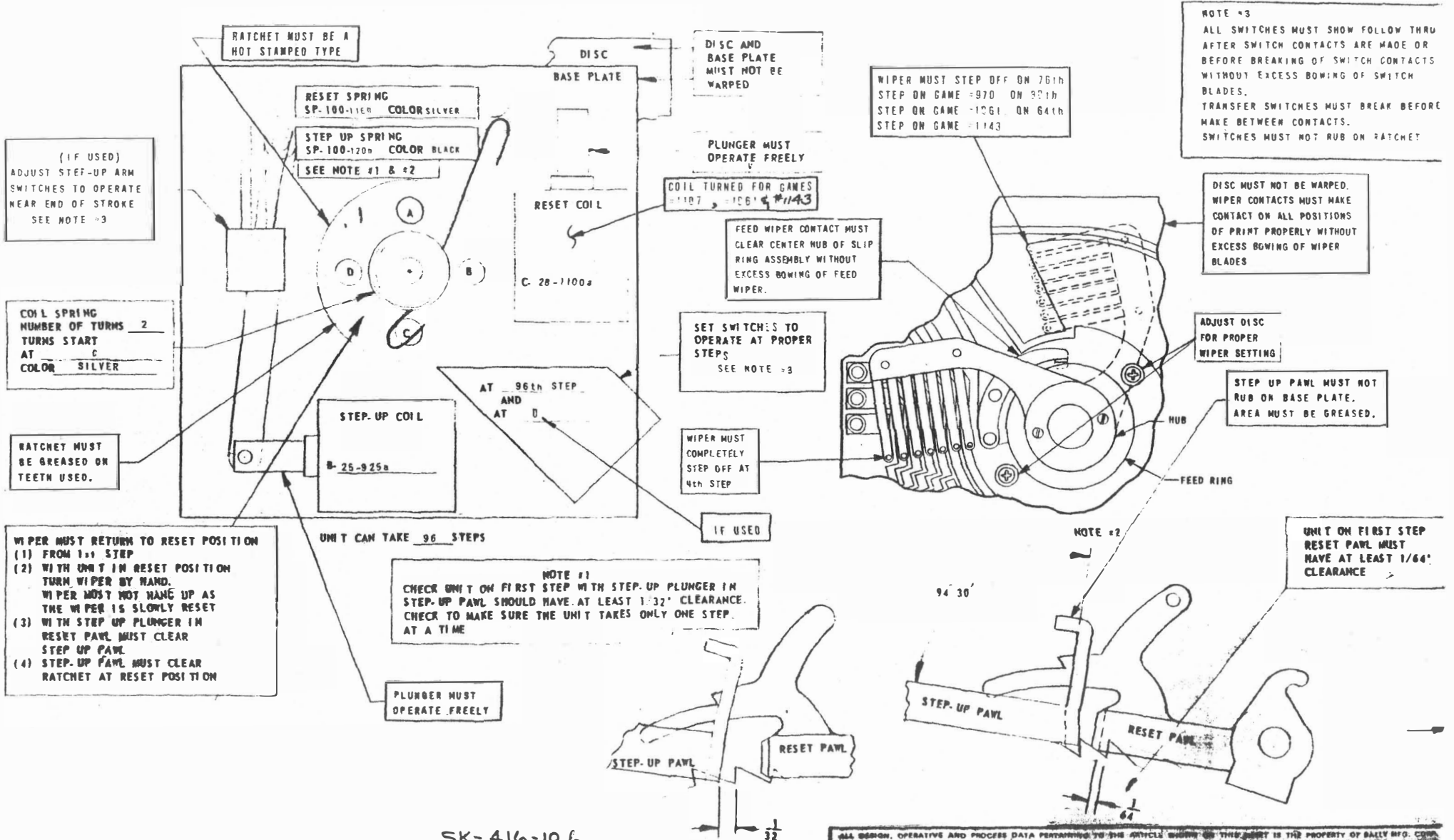
#1143 2/28/78 2-7-78

**Bally MANUFACTURING CORP.**  
2640 BELMONT AVE.  
CHICAGO ILL.

**CONTACT PLATE WIRING**

AFTER WIRING - WIRE  
BRUSH RIVET HEADS

DIRECTION OF ROTATION



SK-416-10 &

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REMOVE ALL BURRS

TOLERANCES ON DIMENSIONS UNLESS OTHERWISE SPECIFIED  
FRACTIONS : .003  
DECIMALS : .003

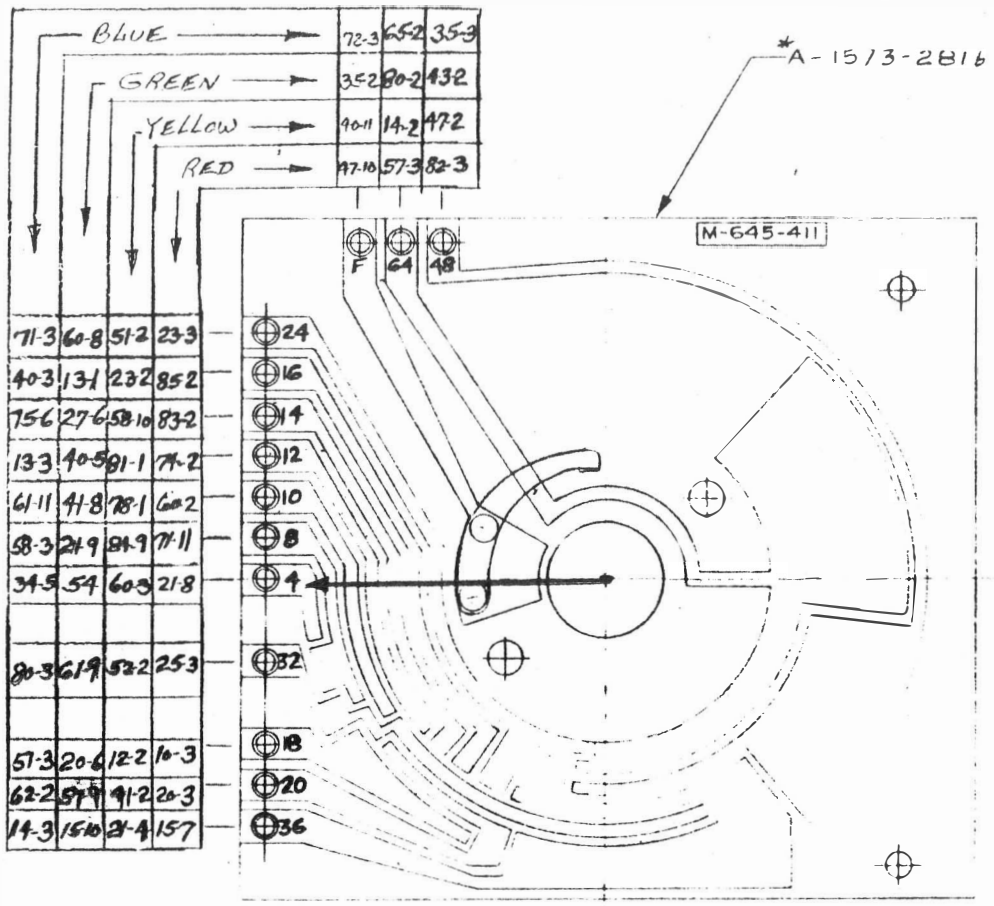
**Bally MANUFACTURING CORP.**  
2640 BELMONT AVENUE  
CHICAGO, ILLINOIS

#1143  
#970, #106

DR. BY	DATE	CHK. BY	DATE	AP'D BY	DATE	AP'D BY	DATE	PRINT & CONTROL	PROD. CONT.	PL. MGR.	ING. MGR.	TOOL MGR.	COMP. MGR.	INS. MGR.	TOP MGR.	WASH. MGR.	TOTAL	SCALE
8/16/73	6-6-73	6-6-73	7-9-73															

NAME: REPLAY COUNTER UNIT  
ASSEM. NO. USED ON: W

W 728-14 B  
REPLAY



DIE SIZE CC FT PER

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REMOVE ALL BURRS	DR BY	DATE	Bally M
	E.V.	3-3-78	
TOLERANCES ON DIMENSIONS UNLESS	CK BY	DATE	MAR 2 2 1978
	ZiEP	3/21/78	
AP'D BY	DATE	PRINT CONTROL	

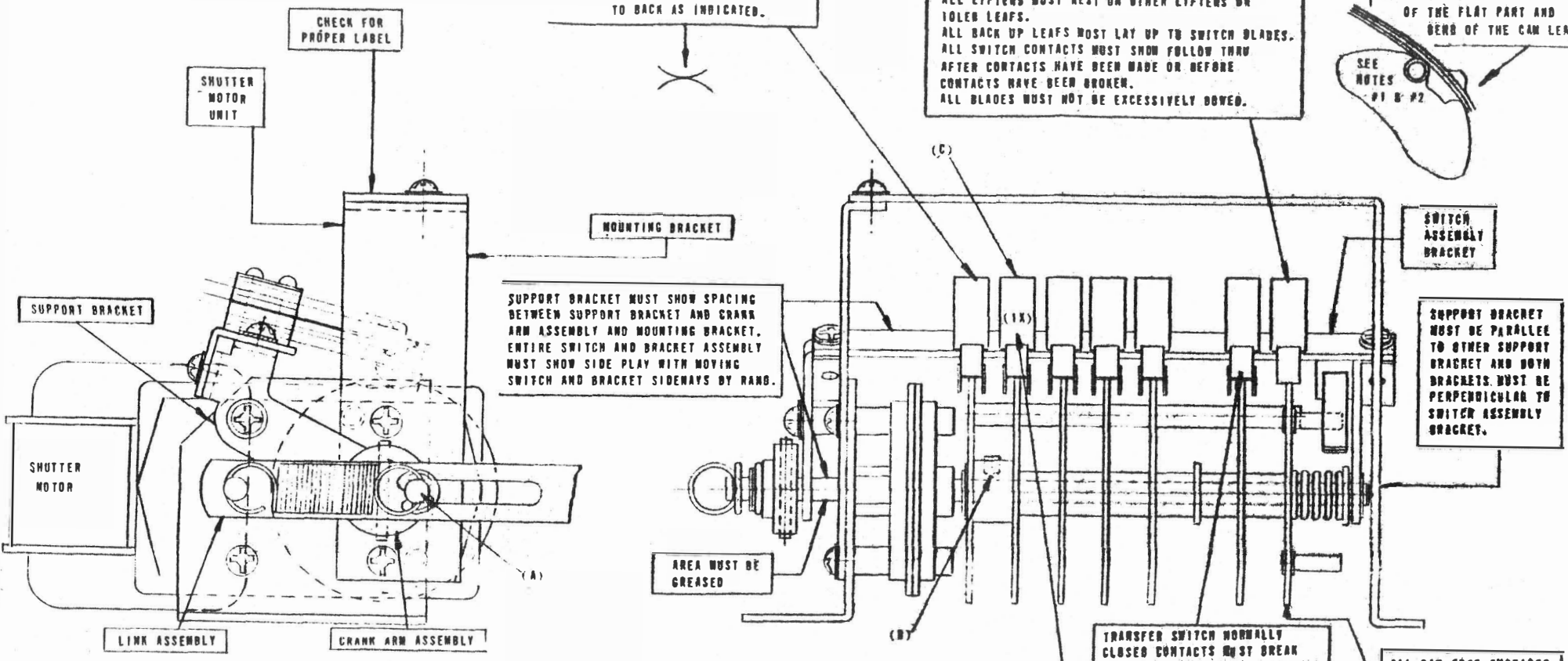
# SHUTTER MOTOR UNIT ADJUSTMENTS

SK-416-73&1

NOTE:  
WHEN TWO SPRING PLATES ARE USED FOR EACH SWITCH STACK THEY MUST BE MOUNTED BACK TO BACK AS INDICATED.

NOTE #1  
ALL CAM LEAFS AND ROLLERS MUST BE ADJUSTED TO REST ON THE CAM EDGES WITH A PORTION OF THE ROLLER OR CAM LEAF VISIBLE ON EACH SIDE OF THE CAM.  
ALL IDLER BLADES MUST LAY FIRMLY ON LOWER LEAF.  
ALL LIFTERS MUST REST ON OTHER LIFTERS OR IDLER LEAFS.  
ALL BACK UP LEAFS MUST LAY UP TO SWITCH BLADES.  
ALL SWITCH CONTACTS MUST SHOW FOLLOW THRU AFTER CONTACTS HAVE BEEN MADE OR BEFORE CONTACTS HAVE BEEN BROKEN.  
ALL BLADES MUST NOT BE EXCESSIVELY DOWED.

NOTE 2  
THE CAM LEAF MUST BE ADJUSTED FOR THE PIN TO MAKE ON THE JUNCTION OF THE FLAT PART AND BEND OF THE CAM LEAF.



SUPPORT BRACKET MUST SHOW SPACING BETWEEN SUPPORT BRACKET AND CRANK ARM ASSEMBLY AND MOUNTING BRACKET. ENTIRE SWITCH AND BRACKET ASSEMBLY MUST SHOW SIDE PLAY WITH MOVING SWITCH AND BRACKET SIDWAYS BY HAND.

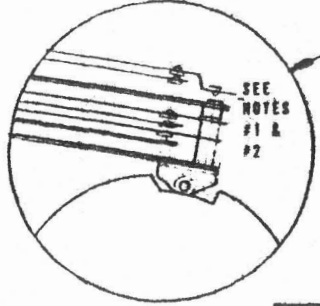
SWITCH ASSEMBLY BRACKET

SUPPORT BRACKET MUST BE PARALLEL TO OTHER SUPPORT BRACKET AND BOTH BRACKETS MUST BE PERPENDICULAR TO SWITCH ASSEMBLY BRACKET.

ALL CAM EDGE SURFACES MUST BE GREASED WITHOUT EXCESS GREASE VISIBLE ON ADJACENT AND CAM EDGES.

TRANSFER SWITCH NORMALLY CLOSED CONTACTS MUST BREAK BEFORE NORMALLY OPEN CONTACTS ARE MADE. SEE NOTE #1

NOTE #3  
THE ADJUSTMENT OF THE SPECIAL SWITCH (ASW-C12-1a) MUST BE SUCH THAT THE NORMALLY CLOSED CONTACTS MUST BREAK AFTER THE NORMALLY OPEN CONTACTS ARE MADE WITH VISIBLE FOLLOW THRU OF CONTACTS AFTER THEY ARE MADE OR BEFORE CONTACTS ARE BROKEN.

