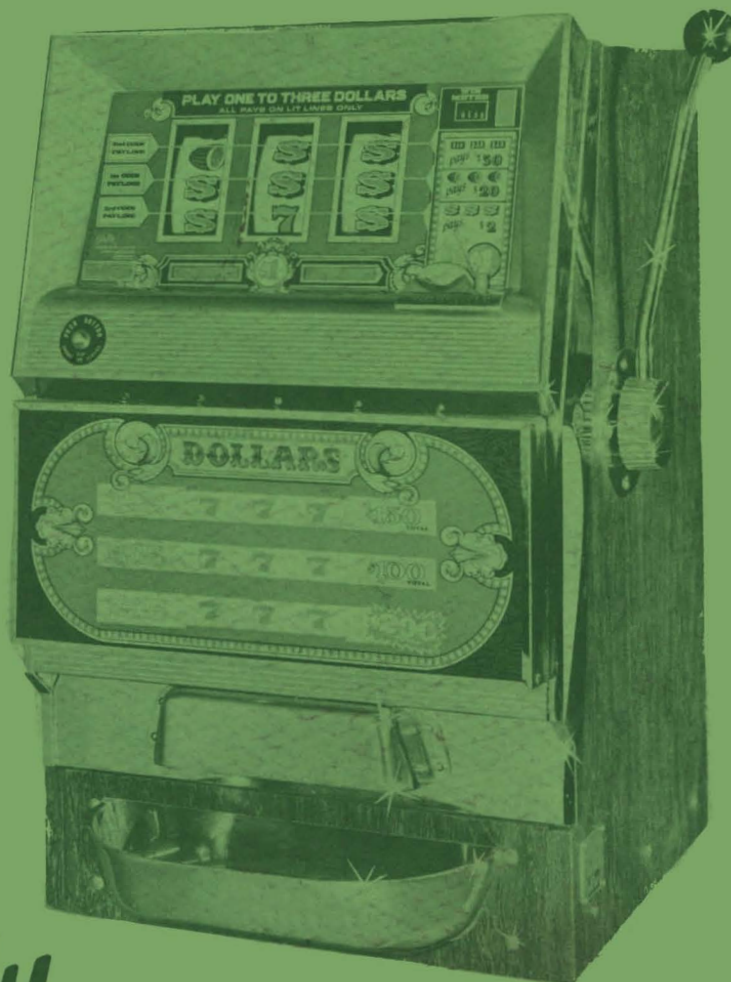


*Bally*<sup>®</sup>

# DOLLAR SLOT MACHINES

**SERVICE INSTRUCTIONS & PARTS CATALOG**

**Covering High Capacity Dollar Lowboy,  
3 Reel Intermediate & 3 Wide Reel Games**



*Bally*<sup>®</sup>

**MANUFACTURING CORPORATION**

**2640 Belmont Avenue · Chicago, Illinois, 60618, U.S.A.**

TELEPHONE (312) 267-6060/TELEX NO. 253076/CABLE ADDRESS: BALFAN

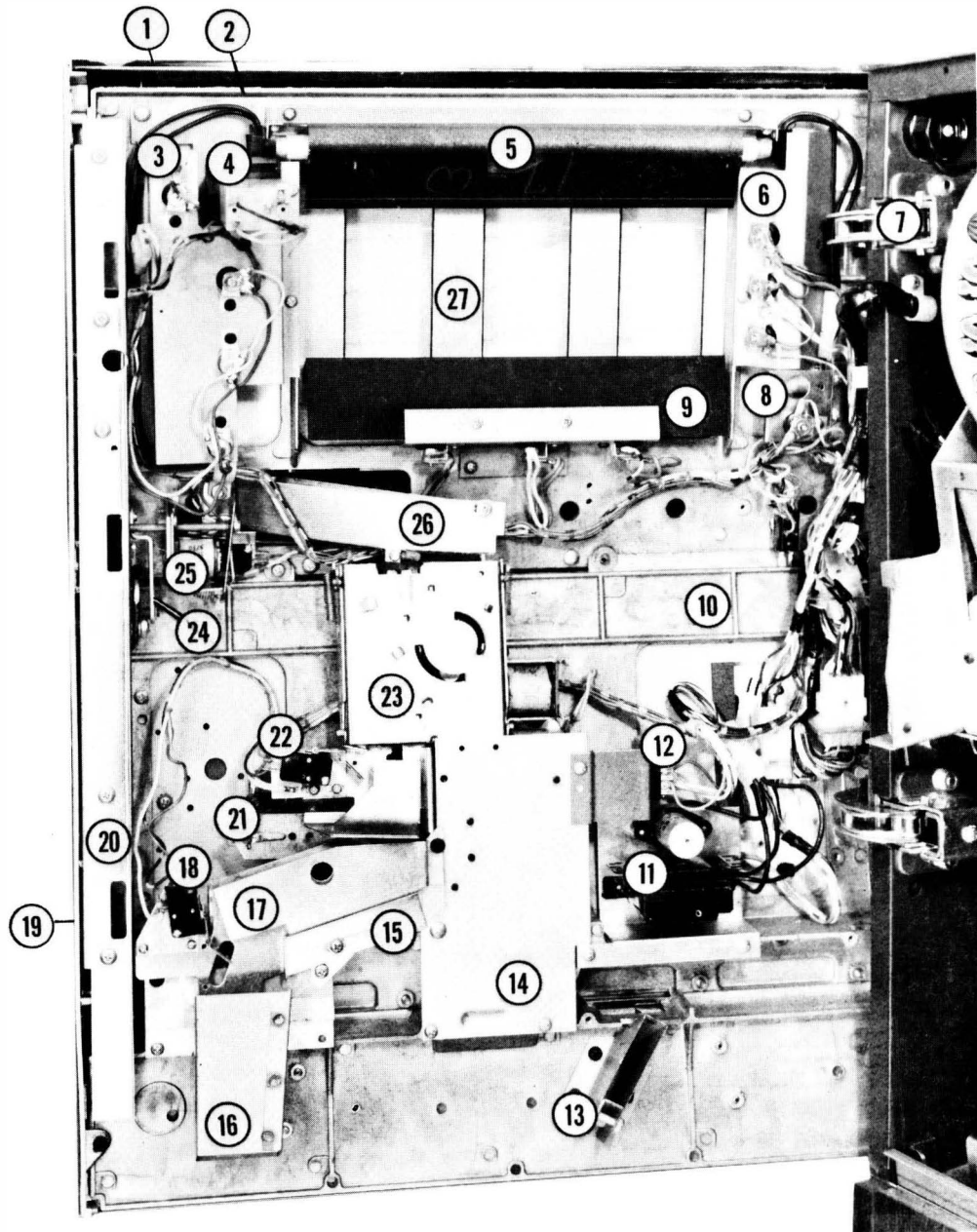
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In regards to parts references throughout this book, often parts numbers are qualified by referring to the particular machine by the number of (narrow) reels wide it is, such as a 3 reel, 4 reel or 5 reel machine. This in turn clarifies the part by machine width thus clarifying a particular part no. If a game is an intermediate 3 reeler (2 1/4" reel width) it is the same cabinet width as a 4 reeler (narrow reel game). If a game is a wide reel, 3 reeler, (3 1/4" reel width) it is the same cabinet width as a 5 reel (narrow reel game).