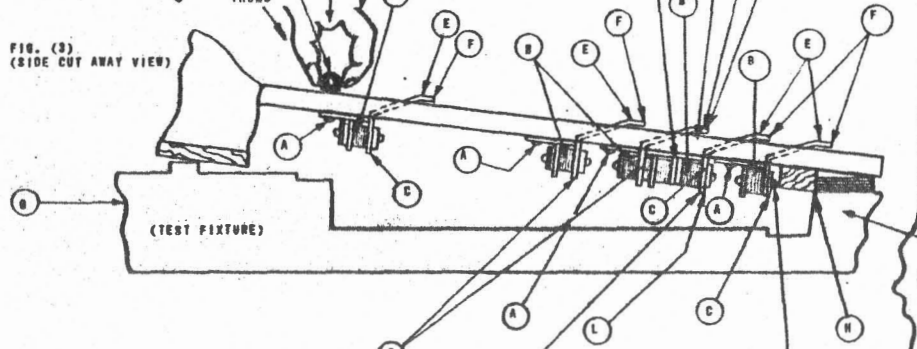
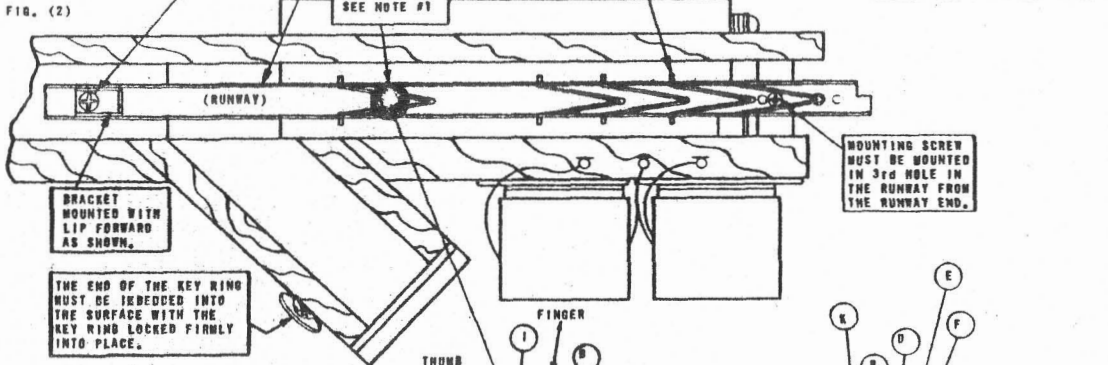
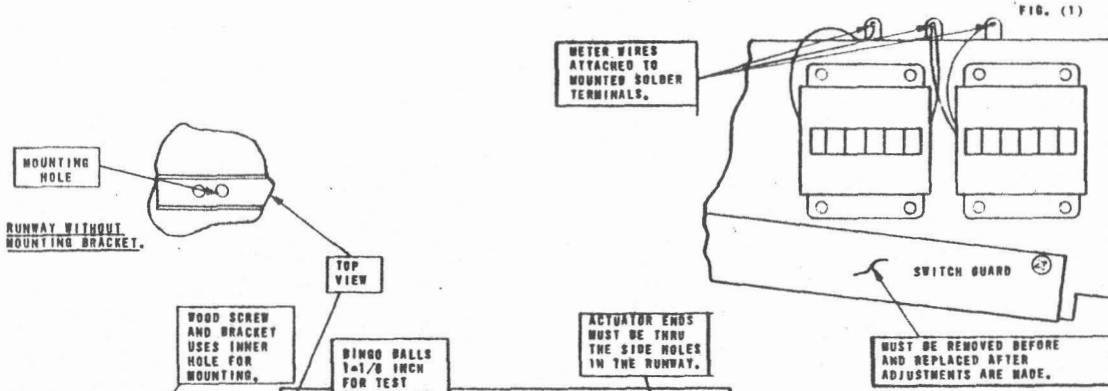


CRANK ARM AND CAM ASSEMBLIES ADJUSTMENT

- (1) POSITION THE LINK ARM ASSEMBLY WITH THE CRANK ARM ASSEMBLY INTO THE POSITION SHOWN (FULLY CLOSED SHUTTER POSITION) WITH THE TURNING OF THE SHAFT. WITH THE CENTER LINE OF THE LINK ASSEMBLY PARALLEL TO THE BASE LINE. THE PIN OF THE CRANK ARM ASSEMBLY SHOULD BE THEN IN THE FULL FORWARD POSITION AS SHOWN. (A)
- (2) LOSSEN THE ALLENITE (B), SO THAT THE CAM ASSEMBLY WILL MOVE FREELY AND INDEPENDENT OF THE SNAFT.
- (3) POSITION CAM IX WITH THE SWITCH ROLLER SEATED FIRMLY INTO THE CAM SLOT.
- (4) TIGHTEN DOWN THE ALLENITE (B) AND CHECK TO SEE THAT THE CAM ASSEMBLY WILL TURN 360 DEGREES FREELY.

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**NOTE #1 - ACTUATOR ADJUSTMENTS**

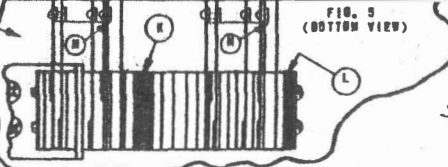
- REMOVE THE PROTECTIVE SWITCH GUARD (IF NECESSARY) (SEE FIG. (1)).
- POSITION ALL SWITCH ASSEMBLIES (B) IN FIGURES #3 AND #4 SO THAT THE ACTUATOR ENDS (C) ARE STRAIGHT AND PERPENDICULAR TO THE RUNWAY (D). ALL ACTUATOR LIPS (E) ARE AT THE SAME HEIGHT TO ONE ANOTHER ABOVE THE RUNWAY AND NOT MORE THAN 1/8 INCH ABOVE THE RUNWAY (D) FROM THE TOP OF THE ACTUATOR LIPS (E) TO (F) BY (IF NECESSARY):
  - LOOSEN ALL MOUNTING SCREWS (A) AS SHOWN IN FIGURES #2 AND #3 POSITION THE SWITCH AND BRACKET ASSEMBLY AT (J) AND RE-TIGHTEN THE MOUNTING SCREWS (A) (SEE NOTE #3)
  - ADJUST ALL SWITCHES AT (J) AS ILLUSTRATED IN FIGURE #4. (SEE NOTE #2 FOR SWITCH ADJUSTMENTS).
  - BEND (IF NECESSARY) THE ACTUATORS FOR HEIGHT AND CENTERING.
- WITH ONE FINGER AND THUMB HOLDING A DINGO BALL (1-1/8 INCH) AT (I) PUSH THE BALL ACROSS EACH ACTUATOR LIP (E) WHILE HOLDING THE BALL TIGHTLY AGAINST THE TOP OF THE RUNWAY (D) AND CHECK FOR PROPER SWITCH ADJUSTMENT (SEE NOTE #2).
- PLACE THE BALL TROUGH ASSEMBLY ONTO THE TEST FIXTURE (B) AS SHOWN IN FIGURE #3 AND BUTT THE LOWER FRONT EXTENDED PORTION OF THE BALL TROUGH ASSEMBLY AGAINST THE FRONT INSIDE SHOULDER OF THE TEST FIXTURE AT (H) IN FIGURE #3.
- PLACE A DINGO BALL ON THE RUNWAY AS SHOWN AT (I) IN FIGURE #3.
- ALLOW THE BALL TO ROLL VERY SLOWLY WITH ONE FINGER (G) DOWN THE RUNWAY (D) ACROSS ALL ACTUATOR LIPS (E). AT NO TIME THEN MUST THE BALL STOP ROLLING ON ITS OWN ACCORD AND AT NO TIME THEN MUST THE ACTUATOR ENDS (C) COME OUT OF BETWEEN THE FISH PAPERS AND THE LOWER IDLER LEAFS AT (J) IN FIGURE #3 DURING THE ENTIRE STROKE OF EACH ACTUATOR.
- RECHECK ALL ADJUSTMENTS SO THAT IT IS CERTAIN THAT:
  - THE BALL WILL NEVER STOP ON IT'S OWN WITH THE ROLL OF THE BALL VERY SLOWLY ACROSS ALL ACTUATOR LIPS (E).
  - ALL SWITCHES WILL MAKE OR BREAK PROPERLY WITH FOLLOW THRU OF THE SWITCH CONTACTS (SEE NOTE #2).
  - THE ACTUATOR ENDS (C) WILL NEVER COME OUT OF BETWEEN THE SWITCH LEAFS AND SWITCH LOWER IDLER LEAFS.
  - THE LIGHT PRESSURE OF THE SWITCH LOWER IDLER LEAFS WILL ALWAYS BE MAINTAINED AT REST POSITION AGAINST THE ACTUATOR ENDS.
- IF ADJUSTMENT IS AGAIN NECESSARY, THEN REPEAT STEPS 2 THRU 7 UNTIL ALL ADJUSTMENT CHECKS IN STEP 7 ARE MET WITH SATISFACTION.
- REPLACE THE PROTECTIVE SWITCH GUARD (SEE FIG. 1).

**NOTE #2 - SWITCH ADJUSTMENTS**

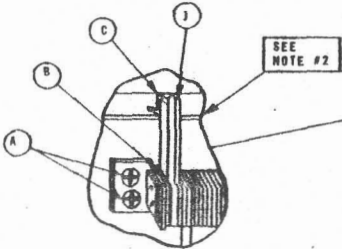
- ALL SWITCH CONTACTS MUST SHOW APPROXIMATELY NOT MORE THAN 1/64 FOLLOW THRU OF CONTACTS AFTER MAKING OR BREAKING OF SWITCH CONTACTS.
- THE LOWER HEAVY IDLER LEAFS MUST SHOW LIGHT TENSION ON THE ACTUATOR ENDS (C) WHEN THE SWITCHES ARE AT REST POSITION.
- THE UPPER LIGHT IDLER LEAFS AND FISH PAPERS MUST REST AGAINST THE ACTUATOR ENDS (C) THRU THE COMPLETE STROKE.
- ALL SWITCH LEAFS MUST REST IN THE BOTTOM SWITCH BLADES OF THE BOTTOM SWITCHES FOR THE #2 AND #3 SWITCH BUILD UPS. (SEE "B" IN FIG. 3).
- ALL SWITCH LEAFS MUST BE ADJUSTED WITHOUT EXCESS BOWING OF THE SWITCH LEAFS.

**NOTE #3 - SWITCH SPACING**

WHEN IT IS ASCERTAINED THAT ANY ACTUATOR LIPS (E) CANNOT BE ADJUSTED PROPERLY, TO THE RUNWAY (D), OR THE SWITCHES AND ACTUATORS AT (J) CANNOT BE POSITIONED SO THAT THEY ARE IN THEIR SPACING AT EITHER (K) OR AT (L) BY REMOVING OR ADDING INDIVIDUAL SPACERS AT THOSE AREAS. (SEE FIG. 5).



MUST HAVE A MINIMUM CLEARANCE OF 1/32" BETWEEN SCREW ENDS AND BALL TROUGH.



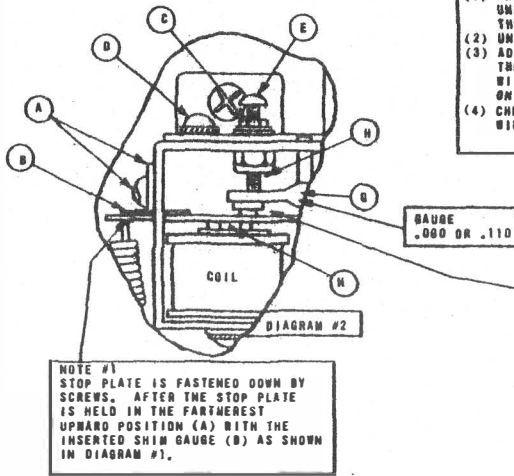
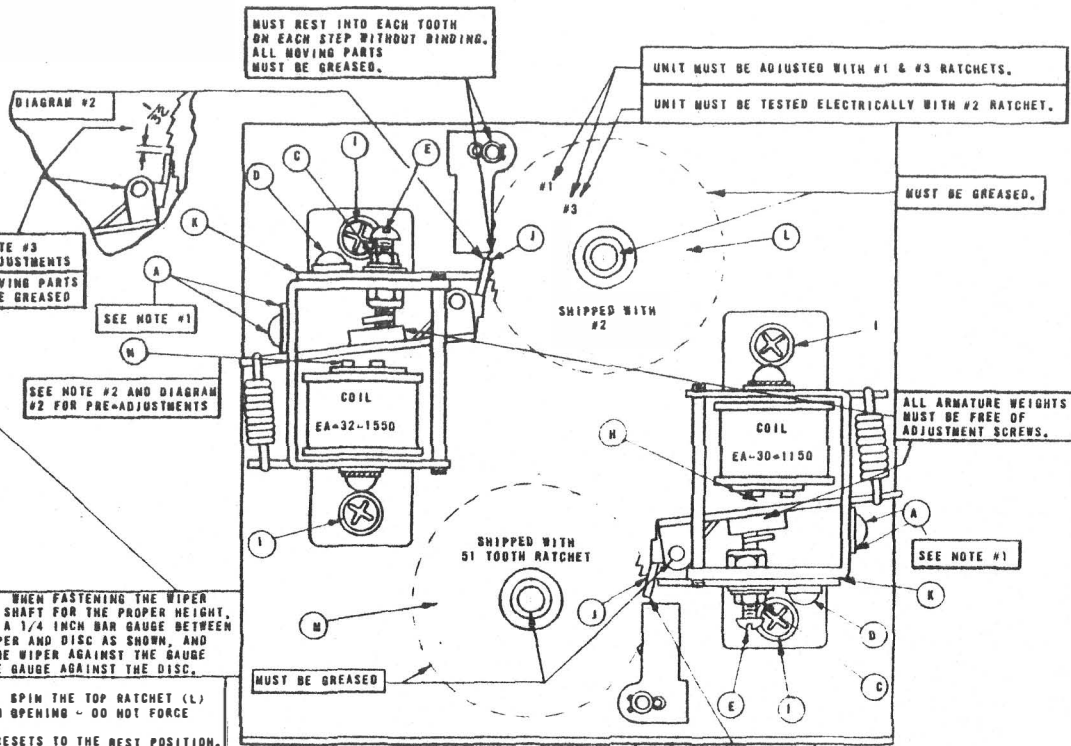
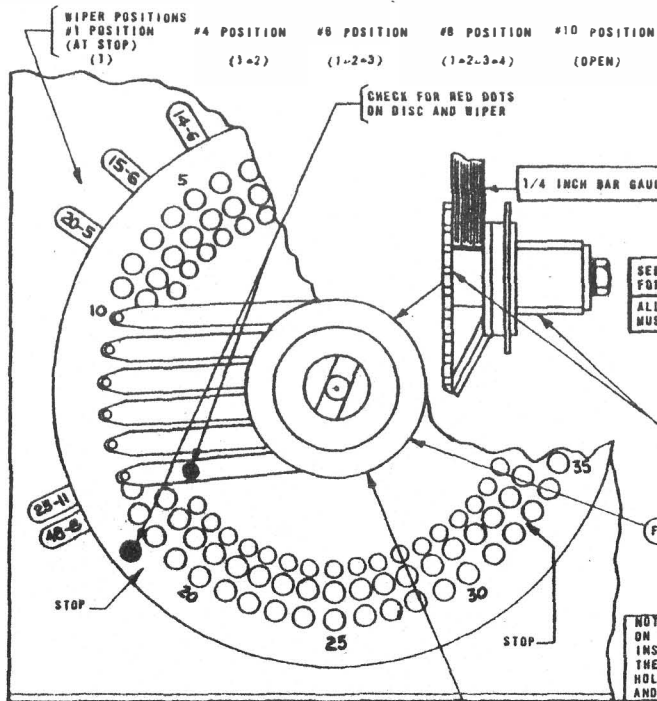
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REMOVE ALL BURRS		DR. BY WLENTY	DATE 4-20-78	Bally MANUFACTURING CORP. 2640 BELMONT AVENUE CHICAGO, ILLINOIS										1143
TOLERANCES ON DIMENSIONS UNLESS OTHERWISE SPECIFIED DECIMALS : . ANGLES :		CHK. BY 266 P	DATE 4/27/78	APR 27 1978	PRINT CONTROL	PROG. CONT.	DET.	FILE	ISSUE	EXP.	INS.	TECH.	TOTAL	SCALE
DO NOT SCALE DRAWING		AP'D BY 266	DATE 4-27-78	NAME BALL TROUGH SWITCH ADJUSTMENTS										ASSEM. NO. USED ON/W
		MATERIAL										PART NO. SK-416-1016		

DESCRIPTION	TOOL NO.	NO.	LET.	CHANGE	DATE	BY	CK.

SK-416-1016





**TO SET WIPER POSITION**

- (1) WHILE HOLDING THE TOP ARMATURE DOWN TO THE COIL, SPIN THE TOP RATCHET (L) UNTIL THE PIN RESTS AGAINST THE STOP (VISIBLE IN OPENING - DO NOT FORCE THE RATCHET AGAINST THE STOP).
- (2) UNLATCH THE BOTTOM RATCHET (M) UNTIL THE WIPER RESETS TO THE REST POSITION.
- (3) ADJUST THE WIPER TO THE POSITION SHOWN, WITH ALL OF THE WIPER CONTACTS ON THE CENTER OF THE DISC CONTACTS AND LOCK INTO PLACE THE LOOSE WIPER (F) WITH THE TWO MOUNTING ALLENKEYS (EACH WIPER CONTACT MUST NOT MAKE CONTACT ON MORE THAN ONE DISC CONTACT AT ONE TIME AT REST POSITION).
- (4) CHECK THAT THE FEED WIPER CONTACT MUST CLEAR THE CENTER HUB OF THE WIPER ASSEMBLY WITHOUT EXCESS BOWING OF THE FEED WIPER.

**NOTE #2 PRE-ADJUSTMENT OF BOTH MAGNET ASSEMBLIES**

- (1) LOOSEN LOCK NUT (C).
- (2) LOOSEN LOCKSCREW (D).
- (3) LOOSEN ADJUSTMENT SCREW (E).
- (4) WHILE HOLDING DOWN THE ARMATURE ASSEMBLY DOWN TO THE COIL (N), PLACE THE .090 GAUGE FOR THE EA-32-1550 COIL ASSEMBLY OR THE .110 GAUGE FOR THE EA-30-1150 COIL ASSEMBLY (B) BETWEEN THE ADJUSTMENT SCREW (E) AND THE ARMATURE ASSEMBLY (N).
- (5) TIGHTEN DOWN THE SCREW (E) UNTIL THE .090 OR .110 GAUGE (B) CANNOT BE REMOVED.
- (6) LOOSEN THE SCREW (E) SLOWLY UNTIL THE .090 OR .110 GAUGE (B) CAN BE REMOVED AT (N) WITH THE FEEL OF RUBBING OF BOTH THE ARMATURE AND THE ADJUSTMENT SCREW (E) WHEN REMOVED AT (N).
- (7) TIGHTEN LOCK NUT (C).
- (8) REMOVE THE GAUGE (B) AND RECHECK ALL ADJUSTMENTS.

NOTE: ADJUSTMENTS MAY BE ALTERED SLIGHTLY FOR THE ADJUSTMENT OF THE PAUL INTO THE RATCHET TEETH (J).

**NOTE #3 MAGNET ASSEMBLY ADJUSTMENTS**

- (1) LOOSEN BOTH SCREWS (I) OF EACH MAGNET ASSEMBLY.
- (2) ADJUST THE HEIGHT OF EACH ARMATURE, SO THAT AFTER STEPPING OF THE PAUL INTO THE NEXT TOOTH OF THE RATCHET, APPROXIMATELY 1/32 SPACING WILL BE VISIBLE BETWEEN THE PAUL AND THE RATCHET TOOTH AS SHOWN IN DIAGRAM #2 AT (J) FOR #1, #3 AND 51 TOOTH RATCHETS. IF DONE PROPERLY, APPROXIMATELY 1/84 FREE PLAY OF THE PAUL AT REST IN THE RATCHET TOOTH WILL BE VISIBLE WHEN THE RATCHETS ARE MOVED BY HAND.
- (3) TIGHTEN ALL MOUNTING SCREWS FOR BOTH ASSEMBLIES (I).
- (4) SLIDE BOTH STOPS (K) TO REST AGAINST THE PAULS. (DO NOT FORCE).
- (5) TIGHTEN BOTH LOCK SCREWS (D).
- (6) STEP UP BOTH MAGNET ASSEMBLIES ELECTRICALLY WITH #2 AND 51 TOOTH RATCHETS AS SHOWN, AND CHECK TO SEE THAT THE STEPPING IS ALL THE WAY INTO EACH TOOTH WITHOUT MISSING ANY STEPS.
- (7) RECHECK ALL ADJUSTMENTS IF NECESSARY.

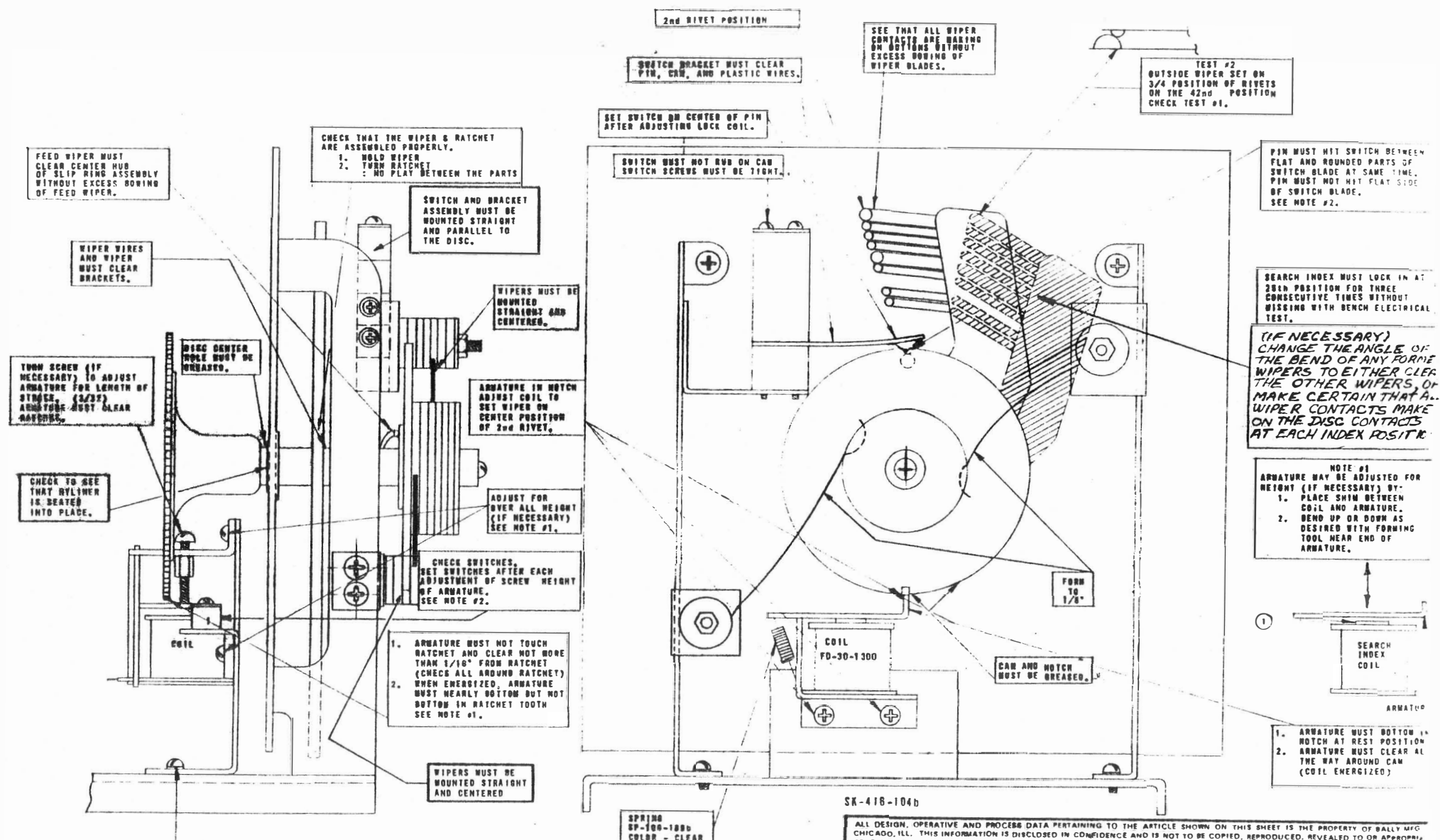
NOTE: UNIT MUST STEP EQUALLY WELL WITH THE #1, #2 AND #3 RATCHETS; THEREFORE HEIGHT ADJUSTMENTS MAY BE ALTERED SLIGHTLY.

DIE SIZE - C.C. - FT PER M. - LBS PER M. -

ALL DESIGN, OPERATIVE AND PROCESS DATA PERTAINING TO THE ARTICLE SHOWN ON THIS SHEET IS THE PROPERTY OF BALLY MFG. CORP. CHICAGO, ILL. THIS INFORMATION IS DISCLOSED IN CONFIDENCE AND IS NOT TO BE COPIED, REPRODUCED, REVEALED TO OR APPROPRIATED BY OTHERS IN PART OR IN WHOLE, WITHOUT THE EXPRESS CONSENT OF THE OWNERS. THE PRINT IS LOANED AND MUST NOT BE USED IN ANY MANNER DEETRIMENTAL TO THE INTEREST OF THE OWNERS, AND MUST BE RETURNED ON DEMAND.

<b>REMOVE ALL BURRS</b>		DR. BY E.V.	DATE 4-19-78	<b>Bally MANUFACTURING CORP.</b> 2640 BELMONT AVENUE CHICAGO, ILLINOIS				1143	
TOLERANCES ON DIMENSIONS UNLESS OTHERWISE SPECIFIED FRACTIONS - DECIMALS - ANGLES :		CK. BY MGP	DATE 4/27/78					PRINT AP'D BY F.B.	DATE 4-27-78
DO NOT SCALE DRAWING		FINISH:		REFLEX ADJUSTMENTS				ASSEM. NO. USED ON W	
		HARDENING:		MATERIAL				PART NO. SK-416-1036	

DESCRIPTION	TOOL NO.	NO.	LET.	CHANGE	DATE	BY	CK.
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TEST #1  
ADJUST SEARCH INDEX TO SET SEARCH WIPERS.  
1. RUN MOTOR.  
2. HOLD IN ARMATURE AGAINST RATCHET TOOTH.  
3. CHECK TEST #2  
SET WIPER ON 3/4 POSITION OF RIVET.

NOTE #2  
ALL SWITCHES MUST GOOD FOLLOW THRU AFTER SWITCH CONTACTS ARE MADE OR BEFORE BREAKING OF SWITCH CONTACTS WITHOUT EXCESS BOWING OF SWITCH BLADES.

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REMOVE ALL MARKS		DR. BY E. V.	DATE 4-10-78	Bally MANUFACTURING CORP. 2640 BELMONT AVENUE CHICAGO, ILLINOIS												
TOLERANCES ON DIMENSIONS UNLESS OTHERWISE SPECIFIED FRACTIONS DECIMALS :		CK. BY 26P	DATE 1/12/78	AP'D BY	DATE	PRINT CONTROL	TEST	INS. DIV.	INS. DIV.	INS. DIV.	INS. DIV.	INS. DIV.	INS. DIV.	INS. DIV.	TOTAL	SCA
		AP'D BY	DATE			APR 12 1978										ASSEM. NO. USED ON #
		CONTROL UNIT SEARCH WIPER & INDEX ADJUSTMENTS														

CHECK THAT THE WIPER & RATCHET ARE ASSEMBLED PROPERLY  
 1. HOLD WIPER  
 2. TURN RATCHET  
 : NO PLAY BETWEEN THE PARTS.

SEE NOTE #2  
 LEATHER WASHER  
 KEY WASHER

DISC CENTER HOLE MUST BE GREASED.  
 CHECK TO SEE THAT NYLINER IS LOCKED INTO PLACE.

SEE NOTE #1

SWITCH ACTUATOR

CHECK FOR PROBABILITY INDEX LABEL.

NOTE #2:  
 ALL KEY WASHER BUMPS MUST FIT INTO LEATHER WASHER HOLES.  
 ALL LEATHER WASHERS MUST BE SOAKED IN MEATSFOOT OIL.

KEY WASHER BUTTONS MUST SET INTO LEATHER WASHER HOLES.

LEATHER WASHER

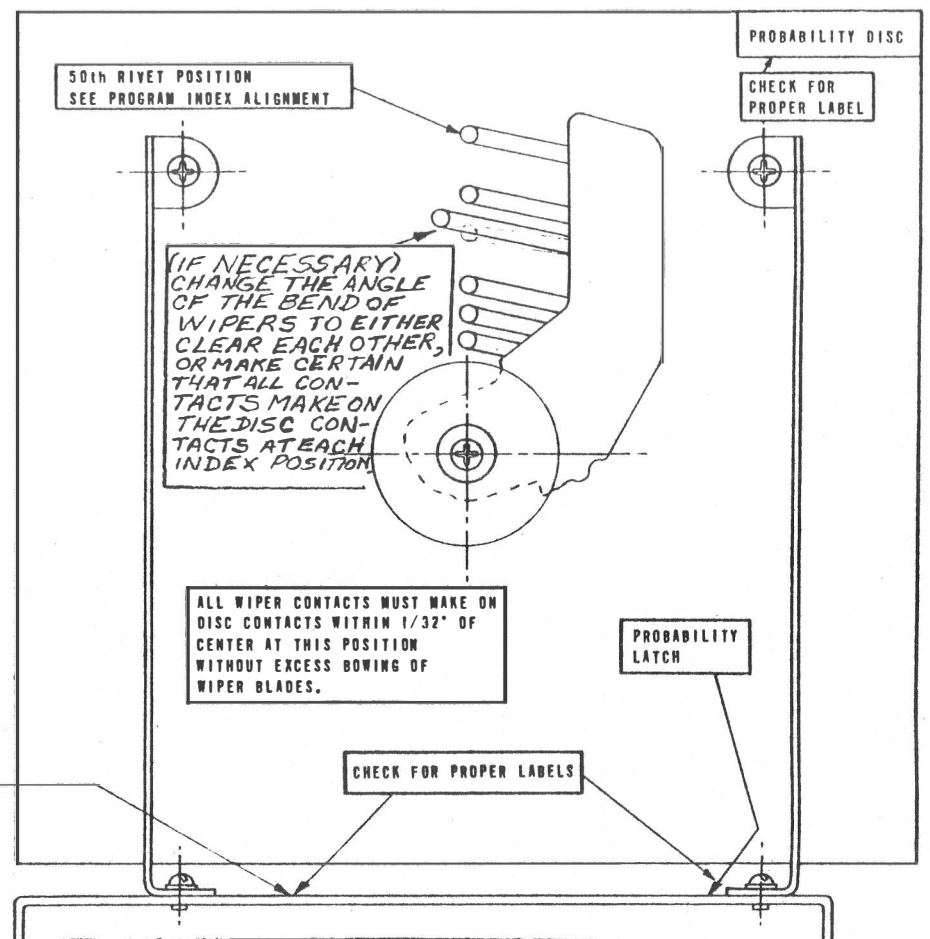
PROBABILITY UNIT

CHECK TO SEE THAT KEY WASHER ASS'Y. TABS ARE LOCKED INTO HUB SLOTS

RATCHET

PROBABILITY INDEX ALIGNMENT  
 1. MOVE INDEX IN OR OUT UNTIL WIPER CONTACTS ARE POSITIONED ON THE DISC CONTACT CENTERS AT THE 50th POSITION OF THE DISC AS SHOWN.  
 2. PLACE INDEX ASSEMBLY, SO THAT INDEX ASSEMBLY IS PARALLEL TO DISC AND THAT SUFFICIENT AREA IS SHOWING ON EACH SIDE OF THE RATCHET OF THE PART OF THE INDEX ARM THAT INDEXES INTO THE RATCHET.  
 3. RECHECK POSITIONING OF PROBABILITY INDEX AND WIPER ON DISC CONTACTS AND LOCK INDEX INTO PLACE.

SK-416-99e



50th RIVET POSITION  
 SEE PROGRAM INDEX ALIGNMENT

PROBABILITY DISC  
 CHECK FOR PROPER LABEL

(IF NECESSARY) CHANGE THE ANGLE OF THE BEND OF WIPERS TO EITHER CLEAR EACH OTHER, OR MAKE CERTAIN THAT ALL CONTACTS MAKE ON THE DISC CONTACTS AT EACH INDEX POSITION.

ALL WIPER CONTACTS MUST MAKE ON DISC CONTACTS WITHIN 1/32" OF CENTER AT THIS POSITION WITHOUT EXCESS BOWING OF WIPER BLADES.