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# FRONT DOOR ASSEMBLY

4 REEL WIDE

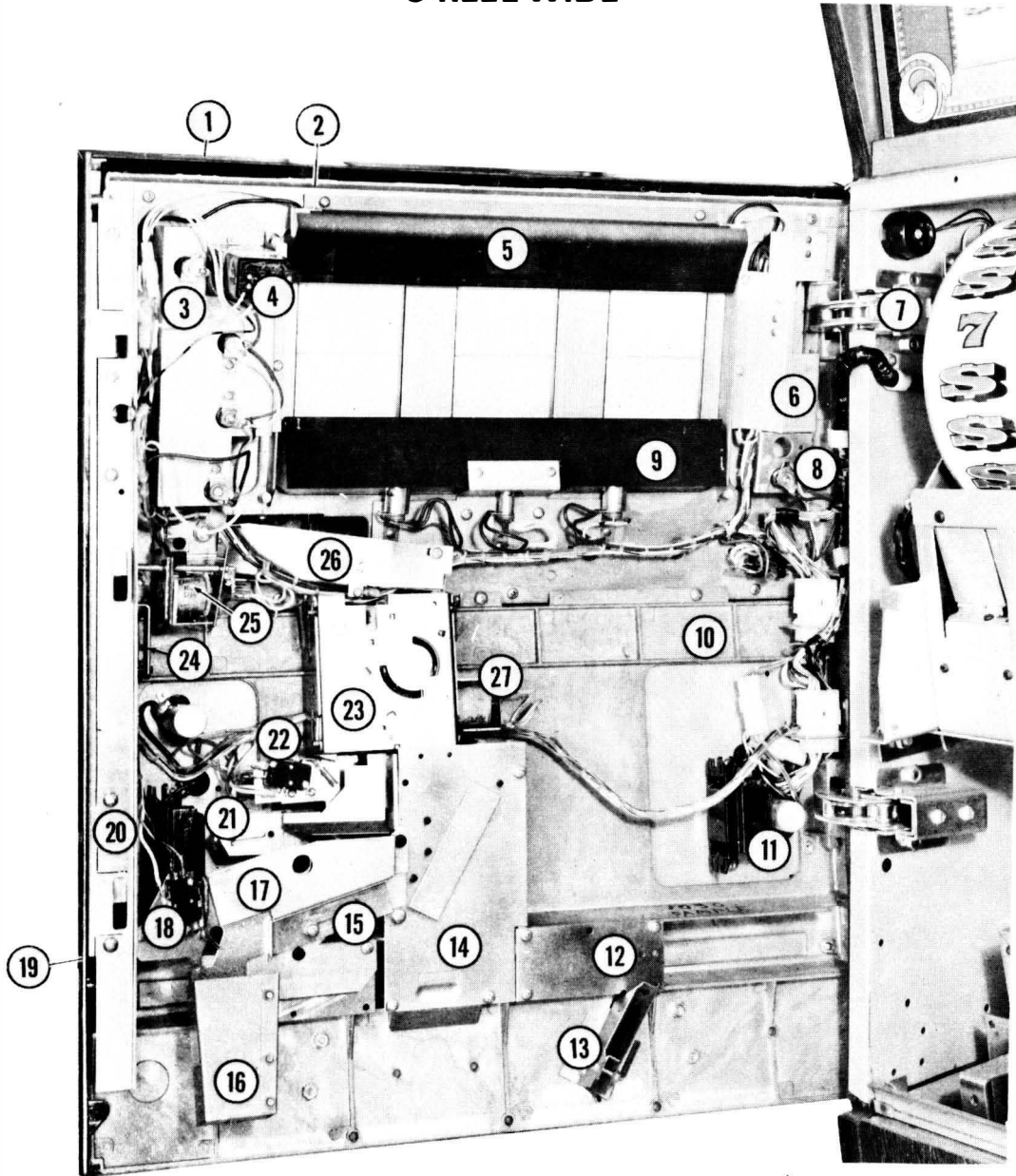


Index No.	Part No.	Description	No. Req.	Index No.	Part No.	Description	No. Req.
1	C-780-5	Window Frame . . . . .	1	15	P-6702-1	Coin Slide Guide . . . . .	1
2	C-1059-2	Upper Door Casting . . . . .	1	16	A-3018-73	Coin Slide Assy. . . . .	1
3	AS-2360-50	Light Shield Assy. . . . .	1	17	A-3039-2	Coin Ramp Plate Assy. . . . .	1
4	E-664-5	Impulse Ctr. & Plug Assy. . . . .	1	18	E-108-149	Micro Switch . . . . .	2
5	AS-2334-35	Florescent Light Brkt. Assembly. . . . .	1	19	C-657-2	Door Frame (Lock Sd.) . . . . .	1
6	AS-2360-29	Light Shield Assy. . . . .	1	20	P-7120	Door Shield . . . . .	1
7	A-2875-1	Hinge Assy. . . . .	2	21	AS-2517-11	Coin Deflector & Mag. . . . .	1
8	AS-2360-48	Light Shield Assy. . . . .	1	22	E-108-149	Micro Sw. . . . .	2
9	A-2937-35	Light Shield Assy. . . . .	1	23	A-3074	Slug Rejector Assy. . . . .	1
10	C-1054-5	Lower Door Casting . . . . .	1	24	A-2930	Lock Cam . . . . .	1
11	E-409-1	Ballest . . . . .	1	25	AS-2452	Electric Door Lock . . . . .	1
12	AS-2538-34	Plug in Relay Assy. . . . .	1	26	A-2957-8	Coin Slide Assy. . . . .	1
13	A-3018-74	Coin Exit Ramp . . . . .	1	27		Reel Glass (Specify, Coin, Name & Model Number. . . . .	1
14	AS-2872-1	Cover Plate Assy. . . . .	1				

NOTE: FOR A DETAILED PARTS LISTING SEE EXPLODED PARTS DRAWING ON FOLLOWING PAGES.