PROBABILITY LATCH

CHECK FOR PROPER LABELS

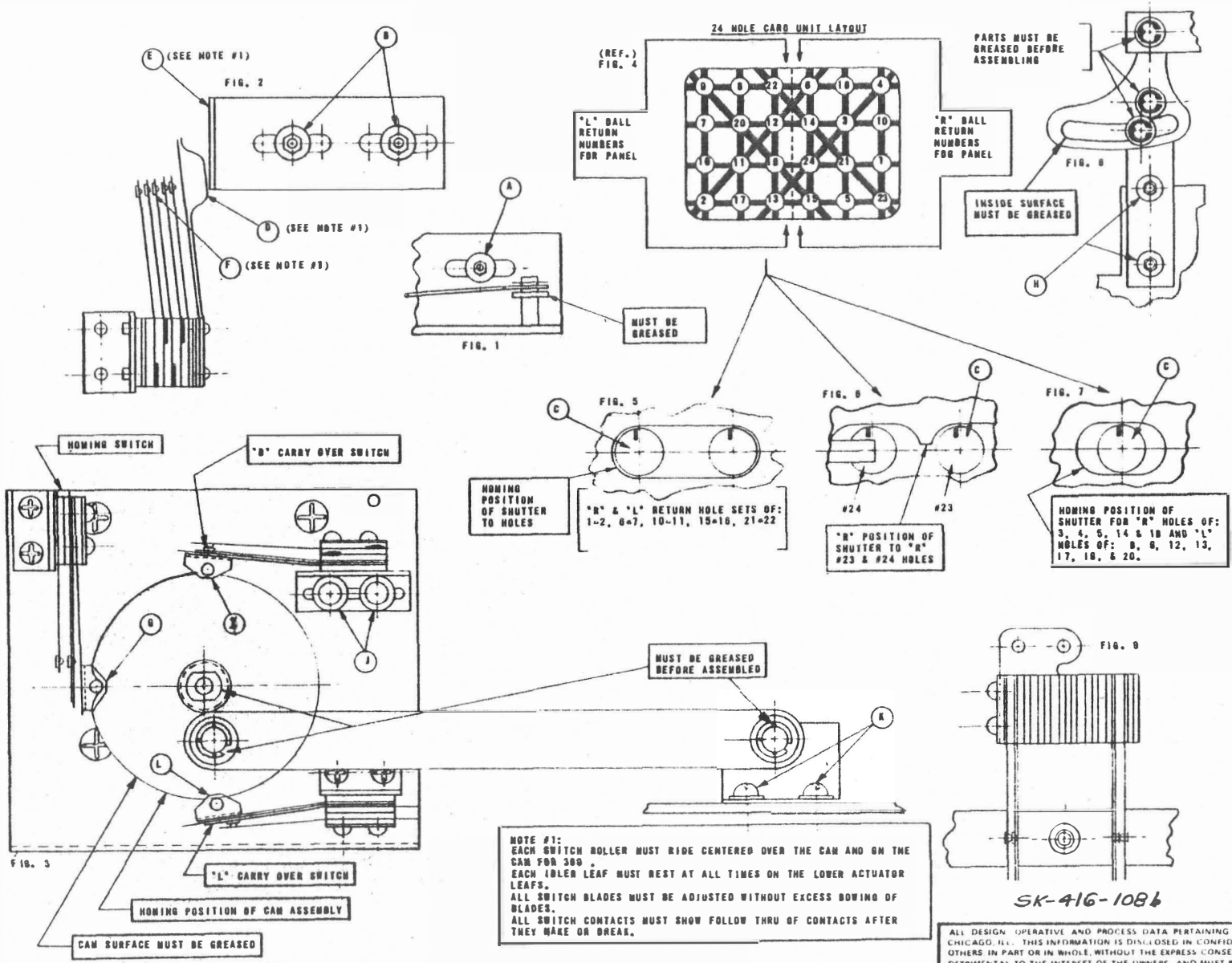
NOTE #1 (SWITCH ADJUSTMENT)  
 BOTTOM LEAF OF THE BOTTOM SWITCH MUST REST ON THE SWITCH ACTUATOR.  
 THE IDLER LEAF OF THE BOTTOM SWITCH MUST REST ON THE BOTTOM LEAF OF THE SWITCH.  
 THE LIFTER OF THE TOP SWITCH MUST REST ON THE IDLER LEAF OF THE BOTTOM SWITCH.  
 THE SWITCHES MUST SHOW FOLLOW THRU OF SWITCH CONTACTS AFTER SWITCH CONTACTS HAVE BEEN MADE WITHOUT EXCESS BOWING OF SWITCH BLADES.

DIE SIZE - C.C. - FT. PERM. - LBS

ALL DESIGN, OPERATIVE AND PROCESS DATA PERTAINING TO THE ARTICLE SHOWN ON THIS SHEET IS THE PROPERTY OF BALLY MANUFACTURING CO., CHICAGO, ILL. THIS INFORMATION IS DISCLOSED IN CONFIDENCE AND IS NOT TO BE COPIED, REPRODUCED, REVEALED OR OTHERWISE USED IN ANY MANNER, IN PART OR IN WHOLE, WITHOUT THE EXPRESS CONSENT OF THE OWNERS. THE PRINT IS LOANED AND MUST BE RETURNED TO THE INTEREST OF THE OWNERS, AND MUST BE RETURNED ON DEMAND.

REMOVE ALL BURRS	DR. BY	DATE	<b>Bally MANUFACTURING CO.</b> 2640 BELMONT AVENUE CHICAGO, ILLINOIS APR 10 1978									
	E.V.	4-6-78										
	CK. BY	DATE	PRINT CONTROL	PROG. CONT.	FILE DEPT.	ENG. FILE	TOOL DESIGN	COST DEPT.	INC.	TOOL	MACH.	INS.
	AP'D BY	DATE	NAME									
TOLERANCES ON DIMENSIONS UNLESS OTHERWISE SPECIFIED			PROBABILITY WIPER & INDEX ADJUSTMENTS									
FRACTIONS -			MATERIAL									
DECIMALS -			FINISH:									
ANGLES -			HARDENING:									
DO NOT SCALE DRAWING			ASSY									

OPER.	DEPT.	DESCRIPTION	TOOL NO.	NO.	LET.	CHANGE	DATE	BY	CHK.
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SHUTTER AND GUIDE UNIT ADJUSTMENTS

1. ROTATE THE SHUTTER MOTOR ASSEMBLY SO THAT THE SHUTTER IS IN A CLOSED POSITION.
2. LOOSEN AND THEN TIGHTEN THE LOCKING NUTS (A) ON THE SHUTTER CONTROL BRACKET (FIG. 1) WHEN THE SHUTTER IS MOVED TO PROPERLY COVER THE PANEL HOLES. IF ADJUSTED PROPERLY, THE PANEL HOLES WILL BE FULLY OPENED WHEN THE SHUTTER MOTOR ASSEMBLY IS IN THE OPEN INDEX POSITION.
3. WHILE THE GUIDE UNIT CAM IS IN IT'S HOMING POSITION (B IN FIG. 3) AND THE SHUTTER MOTOR ASSEMBLY IS IN IT'S OPENED INDEX POSITION, LOOSEN AND TIGHTEN THE LOCKING NUTS (B) AFTER THE SHUTTER SWITCH BRACKET (FIG. 2) IS MOVED SUFFICIENTLY TO CLOSE ALL OF THE SHUTTER SWITCHES IN SEQUENCE (F) AS THE SHUTTER APPROACHES IT'S OPENED POSITION (C IN FIG.'S 5, 6 & 7) WITH THE SWITCHES PROPERLY ADJUSTED. (SEE NOTE #1).
4. LOOSEN THE LOCKING NUTS AND SCREWS (H IN FIG. 8), (I IN FIG. 3), AND (K IN FIG. 3).
5. POSITION THE SHUTTER BY HAND (C IN FIG.'S 5, 6 & 7) SO THAT THERE IS EQUAL DISTANCE OF EACH SIDE OF THE SHUTTER HOLES TO THE PANEL HOLER, AND TIGHTEN THE LOCKING NUTS AND SCREWS (H IN FIG. 8) AND (K IN FIG. 3) WHILE HOLDING THE GUIDE BRACKET PARALLEL TO THE LINK ARM ASSEMBLY.
6. MOVE THE CAM ASSEMBLY (FIG. 3) TO WHERE THE INDENTED PART OF THE CAM (B) IS IN AN UPRIGHT POSITION AND SLIGHTLY BEYOND IN OVER-TRAVEL AFTER THE SHUTTER HAS STOPPED MOVING, AND TIGHTEN THE LOCKING SCREWS (I) IN FIG. 3) AFTER THE "L" CARRY OVER SWITCH ROLLER IS IN THE INDENTED PART OF THE CAM (1) AND THE SWITCH HAS BEEN ADJUSTED WITH IT'S ROLLER IS CENTERED OVER THE CAM. (SEE NOTE #1).
7. ADJUST AND CENTER THE OTHER (2) CAM SWITCHES (B AND J) IN FIG. 3). (SEE NOTE #1).
8. ADJUST BOTH OF THE RETURN SWITCHES (FIG. 9) TO MAKE AT THE END OF EACH STROKE (SEE NOTE #1).
9. RE-CHECK ALL ADJUSTMENTS TO MAKE CERTAIN THAT ALL HOLES ARE EITHER OPENED OR CLOSED WHEN THEY ARE SUPPOSED TO BE. SWITCHES MAKE OR BREAK PROPERLY, AND ALL MOVING PARTS MOVE FREELY WITHOUT BINDING.

NOTE #1:  
 EACH SWITCH ROLLER MUST RIDE CENTERED OVER THE CAM AND ON THE CAM FOR 300°.  
 EACH IDLER LEAF MUST REST AT ALL TIMES ON THE LOWER ACTUATOR LEAF.  
 ALL SWITCH BLADES MUST BE ADJUSTED WITHOUT EXCESS BOWING OF BLADES.  
 ALL SWITCH CONTACTS MUST SHOW FOLLOW THRU OF CONTACTS AFTER THEY MAKE OR BREAK.

ALL DESIGN, OPERATIVE AND PROCESS DATA PERTAINING TO THE ARTICLE SHOWN ON THIS SHEET IS THE PROPERTY OF BALLY MFG. CO., CHICAGO, ILL. THIS INFORMATION IS DISCLOSED IN CONFIDENCE AND IS NOT TO BE COPIED, REPRODUCED, REVEALED OR IN ANY MANNER USED BY OTHERS IN PART OR IN WHOLE, WITHOUT THE EXPRESS CONSENT OF THE OWNERS. THE PRINT IS LOANED AND MUST NOT BE USED IN ANY MANNER DETRIMENTAL TO THE INTEREST OF THE OWNERS, AND MUST BE RETURNED ON DEMAND.

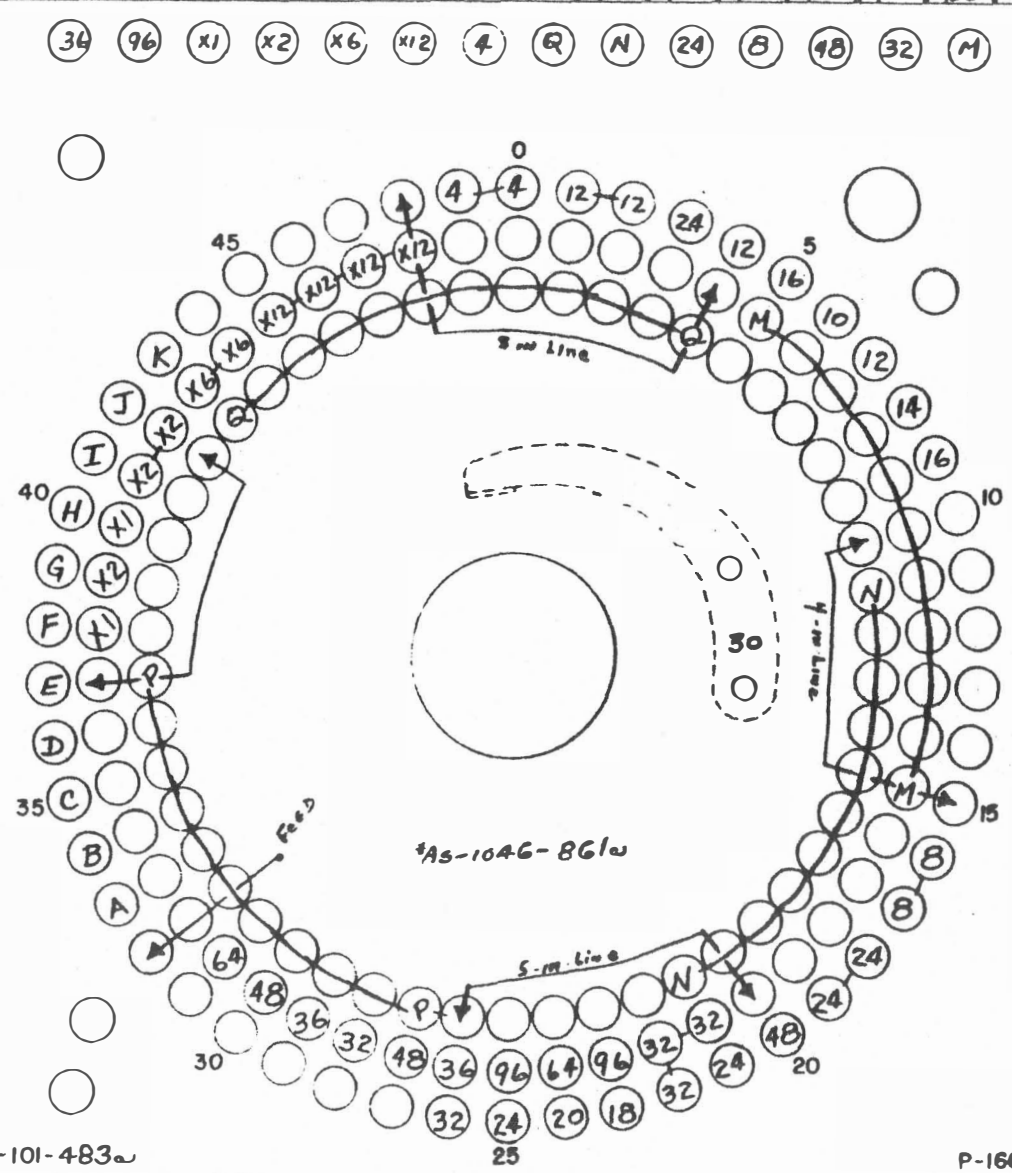
REMOVE ALL BURRS		DR. BY E.V. 4-22-78		DATE 4-22-78		Bally MANUFACTURING CORP.		2640 BENTLEY AVENUE		CHICAGO, ILLINOIS		# 11 43	
TOLERANCES ON DIMENSIONS UNLESS OTHERWISE SPECIFIED		CR. BY MGP		DATE 4-27-78		APR 27 1978		CHICAGO, ILLINOIS		TOTAL		SCALE	
FRACTIONS		AP'D BY GAC		DATE 4-27-78		PRINT CONTROL		MATERIAL		ASSEM. NO. USED ON W		PART NO.	
DECIMALS		FINISH:		NAME		SHUTTER GUIDE UNIT & SHUTTER ADJUSTMENTS		MATERIAL		ASSEM. NO. USED ON W		PART NO.	
ANGLES		HARDENING:		NAME		SHUTTER GUIDE UNIT & SHUTTER ADJUSTMENTS		MATERIAL		ASSEM. NO. USED ON W		PART NO.	
DO NOT SCALE DRAWING		HARDENING:		NAME		SHUTTER GUIDE UNIT & SHUTTER ADJUSTMENTS		MATERIAL		ASSEM. NO. USED ON W		PART NO.	

DESCRIPTION	TOOL NO.	NO.	LET.	CHANGE	DATE	BY	CR.