# FRONT DOOR ASSEMBLY

## 5 REEL WIDE

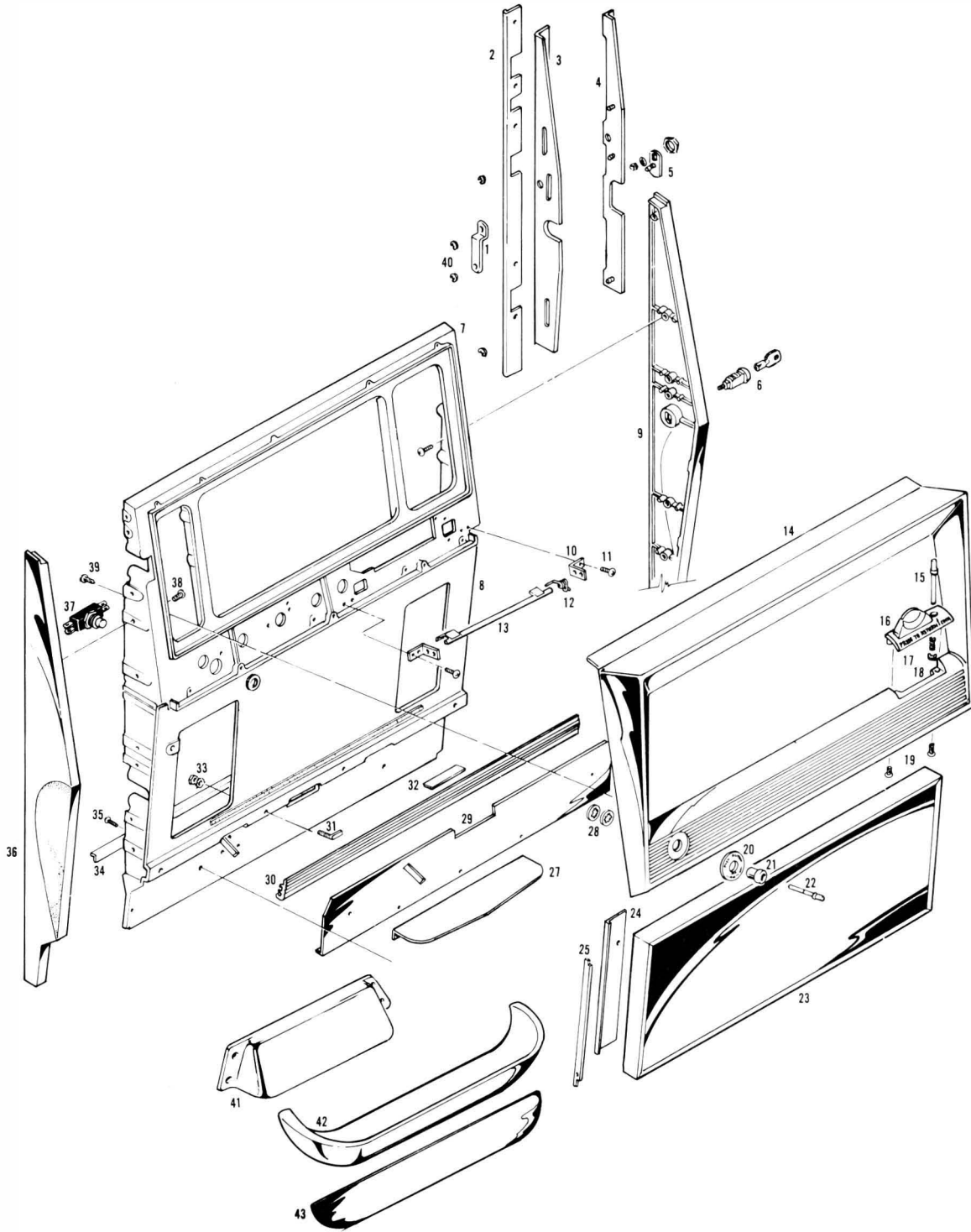


Index No.	Part No.	Description	No. Req.	Index No.	Part No.	Description	No. Req.
1	C-980-3	Window Frame . . . .	1	14	AS-2872-1	Cover Plate Assy. . . .	1
2	C-1159-2	Upper Door Casting . .	1	15	P-6702-1	Coin Slide Guide . . . .	1
3	AS-2360-50	Light Shield Assy. . . .	1	16	A-3018-73	Coin Slide Assy. . . . .	1
4	E-664-5	Impulse Ctr. & Plug Assy.	1	17	A-3039-2	Coin Ramp Plate Assy.	1
5	AS-2334-39	Flourescent Light Brkt. Assembly . . . . .	1	18	E-108-149	Micro Sw. . . . .	1
6	AS-2360-29	Light Shield Assy. . . .	1	19	C-657-2	Door Frame (Lock Sd.)	1
7	A-2875-1	Hinge Assy. . . . .	1	20	P-7120	Door Shield . . . . .	1
8	AS-2360-48	Light Shield Assy. . . .	1	21	AS-2517-11	Coin Deflector & Mag.	1
9	A-2937-34	Lt. Shield Assy. (20 Stop Mul. Coin) . .	1	22	E-108-149	Micro Sw. . . . .	1
10	C-1154-7	Lower Door Casting		23	A-3074	Slug Rejector Assy. . .	1
11	E-409-1	Ballast . . . . .	2	24	A-2930	Lock Cam . . . . .	1
12	A-2925-8	Light Mtg. Assy. . . . .	1	25	AS-2452	Electric Door Lock . . .	1
13	A-3018-74	Coin Exit Ramp . . . . .	1	26	A-2957-8	Coin Slide Assy.	
						Reel Glass (Specify, Coin Name and Model No. Coil	
				27	C-29-1700		

NOTE: FOR A DETAILED PARTS LISTING SEE EXPLODED PARTS DRAWING ON FOLLOWING PAGES.

# FRONT DOOR ASSEMBLY

## FRONT VIEW



NOTE:

THIS EXPLODED VIEW IS BEING USED WITH INDEX PARTS FOR BOTH \$1.00 MACHINES, THE 4 REEL WIDE DOOR AND THE 5 REEL WIDE DOOR.