PART NO.  
**SK-416-108**

BL	14-3	72-3	45	52	57	63	34-5	18-2	52-8	71-3	58-3	35-3	80-3	43-8
YEL	21-4	40-11	45	52	57	63	60-3	74	83-7	51-2	84-9	47-2	52-2	64-7
GRN	15-10	35-2	45	52	57	63	54	75	32-8	60-8	21-9	43-2	61-9	12-8
	15-7	47-10	45	52	57	63	21-8	41	58-7	23-3	71-11	82-3	25-3	36-7

BL	YEL	GRN	RED
65-2	14-2	80-2	(57-3) (64)
61-4	61-4	61-4	(61-4) (P)
82-6	80-5	50-8	(48-4) (K)
50-6	12-3	14	(18-7) (J)
32-6	36-1	75-9	(53-7) (I)
72-6	78-5	34-6	(40-6) (H)
43-6	74-5	27-3	(38-6) (G)
64-6	71-5	25-2	(21-7) (F)
56-7	18-12	61-8	(43-5) (E)
31-6	65-5	23-1	(58) (D)
35-5	63-5	21-2	(65-10) (C)
67-4	61-5	20-1	(83-5) (B)
54-5	60-5	15-1	(81-4) (A)
62-2	41-2	57-9	(20-3) (20)
51-3	12-2	20-6	(10-3) (18)



RED	GRN	YEL	BL
(30)	30	30	30
(10)	60-2	41-8	78-1 61-11
(12)	74-2	40-5	81-1 13-3
(14)	83-2	27-6	58-10 75-6
(16)	85-2	13-1	23-2 40-3

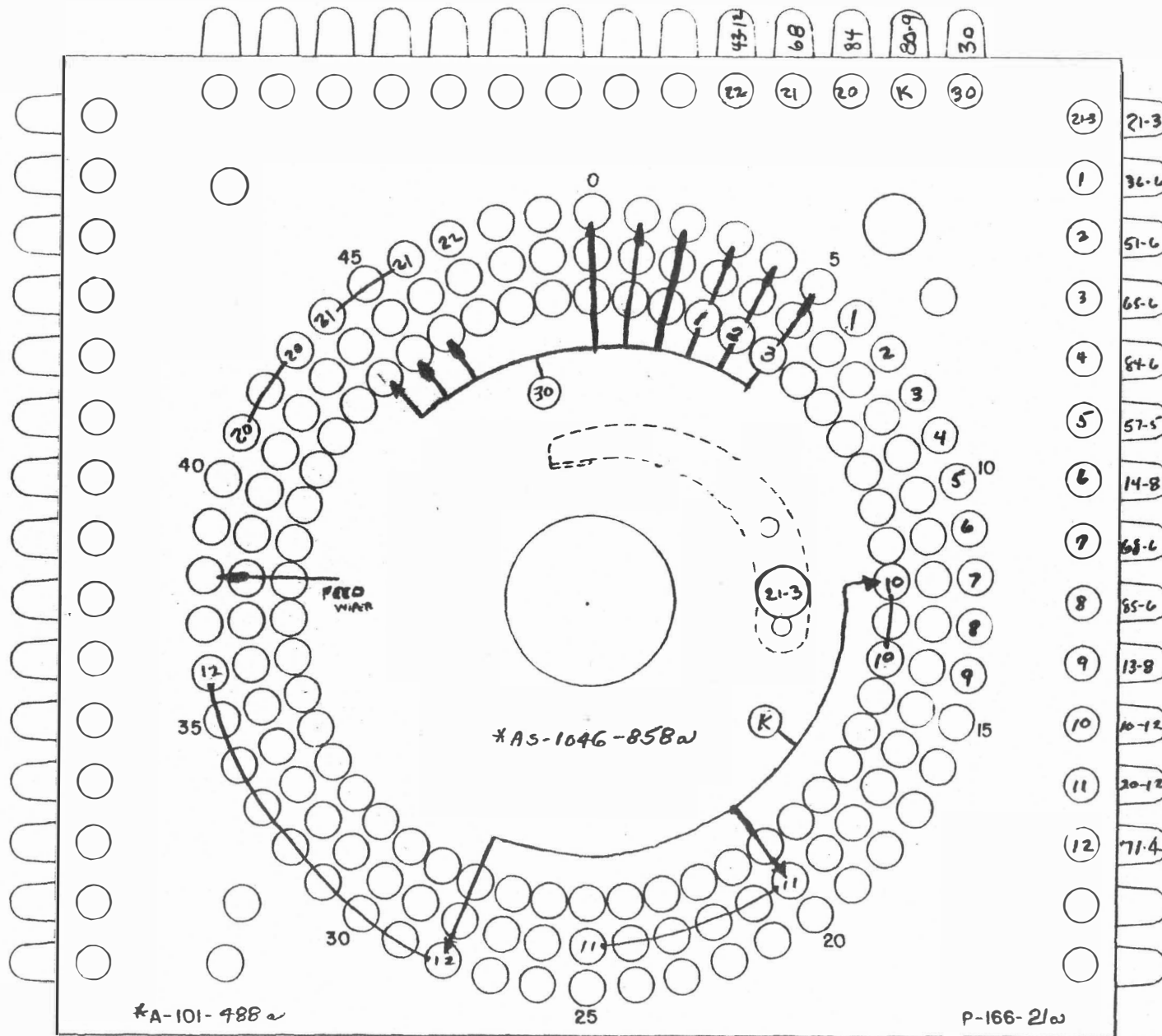
W105J-J

SCORE UNIT

AFTER WIRING - WIRE BRUSH RIVET HEADS

DIRECTION OF ROTATION

**Bally** MANUFACTURING  
 2640 BELMONT AVE  
 CHICAGO ILL  
**CONTACT PLATE WIRI**



- 21-3
- 21-3
- 1 36-6
- 2 51-6
- 3 65-6
- 4 84-6
- 5 57-5
- 6 14-8
- 7 68-6
- 8 85-6
- 9 13-8
- 10 10-12
- 11 20-12
- 12 71-4

AFTER WIRING - WIRE BRUSH RIVET HEADS

DIRECTION OF ROTATION

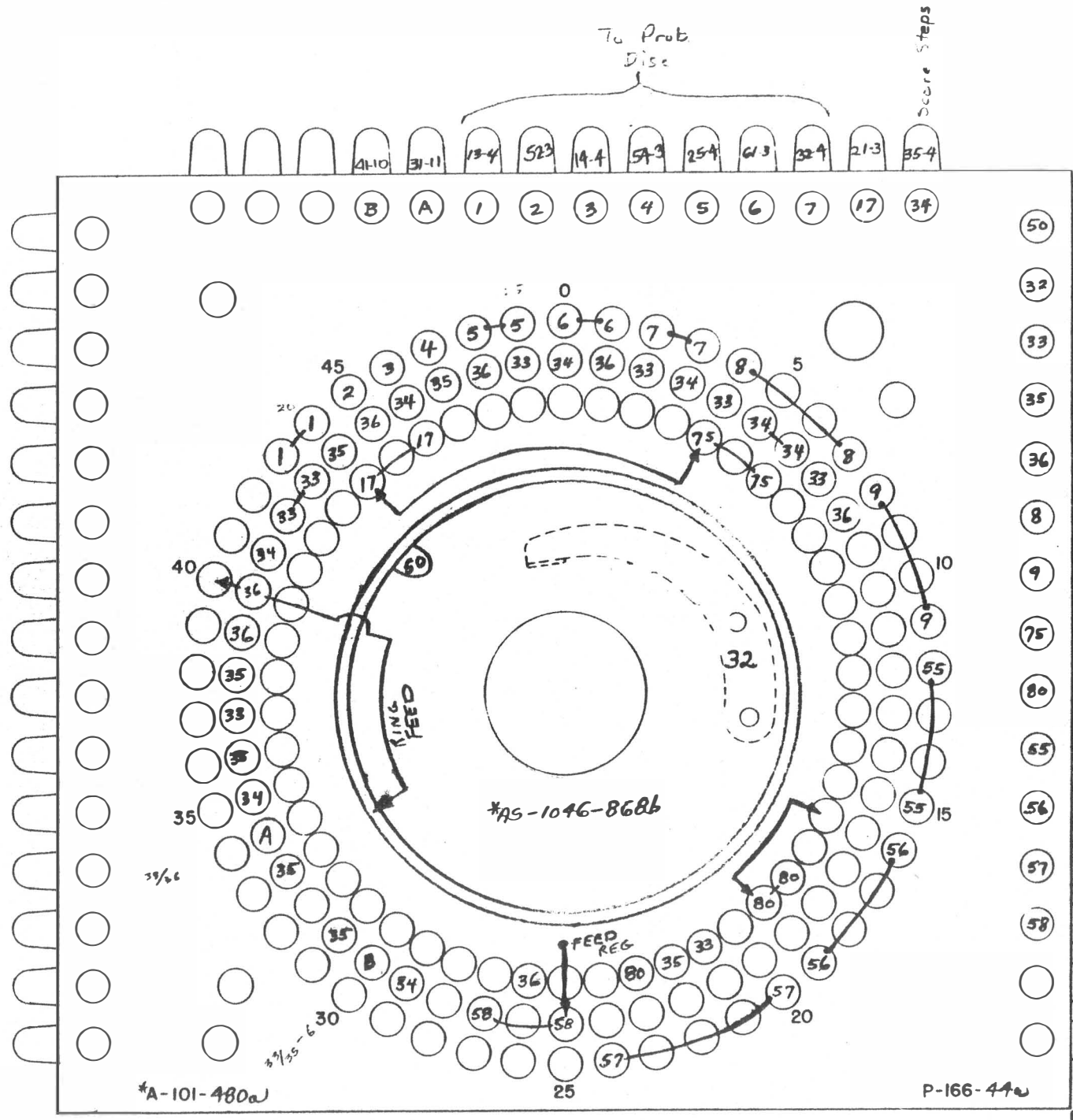
3-13-78

**Bally** MANUFACTURING CORP.  
 2640 BELMONT AVE  
 CHICAGO ILL #1143

**CONTACT PLATE WIRING**



# SCORE PROGRAM



\*A-101-480a

P-166-44a

- 50 36-3
- 32 84-4 C.U. Cam #7
- 33 53-4
- 35 43-4 } Score Steps
- 36 18-4
- 8 68-5 } To Prob. Disc
- 9 41-4
- 75 753 Guaranteed Stop
- 80 63-3 Double Stop Cams #7 & 8
- 65 74-3
- 56 48-3 } To Prob. Disc
- 57 82-9
- 58 60-9 All Re.

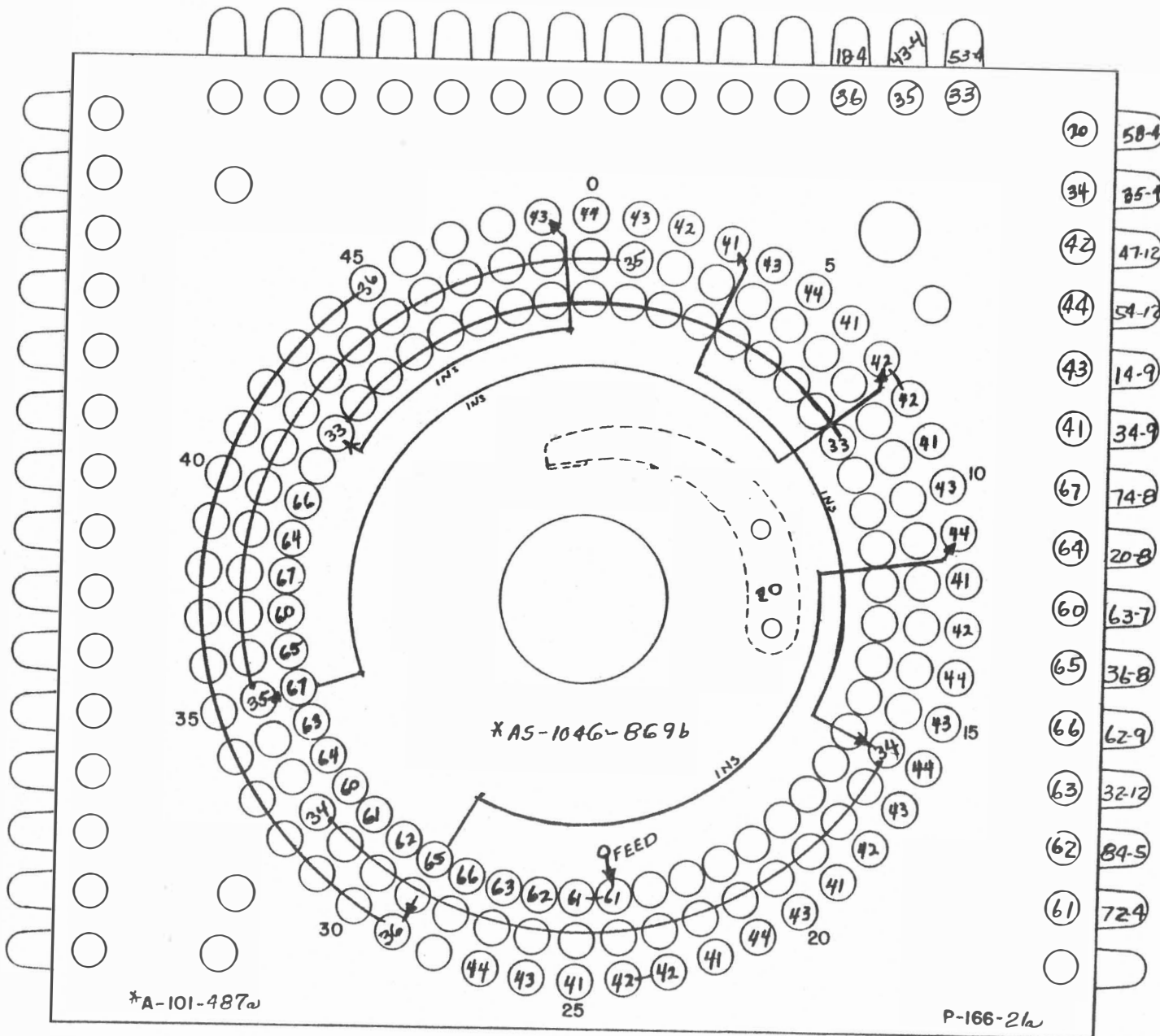
2/28/78  
 2-15-78  
 3/2/78 mcf

AFTER WIRING - WIRE  
 BRUSH RIVET HEADS.

DIRECTION OF ROTATION

34 Steps #1143  
**Bally MANUFACTURING CORP.**  
 2640 BELMONT AVE  
 CHICAGO ILL  
**CONTACT PLATE WIRING**

Scrambler



\*A-101-487a

P-166-2a

AFTER WIRING - WIRE BRUSH RIVET HEADS.

DIRECTION OF ROTATION



16 Steps  
 3/21/78 - W.E.P.  
 2/28/78 1-10-78

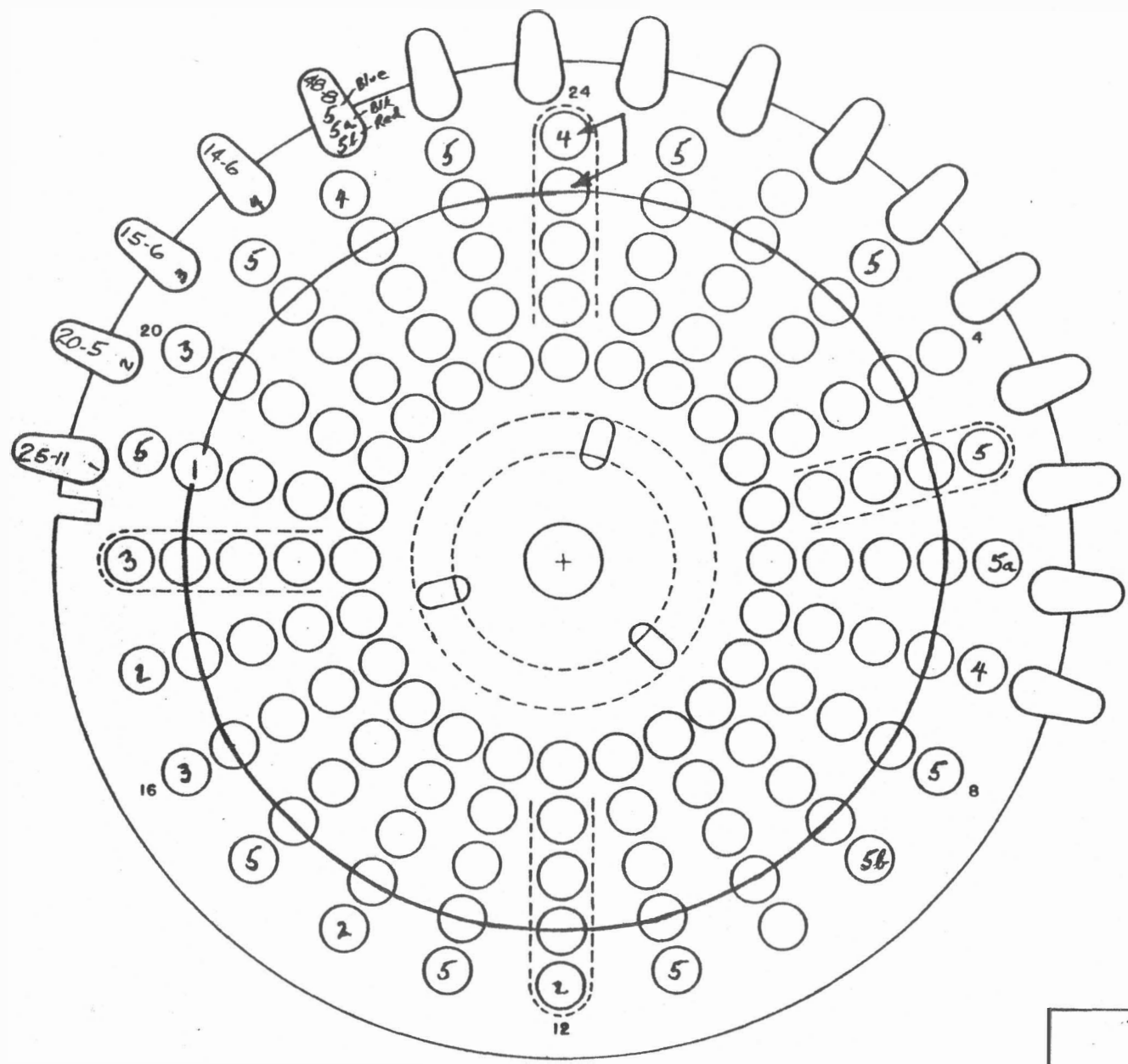
#1143 2-7-78

**Bally** MANUFACTURING CORP.  
 2640 BELMONT AVE. CHICAGO ILL. 2-22-78

CONTACT PLATE WIRING



*Reflex Factor*



INDICATES WIPER SLOTS IN INDEX DISC P-2305

WIRING MUST MATCH SLOTS AS INDICATED

WIRING SIDE

# 1143

P-2299-15w

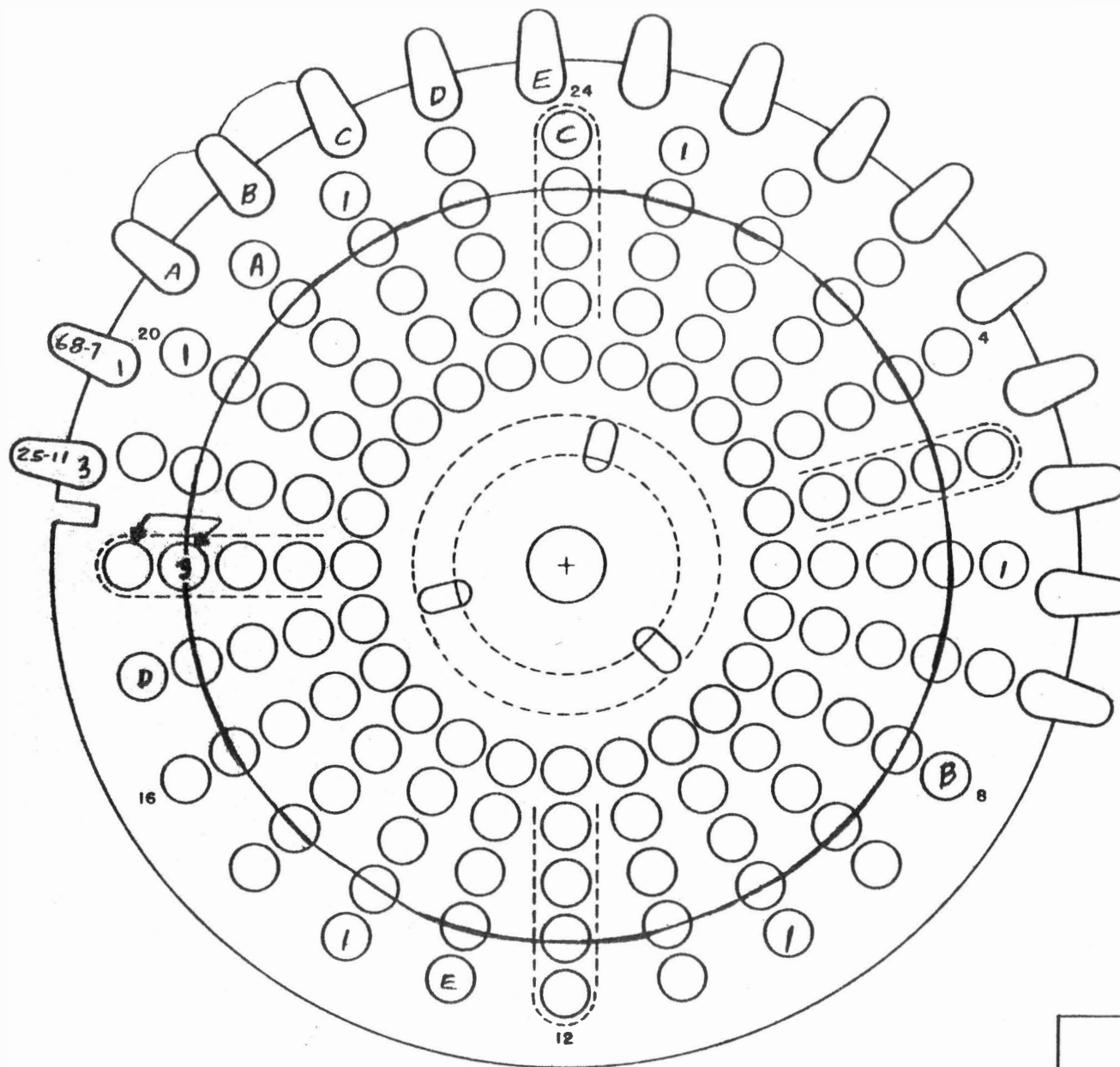
\*A-1366-156w

<b>MANUFACTURING CORP</b>			
2640 BELMONT AVE. CHICAGO ILL.			
<b>CONTACT PLATE WIRING</b>			
USED ON: <i>Reflex Factor</i>			
DR. BY	APPD.	DATE	
	<i>u m j</i>	<i>4/3/78</i>	<i>W-1165-2</i>



W1197

Ratio



INDICATES WIPER  
SLOTS IN INDEX  
DISC P-230B

WIRING MUST MATCH  
SLOTS AS INDICATED

WIRING SIDE

3-13-78

\*1143

**MANUFACTURING CORP.**

2640 BELMONT AVE.

CHICAGO ILL.

**CONTACT PLATE WIRING**

USED ON:

Ratio Disc

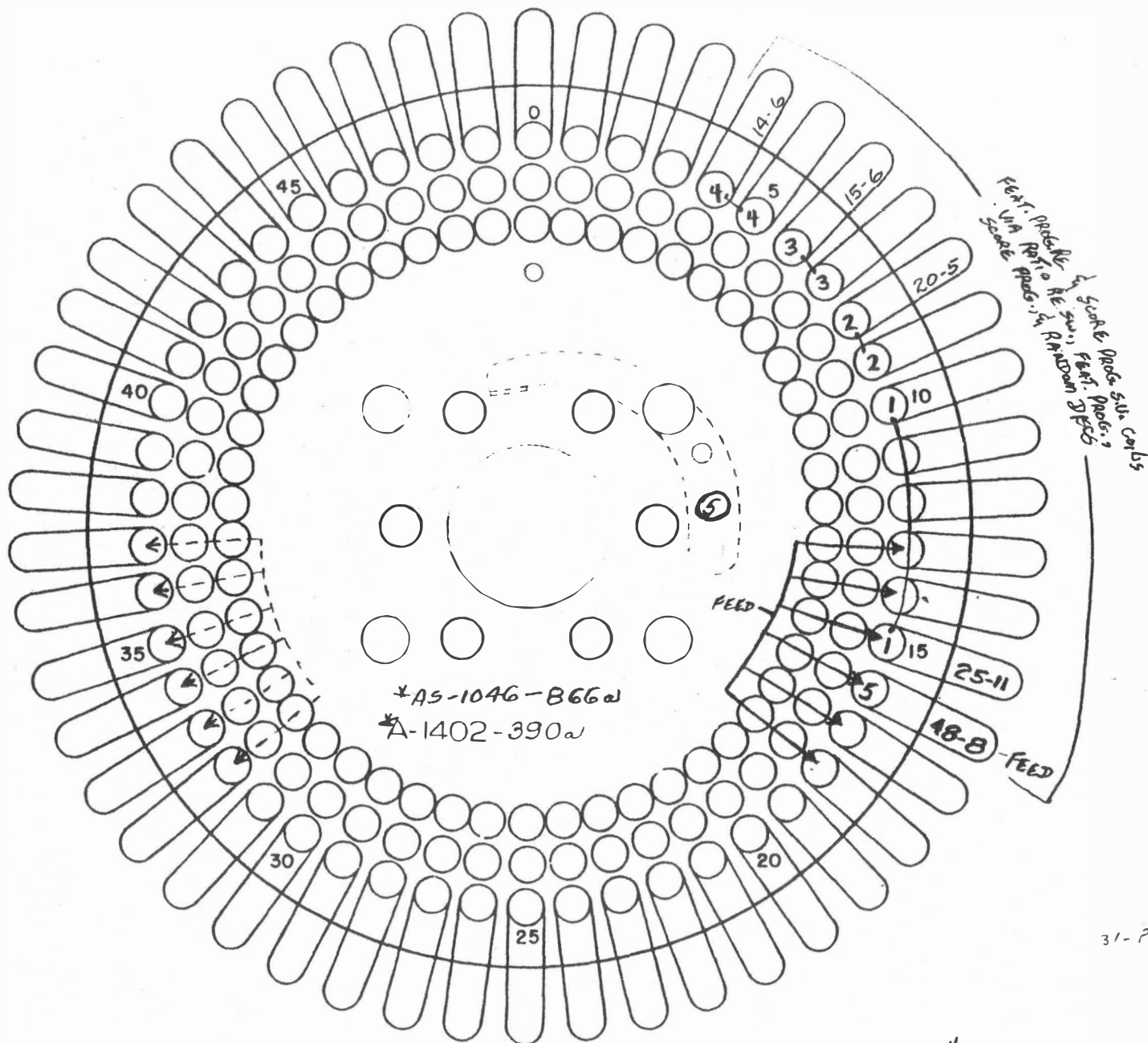
DR. BY	APPD.	DATE	
	WMB	4/3/78	W-11976

P-2299-15a

A-1366-157a

L/W-1083-5

Reflex



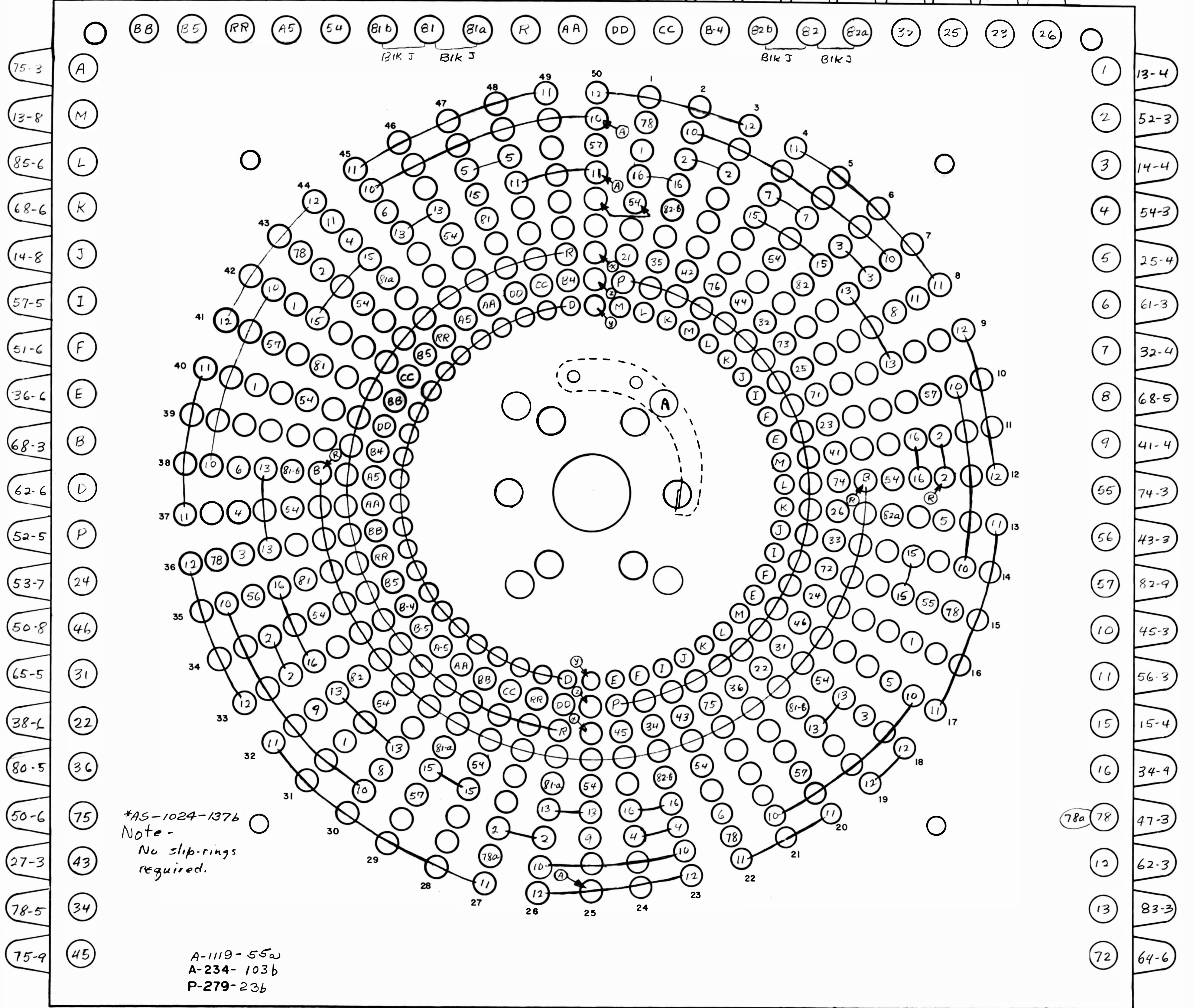
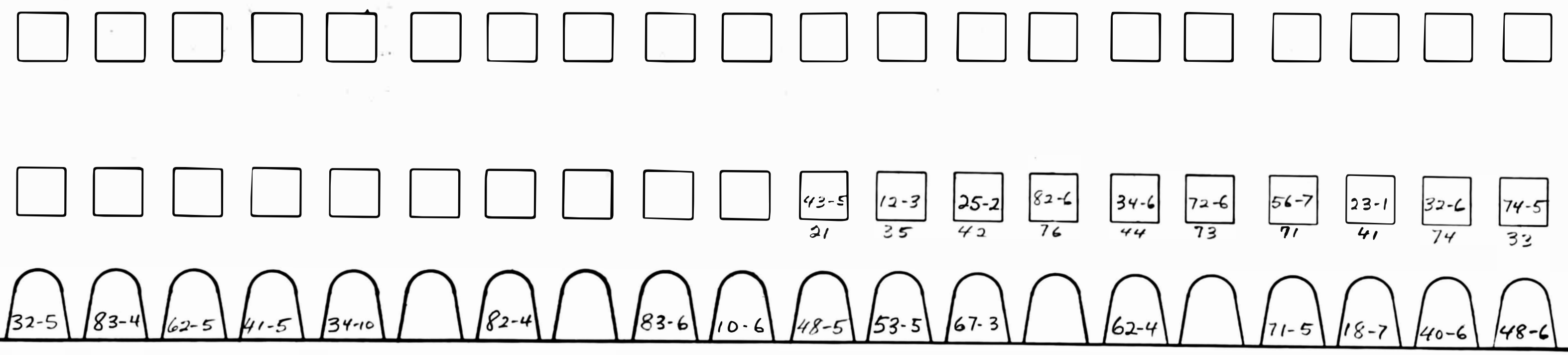
AFTER WIRING - WIRE  
BRUSH RIVET HEADS.

# 1143

4/3/78  
2/28/78  
2-7-78

DR BY	DATE	Bally MANUFACTURING CORP.		SCALE	NO. REQ.
CK BY	DATE	2640 BELMONT AVE.			
AP'D BY	DATE	CHICAGO, ILL.			
AP'D BY	DATE	USED ON	Reflex		
NAME					
FINISH		CONTACT PLATE WIRING			





\*AS-1024-1376  
 Note -  
 No slip-rings  
 required.

A-1119-55a  
 A-234-103b  
 P-279-23b

3-12-78

DR. BY	DATE	MANUFACTURING CORP. 1143	
CK. BY	DATE	2840 BELMONT AVENUE CHICAGO, ILLINOIS	
AP'D BY	DATE	USED ON	SCALE
AP'D BY	DATE	PROBABILITY UNIT	
FINISH		NAME	ASSEM. NO.
		CONTACT PLT. WIRING	
		MATERIAL	PART NO.
		PROBABILITY DISC	W-850-51c





②  
SF  
26

#1143 GALAXY NAME ②	STEP-UP COIL	RESET COIL	TYPE OF SWITCH	TOP LEAF WIRE COLOR	CENTER LEAF WIRE COLOR	BOTTOM LEAF WIRE COLOR	DIAG. LOCATION	STACK LOCATION	OPERATE AT TOP	OPERATE AT ZERO	S.U. ARM
DIAG. TRIP	70 <sup>3</sup> 483 <sup>3</sup> 8						A-40				
			NC	12-5		83-8	A-40	L1			
			NO	53		23	E-48	L2			
			NO	71		25	E-51	L3			
			NO	81-11		21-10	E-53	L4			
			NO	67-2		34-3	E-55		R1		
			NO	30		48-5	G-9		R2		
TILT TRIP	70 <sup>3</sup> 414 <sup>5</sup>						A-13				
			NC	96-16		92-16	F-3	L1			
			NC	10		51-7	J-31	L2			
			NO	85-8		13-5	B-5	L3			
			NO	71-2		30	D-9	L4			
			T	36-5	18-8	45-10	J-29		R1		
			T	21-3	30-5	15	G-7		R2		
SELECT B/570 <sup>3</sup> 464 <sup>3</sup> TRIP							A-23				
			NC	64-4		64-5	A-23	A			
			NC	71-4		32-10	B-21	B			
			NO	41-11		38-3	B-11	C			
			NO	60-6		35-8	E-17	D			
②			②								2

③  
OK  
26

FORM 4028

#1143 GALAXY NAME ③	STEP-UP COIL	RESET COIL	TYPE OF SWITCH	TOP LEAF WIRE COLOR	CENTER LEAF WIRE COLOR	BOTTOM LEAF WIRE COLOR	DIAG. LOCATION	STACK LOCATION	OPERATE AT TOP	OPERATE AT ZERO	S.U. ARM
SELECT A/S TRIP	70 <sup>J</sup> 47 <sup>J</sup>						A-23				
			NC	47-4		47J	A-23	A			
			NC	71-4		56-9	B-22	B			
			NO	35-8		81-2	D-17	C			
SHUFFLE TRIP	70 <sup>J</sup> 65						A-10				
			NC	62		83	D-9	A			
			NC	12-6		38-5	H-3	B			
			NO	30		54-8	H-9	C			
E. B TRIP #1	70 <sup>J</sup> 47 <sup>J</sup>						A-11				
			NC	47-1		47J	A-11	L1			
			NC	34		71-2	D-10	L2			
			NC	56-5		18-6	G-7	L3			
			NO	50-2		48-1	E-5	L4			
			NO	41-11		38-3	B-11		R1		
			NO	25-7		72-8	E-15		R2		
			NO	13-2		64-1	E-20		R3		
			NO	65-7		68-3	C-33		R4		
E. B TRIP #2	70 <sup>J</sup> 47 <sup>J</sup>										
			NC	54-11		41-12	F-40	L1			
			NC	81-3		67-8	F-41	L2			
			T	53-3	27-9	18	D-7	L3			
			T	51-13	81-3	14-1	D-23	L4			
			NC	78-2		75-3	F-38		R1		
			NO	35-6		62-6	H-25		R2		
			NO	43-11		74-11	H-11		R3		
			NO	85-11		70	A-19		R4		3

③



4  
OF  
26

#1143 GALAXY NAME (4)	STEP-UP COIL	RESET COIL	TYPE OF SWITCH	TOP LEAF WIRE COLOR	CENTER LEAF WIRE COLOR	BOTTOM LEAF WIRE COLOR	DIAG. LOCATION	STACK LOCATION	OPERATE AT TOP	OPERATE AT ZERO	S.U. ARM
BALL RETURN	70 <sup>J</sup> & 84-10						A-41				
TRIP			NC	54-4		84-10	A-41	A			
			NO	61		31	F-9	B			
			NO	30		62-5	H-9	C			
			NO	25-10		38-9	H-3	D			
RELAY BANKS											
(C" RELAY BANK)											
RETURN 'R'	70 <sup>J</sup> & 67						A-9				
RE.			NO	83		64 J	B-9	A			
			NO	12-9		30 J	H-28	B			
			NC	30 J		18-1	F-16	C			
			NC	53-2		15-11	C-9	D			
			NC	30 <sup>30J</sup>		75-5	F-24	E			
			NC	21-3		27-10	F-18	F			
			T	50-1	30 J	47	F-8	G			
			T	60	30 J	72	C-8	H			
RETURN 'L'	70 <sup>J</sup> & 15-11						A-9				
RE.			NO	83		15-11	B-10	A			
			NO	25-12		30	H-28	B			
			NC	27-10		78-8	E-18	C			
			NC	57-6		75-5	E-24	D			
			NC	32		64	B-9	E			
			NC	18-1		45-2	E-16	F			
			T	80-8	50-1	47	E-8	G			
			T	82	60	56	C-9	H			
BUTTON	70 <sup>J</sup> & 35-1						A-16				
SAFETY RE.			NO	13-6		40-2	C-17	A			
			NO	20-2		54-2	C-17	B			
			NO	71-6		61-2	C-18	C			
			NO	10		75-10	J-39	D			4

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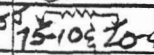
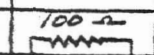
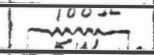
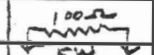
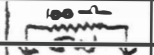
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FORM 4028

GALAXY NAME	STEP-UP COIL	RESET COIL	TYPE OF SWITCH	TOP LEAF WIRE COLOR	CENTER LEAF WIRE COLOR	BOTTOM LEAF WIRE COLOR	DIAG. LOCATION	STACK LOCATION	OPERATE AT TOP	OPERATE AT ZERO	S.U. ARM
#1143 ("A" BANK) A.C. RE.	70931-2				TO 61-6 MULTI RE. 1.8KΩ 7w.	PLAY	A-3				
			NO	30J	↑	31-2	D-4	A			
			NO	51-7	↓	80-1	H-31	B			
			NC	74-7	↔	30J	G-7	C			
			NC	71-2	→	30J	E-9	D			
			T	45-10		40	J-29	E			
			T	75-2		50-2	E-5	F			
					slits MULTI 30. RE.						
MULTIPLAY RE.	70931-10				TO 61-6 MULTI RE.		A-6				
			NO	25-6	↔	31-10	F-6	A			
			NO	85-10	↔	10-5	E-6	B			
			NC	81-10	↔	74-4	B-5	C			
			T	61-6	↔	15-2	41-7	C-47	D		
START RE.	70983-11						A-5				
			NO	48-2		13-5	F-7	A			
			NO	25-8		13-5	E-7	B			
REPLAY RESET RE.	70975-2						A-4				
			NO	56-2		75-2	F-5	A			
			NO	94-16		92-16	G-1	B			
			NC	30		50-5	C-47	C			
			NC	10-5		858	C-5	D			
			T	83-9	81-10	51-9	B-5	E			
											7

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GALAXY # 1143 NAME SEARCH RE BANK	STEP-UP COIL	RESET COIL	TYPE OF SWITCH	TOP LEAF WIRE COLOR	CENTER LEAF WIRE COLOR	BOTTOM LEAF WIRE COLOR	DIAG. LOCATION	STACK LOCATION	OPERATE AT TOP	OPERATE AT ZERO	S.U. ARM
#1	150  75-10 & 20-4						J-40				
	100 $\Omega$ SW.		NO	52-4		65-9	G-51	A			
			NO	57-4		81-6	G-53	B			
			NO	21-12		61-4	G-55	C			
			NO	64-9		27-8	F-56	D			
#2	100 $\Omega$  SW 75-1 & 74-9						J-40				
			NO	50-3		52-1	H-51	A			
			NO	51-4		65-9	G-51	B			
			NO	53-6		57-4	H-52	C			
			NO	53-6		58-9	J-55	D			
#3	100 $\Omega$  SW 75-5 & 60-4						J-41				
			NO	45-4		50-3	J-51	A			
			NO	45-4		63-9	J-52	B			
#4	100 $\Omega$  SW 75-3 & 15-3						J-42				
			NO	45-4		56-6	J-50	A			
			NO	63-9		53-6	J-52	B			
			NO	50-3		51-4	H-51	C			
#5	100 $\Omega$  SW 75-1 & 18-5						J-42				
			NO	51-4		65-9	G-52	A			
			NO	56-6		13-9	H-50	B			
			NO	57-4		81-6	G-53	C			
			NO	53-6		25-9	H-54	D			
			NO	58-9		21-12	H-55	E			
			NO	58-9		80-10	G-56	F			8

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9  
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FORM 4028

GALAXY #1143 NAME	STEP-UP COIL	RESET COIL	TYPE OF SWITCH	TOP LEAF WIRE COLOR	CENTER LEAF WIRE COLOR	BOTTOM LEAF WIRE COLOR	DIAG. LOCATION	STACK LOCATION	OPERATE AT TOP	OPERATE AT ZERO	S.L. ARM
SEARCH RE. #6	75 <sup>T</sup> 31-8						J-43				
			NO	13-9		65-9	G-50	A			
			NO	25-9		81-6	G-54	B			
			NO	21-12		61-4	G-55	C			
			NO	27-8		80-10	E-56	D			
LIFTER START RE.	70 <sup>S</sup> 38-8						A-13				
			NO	36		38-8	C-12	A			
			NC	43-12		50	E-11	B			
			NC	10-1		63-6	E-14	C			
			SCORE UNITS (4)								
RED SCORE	70 <sup>S</sup> 48-10	70 <sup>S</sup> 78-3					A-38 C-25				
UNIT	OPEN	@ TOP	NC	48 <sup>T</sup> -10		54-12	C-38				
GEN SCORE	70 <sup>S</sup> 61-12	70 <sup>S</sup> 78-3					A-39 C-25				
UNIT	OPEN	@ TOP	NC	61 <sup>T</sup> -12		47-12	C-39				
YEL SCORE	70 <sup>S</sup> 58-2	70 <sup>S</sup> 78-3					A-48 C-25				
UNIT	OPEN	@ TOP	NC	58 <sup>T</sup> -2		14-9	C-40				
BLUE SCORE	70 <sup>S</sup> 64-2	70 <sup>S</sup> 78-3					A-39 C-25				
UNIT	OPEN	@ "0"	NO	14-7		15	F-7	A			
	CLOSED	@ "0"	NO	30		71-2	E-10	B			
	OPEN	@ TOP	NC	64 <sup>T</sup> -2		34-9	C-39	C			9

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26

GALAXY #1143 NAME	STEP-UP COIL ⑩	RESET COIL	TYPE OF SWITCH	TOP LEAF WIRE COLOR	CENTER LEAF WIRE COLOR	BOTTOM LEAF WIRE COLOR	DIAG. LOCATION	STACK LOCATION	OPERATE AT TOP	OPERATE AT ZERO	S.U. ARM
		REPLAY	UNITS								
RED REPLAY UNIT	41 & 38 (OPEN	70 & 85-5 AT 96)	NC	47-10		53	C-48 A-24 E-48				
GRN REPLAY UNIT	75 & 48 (OPEN @ 96)	70 & 85-5	NC	35-2		81-11	C-52 A-24 E-53				
YEL. REPLAY UNIT	74 & 43 OPEN @ 96	70 & 85-5	NC	40-11		25	C-50 A-24 E-51				
BLUE REPLAY UNIT	68-2 & 18-2 OPEN @ 96	70 & 85-5	NC	72-3		67-2	C-55 A-25 E-55				
SCRAMBLE UNIT	70 & 34-2 CLOSED	70 & 85-5 @ TOP	NO	85J		85-5	A-24 A-24 B-24				
TIMER UNIT	70 & 57-6 OPEN	70 & 72-5 @ "0"	NO	30		83-12	A-15 A-15 E-12	A			
	OPEN	@ "0"	NO	72-8		72J	B-15	B			
	OPEN	@ TOP	NC	94-16		96-16	G-3	C			
		⑩									⑩

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13  
OF  
26

FORM 4038

#1143 GALAXY NAME CONTROL UNIT	STEP-UP COIL (13)	RESET COIL	TYPE OF SWITCH	TOP LEAF WIRE COLOR	CENTER LEAF WIRE COLOR	BOTTOM LEAF WIRE COLOR	DIAG. LOCATION	STACK LOCATION	OPERATE AT TOP	OPERATE AT ZERO	S.U. ARM
#13		(X6)	NO	57		70	B-48				
#14		(X11)	NO	61-6		68-4	D-47	A			
			NO	45		70 <sup>J</sup>	B-48	B			
			NO	-		70 <sup>J</sup>	-	C			
#14 Y	(BACK SW)		NO	21-3		23-8	F-46				
#15		(X2)	NO	52		70	B-48				
#16		(SAFETY)	NO	75-8		56-4	J-48				
SEARCH P.N SW.	(OPEN ON PIN)		NO	58-8		21-3	E-26				
SEARCH WIPER CAM LOCK MAG.				70E, 15-8			A-17				
TIMER CAM INDEX				70E, 547			A-7				
			NO	94-10		92-10	F-2	A			
			NC	27-7		61-10	B-6 A-6	B			
			NC	30		80	F-10	C			
						92K~ 1/2 W.					
		(13)									13

13

14  
OF  
26

#143 GALAXY	STEP-UP COIL	RESET COIL (14)	TYPE OF SWITCH	TOP LEAF WIRE COLOR	CENTER LEAF WIRE COLOR	BOTTOM LEAF WIRE COLOR	DIAG. LOCATION	STACK LOCATION	OPERATE AT TOP	OPERATE AT ZERO	S.I. ARM
REPLAY CAMS											
INDEX	70 <sup>5</sup> 408						A-46				
		(M.W.E.)	NO	68-4		23-8	E-46	L1			
			NC	15-9	30-2 10-10	68-4	C-46	L2			
		(M.W.E.)	NO	75-8		56-4	J-48		R1		
			NC	27-2		36-2	D-15		R2		
SEARCH											
INDEX	70 <sup>5</sup> 159						A-46				
			LUG	70 <sup>J</sup>							
			NO	68-4		40-8	B-46				
SHUTTER MOTOR											
CAMS	70 <sup>5</sup> 533						A-7				
#1			NO	80-8		53-3 <sup>53<sup>J</sup></sup>	D-8	A			
			NC	45-6		54-7	B-7	B			
#1 X		(o.w.c.)	NO	85		53-3 <sup>J</sup>	D-8	A			
		(c.w.c.)	NC	21-3		75-8	J-47	B			
		(c.w.c.)	NC	21-3		78-6	F-15	C			
#2			NC	50		31-3	D-11				
#3			NO	85-5		57-6	C-24	A			
			NO	45-2		51-0	C-15	B			
		(14)									14

14



15  
OF  
26

Form 4038

GALAXY #143 NAME SHUTTER MOTOR		STEP-UP COIL	RESET COIL (15)	TYPE OF SWITCH	TOP LEAF WIRE COLOR	CENTER LEAF WIRE COLOR	BOTTOM LEAF WIRE COLOR	DIAG. LOCATION	STACK LOCATION	OPERATE AT TOP	OPERATE AT ZERO	S.U. ARM
# 4			(c.w.c)	NC	21-3 <sup>3</sup>		10-1	F-14	A			
			(c.w.c)	NO	21-3		82-8	F-17	B			
			(o.w.c)	NC	18-3 <sup>3</sup>		15	E-7	C			
			(o.w.c)	NC	53-3		18-3	D-7	D			
# 5			(o.w.c)	NO	83-2		31-4	D-12	A			
			(o.w.c)	NO	21-3 <sup>3</sup>		47-8	H-56	B			
				T	64-1 <sup>3</sup>	21-3 <sup>3</sup>	38-4	F-20	C			
				T	27-9	25-8	45-6	D-7	D			
# 6				NO	45-2 <sup>3</sup>		51-10	B-10	A			
				NO	45-2		72-8	D-16	B			
				NO	78-3		57-6	D-24	C			
# 7				NO	65		83	C-10	A			
				NC	71-2		84-7	B-10	B			
				NO	21-3		34-2	D-23	C			
SHUTTER	SWs			NO	83-1	40-4	50-4	78-8	E-18 E-19			
BALL LIFTER MOTOR	709383								A-11			
CAMS												
# 1			(CARRY OVER)	NO	21-3 <sup>3</sup>		41-11	D-11	A			
				NO	21-3		57-1	F-12	B			
				NC	63-6		321	E-13	C			
			(15)									15

15



18  
OF  
26

#1143 GALAXY NAME	STEP-UP COIL	RESET COIL (18)	TYPE OF SWITCH	TOP LEAF WIRE COLOR	CENTER LEAF WIRE COLOR	BOTTOM LEAF WIRE COLOR	DIAG. LOCATION	STACK LOCATION	OPERATE AT TOP	OPERATE AT ZERO	S.U. ARM
BALL LIFTER	SW		NO	41-11		52-9	C-11				
Collect Button Sw ("R")			NO	34-1		15-8	B-17	A			
			NO	21-3		75-11	F-16	B			
"A" MOTOR	70 1/2 40-2						A-17				
"A" CAM sw's			NO	21-3		40-2	B-17	A			
	(CARRY OVER)		NC	82-8		74-1	F-16	B			
"B" MOTOR	70 1/2 54-2						A-17				
"B" CAM sw's			NO	21-3		54-2	B-17	A			
	(CARRY OVER)		NC	74-1		45-8	D-16	B			
"C" MOTOR	70 1/2 61-2						A-18				
"C" CAM sw's			NO	21-3		61-2	B-18	A			
	(CARRY OVER)		NC	45-8		35-1	C-16	B			
"A" BUTTON			NO	41-1		13-6	C-17				
"B" BUTTON			NO	51-8		20-2	C-17				
"C" BUTTON			NO	60-1		71-6	C-18				
		(18)									18

18



19  
OF  
26

#1173 GALAXY NAME	STEP-UP COIL	RESET COIL	TYPE OF SWITCH	TOP LEAF WIRE COLOR	CENTER LEAF WIRE COLOR	BOTTOM LEAF WIRE COLOR	DIAG. LOCATION	STACK LOCATION	OPERATE AT TOP	OPERATE AT ZERO	S.U. ARM
PROBABILITY		19									
MOTOR	95-16 & 92-16						E-2				
(16 PULSE SW.S)			NO	20		14-10	J-5	A			
			NO	75-2		51-9	C-5	B			
			NO	47-8		81-6	G-56	C			
INDEX	70 & 60-10		NO	92-16		44-16	F-2	D		515/28	
			NO	30		18-6	G-7			246A	
			NO	30J		47-6	G-25				
LATCH COIL	70 & 12						A-7				
SHUTTER GUIDE MOTOR	70 & 27						A-8				
(E.O.S. SW.S)		"L"		85		53-3	D-8				
		"R"	NO	85J		53-3	D-8				
"R" CARRY OVER		(TOP)	NO	72		27	B-8				
"L" CARRY OVER		(BOTTOM)	NO	56		27	B-8				
		(TOWARD GUIDE MOTOR)									
HORIE CARRY OVER		(END)	NO	82		27	B-9				
TROUGH SW.S.											
#1			NO	68 <sup>605</sup>		43-12	E-11				
#2			NO	32 <sup>321</sup> -1		50-9	C-14	A			
			NO	68J		84 <sup>843</sup>	F-11	B			
#3			NO	32J		58-1	D-14	A			
			NO	21-3		84J	G-11	B			
		19									19

19

20  
OF  
26

#1143 GALAXY NAME	STEP-UP COIL	RESET COIL 20	TYPE OF SWITCH	TOP LEAF WIRE COLOR	CENTER LEAF WIRE COLOR	BOTTOM LEAF WIRE COLOR	DIAG. LOCATION	STACK LOCATION	OPERATE AT TOP	OPERATE AT ZERO	S.U. ARM
TROUGH SW's.											
#4			NC	75-12		72-1	D-13				
#8			NO	4-11		38-3	B-11				
BONUS CNTR.	70 <sup>5</sup> & 27-4						A-56				
(OPEN @ 16)			NC	64-9		23-7	E-56				
(HAMING SW)			NC	80-6		27-4	F-57				
EXTRA	70 <sup>5</sup> & 80-9	70 <sup>5</sup> & 78-3					A-21 C-24				
BALL UNIT											
FEAT PROG.	70 <sup>5</sup> & 65-3	70 <sup>5</sup> & 78-3					A-23 C-24				
UNIT											
SCORE PROG.	70 <sup>5</sup> & 13-10	70 <sup>5</sup> & 85-5					A-36 A-26				
UNIT											
A B C	70 <sup>5</sup> & 25-5	70 <sup>5</sup> & 89-5					A-42 A-25				
UNIT											
SEL. FEAT	70 <sup>5</sup> & 78-4	70 <sup>5</sup> & 85-5					A-45 A-25				
UNIT											
		20									20

20

21  
OF  
25

GALAXY NAME	STEP-UP COIL	RESET COIL	TYPE OF SWITCH	TOP LEAF WIRE COLOR	CENTER LEAF WIRE COLOR	BOTTOM LEAF WIRE COLOR	DIAG. LOCATION	STACK LOCATION	OPERATE AT TOP	OPERATE AT ZERO	S.U. ARM
#1143		(21)									
YEC. BUTTON Sw.'s											
	(BREAK BEFORE MAKE)		NO	80		10-2	C-11	A			
			NO	48-1		63-2	D-5	B			
			NC	34		71-2	D-10	C			
GRN BUTTON Sw.'s											
	(BREAK BEFORE MAKE)		NC	74-6		32-2	E-21	A			
			NO	85-1		13-2	C-20	B			
			NO	50-2		63-2	D-5	C			
BLUE BUTTON Sw.'s											
	(BREAK BEFORE MAKE)		NC	74-6		62-1	E-20	A			
			NO	82-2		57-10	C-20	B			
			NO	50-2		63-2	D-6	C			
RED BUTTON Sw.'s											
	(BREAK BEFORE MAKE)		NO	80		71-2	E-10	A			
			NO	50-2		63-2	D-6	B			
			NC	74-6		38-4	F-20	C			
RETURN "R" (RIGHT)											
BUTTON Sw.'s			T	32	83	12 <sup>J</sup>	C-9				
						↑ NC ↑					
RETURN "L" (LEFT)											
BUTTON Sw.'s			NO	53-2		12 <sup>J</sup>	C-9				
		(21)									21

21

22  
OF  
26

GALAXY #1143 NAME PANEL SW.'S & LITES	STEP-UP COIL	RESET COIL (22)	TYPE OF SWITCH	TOP LEAF WIRE COLOR	CENTER LEAF WIRE COLOR	BOTTOM LEAF WIRE COLOR	DIAG. LOCATION	STACK LOCATION	OPERATE AT TOP	OPERATE AT ZERO	S.U. ARM
FEATURE LITES WITH 40 WIRE COM. (J-25 THRU J-28)											
1ST	36-6	2ND	84-6	3RD	68-6	"L" RETURN	25-12				
EXTRA	51-6	EXTRA	57-5	EXTRA	85-6	"R" RETURN	12-9				
BALL	65-6	BALL	14-8	BALL	13-8						
PANEL SW.'S WITH 30 WIRE COM.      CARD LITES AT HOMING POSITIONS WITH 10 WIRE COM.      FEATURE LITES											
#1 (G-32 THRU G-39)	48-7	A	(J&H 32 THRU 39)	85-3	SELECT NOW	(RETURN FEATURE)	38-5 & 41-10 (J-3)				
#2	56-8	G	(J&H 39)	38-1	SELECT NOW	(A-B-C)	85-7 & 41-10 (J-5)				
#3	67-7	M		61-1			(WITH 20 WIRE COM.)				
#4	78-7	DISC S		52-1	B/4		62-3 (J-5 THRU				
#5	62-7	DISC B		75-1	→		27-5 (J-10)				
#6	52-7	"A" H		27-1	B/5		83-4				
#7	31-7	N		63-1	→		31-5				
#8	60-7	L T		51-1	A/5		41-5				
#9	10-7	C		31-1	A		10-6				
#10	82-7	I		56-1	→		21-6				
#11	80-7	O		43-1	B		32-5				
#12	20-7	DISC U		53-1	→		47-5				
#13	47-7	DISC D		45-1	C		53-5				
#14	61-7	J		40-1	RETURN FEATURE		62-5				
#15	81-7	P		65-1	DIAG. FEATURE		48-5				
#16	43-7	V		54-1	FEATURE PLAYED		54-8				
#17	13-7	E		25-1	ALL		81-8				
#18	34-7	K		71-1	SCORES		64-5				
#19	32-7	DISC Q		13	FEATURES		67-5				
#20	72-7	DISC W		23-6	E.B.		43-11				
#21	57-7	DISC F		81-5	LITES						
#22	12-7	L		62-8	TILT		45-10 (G-28)				
#23	35-7	R		47-9	GEN. ILL.		81 (G-29)				
#24	75-7	X		64-8	METER ILL.		50-7 (G-30)				22

22

23  
OF  
26

#1143 GALAXY NAME	STEP-UP COIL	23 RESET COIL	TYPE OF SWITCH	TOP LEAF WIRE COLOR	CENTER LEAF WIRE COLOR	BOTTOM LEAF WIRE COLOR	DIAG. LOCATION	STACK LOCATION	OPERATE AT TOP	OPERATE AT ZERO	S.U. ARM
SCORE LITES WITH 40 WIRE COIL (J10 THRU J25)											
	(RED)	(YELLOW)	(GREEN)	(BLUE)							
#4	81-4	60-5	15-1	54-5							
#8	83-5	61-5	20-1	67-4							
#12	65-10	63-5	21-2	35-5							
#24	58	65-5	23-1	31-6							
#48	43-5	18-12	61-8	56-7							
#72	21-7	71-5	25-2	64-6							
#96	38-6	74-5	27-3	43-6							
#120	40-6	78-5	34-6	72-6							
#144	53-7	36-1	75-9	32-6							
#168	18-7	12-3	14	50-6							
#192	48-6	80-5	50-8	82-6							
(FUSES) (AC/DAMP)	117V	94-6 G	93-16	F-1							
	50V	21-5 G	70	B-3							
	17V	80-1 G	74-10	H-31							
	6V	51 G	18-8	H-30							
	6V	51 G	20	J-30							
	6V	51 G	81	H-30							
(TRANSFORMER)											
115V	(SECONDARY)		2 4 6 8 10	TIED			F3 THRU E-3 G-31				
			11 10 9 8 7 6 5 4 3 2 1								
	(PRIMARY)	TIED	1 3 5 7 9	TIED			F3 THRU E-3				
			94-16 - 95-16 - -								
			91-16								
220V	(PRIMARY)		1 3 5 7 9	TIED			F3 THRU E-3				
			94-16 - 95-16 - 91-16								
270V	(PRIMARY)		1 3 5 7 9	TIED			F3 THRU E-3				
			91-16 - 95-16 91-16 -								
		23									23

23
















<sup>1147</sup> GALAXY NAME REFERENCE	STEP-UP COIL	RESET COIL 	TYPE OF SWITCH	TOP LEAF WIRE COLOR	CENTER LEAF WIRE COLOR	BOTTOM LEAF WIRE COLOR	DIAG. LOCATION	STACK LOCATION
*AS-1046-	868a-							
	SCORE PROG.							
	WIPER ASSY.							
*AS-1046-	869a-							
	SCRAMBLE							
	WIPER ASSY.							
*AS-1110-	59N-							
	TIMER UNIT ASSY.							
*AS-1114-	40a-							
	SEARCH INDEX ASSY.							
*AS-1145-	59b-							
	BALL TROUGH ASSY.							
*AS-1148-	41N-							
	E.B. UNIT ASSY.							
AS-1170b								
	DRAG ARM ASSY.							
AS-1818-	4N-							
	REFLECTOR BRKT. ASSY.							
*AS-1237-	11a-							
	BONUS COUNTER ASSY.							
AS-1305-	66N-							
	FRONT MOLDING ASSY.							
AS-1315-	8a-							
	BALL GATE ASSY.							
*AS-1433-	22N-							
	SHUTTER ASSY.							
AS-2183-	10N-							
	GREEN BUTTON ASSY.							
AS-2183-	11N-							
	BLUE BUTTON ASSY.							
*AS-2409-	43b-							
	TRIP BANK ASSY.							
AS-2517-	7a-							
	SEARCH MAGNET ASSY.							
*AS-2530-	40b-							
	TRIP BANK SW. & BRKT. ASSY.							
*AS-2883-	4N-							
	CARD UNIT INSERT ASSY.							
*AS-2897-	4N-							
	CARD UNIT MOTOR. BASE PLT. ASSY.							
*AS-2930-	38a-							
	LIFTER START RELAY							
*AS-2935b-								
	SHIFTER MOTOR ASSY.							
*AS-2959N-								
	29 HOLE CARD UNIT ASSY.							
*E-300-	939a-							
	(3) RELAY BANK							
*E-300-	940a-							
	(5) RELAY BANK							
*E-300-	941a-							
	(4) RELAY BANK (BACK DOOR)							
*E-300-	942a-							
	SEARCH RELAY BANK							
*E-300-	943a-							
	(4) RELAY BANK (INSERT)							



GALAXY NAME	STEP-UP COIL	RESET COIL	TYPE OF SWITCH	TOP LEAF WIRE COLOR	CENTER LEAF WIRE COLOR	BOTTOM LEAF WIRE COLOR	DIAG. LOCATION	STACK LOCATION
REFERENCE		D						
*FO-497-5a								
- BELGIUM KIT INSTRUCTIONS								
*K-373-10N								
- BELGIUM KIT								
M-469-665b								
- TEMPERED GLASS LABEL								
M-469-742N								
- FORM (101-B) (AMUS. ONLY - NARROW)								
M-469-750N								
- FORM (100) (AMUS. ONLY - WIDE)								
M-469-751N								
- FORM (B1-101-I) (FREE PLAYS)								
M-469-752N								
- FORM (B1-101-II) (FREE PLAY INSTR.)								
M-469-957a								
- NOTICE LABEL								
*M-469-1051a								
- CARD WIRE REPLACEMENT LABELS								
*M-469-1052N								
- FORM (G-1) (HOW TO PLAY)								
*M-469-1053N								
- FORM (G-2) (SCORES)								
*M-469-1054b								
- LABEL LISTINGS								
*M-469-1056a								
- DIODE PLUG LABEL								
*SK-299-41b								
- PROBABILITY MAIN SHAFT INSTALLATI.								
*SK-299-42b								
- PROBABILITY BASE PLT. & SHAFT INST.								
*SK-299-93b								
- C.U. INSTALLATION								
*SK-418-5b								
- BELGIUM KIT INSTALLATION								
*SK-452-2b								
- CARD UNIT AUX. INSERT								
SK-416 a								
- TRIP BANK ADJ.								
SK-416-6b								
- SEARCH INDEX ADJ.								
SK-416-10b								
- REPLAY COUNTER ADJ.								
SK-416-15b								
- E.B. ADJ.								
SK-416-21b								
- TIMER ADJ.								
SK-416-32b								
- SEL. ADJ.								