**ALWAYS GIVE MODEL AND PART NO. WHEN ORDERING SERVICE PARTS**

# FRONT DOOR ASSEMBLY

## FRONT VIEW 4 REEL WIDE

Index No.	Part No.	Description	No. Req.
1	P-6427	Lock Crank . . . . .	1
2	P-7120	Lock Sd. Door Shield . . . . .	1
3	P-6428	Lock Slide Guide . . . . .	1
4	A-2938	Lock Slide Assy. . . . .	1
5	A-2930	Lock Cam Assy. . . . .	1
6	M-281-40	Lock & Hardware . . . . .	1
7	C-1059-2	"Dollar Door" Upper Casting . . . . .	1
8	C-1054-5	"Dollar Door" Lower Casting . . . . .	1
9	C-657-2	Door Frame (Lock Side) . . . . .	1
10	P-6426	Scavenger Bracket . . . . .	1
11	LSPR-832-1104	Screw . . . . .	1
12	SP-399-9	Torsion Spring . . . . .	1
13	A-2929	Scavenger Assy. . . . .	1
14	C-	Window Frame . . . . .	1
15	A-3085	Scavenger Button Assy. . . . .	1
16	C-674-17	Coin Drop Casting . . . . .	1
17	SP-200-38	Compression Spring . . . . .	1
18	P-448-1	Snap Ring (1/4" Shaft) . . . . .	1
19	LSPR-832-1108	Screw . . . . .	1
20	M-1376	Instruction Disc . . . . .	1
21	S-287-8	Button Housing . . . . .	1
22	A-3085-3	Push Button . . . . .	1
23	AS-2358-43	Display Case . . . . .	1
24	P-6665-304	Baffle (Anti-Wire Guard) . . . . .	1
25	P-6682	Shim .031 . . . . .	1
26	CA-1188-24	Wood Panel . . . . .	1
27	AS-2548-13	Wood Panel Assy. w/Cup . . . . .	1
28	P-3389-2	Retaining Ring . . . . .	1
29	P-6441-15	Trim Panel . . . . .	1
30	C-1160-Coin	Extruded Trim . . . . .	1
31	M-606-41	Weld Screw . . . . .	1
32	P-1925-164	Flat Plate . . . . .	1
33	N-01024-2112	Nut . . . . .	1
34	P-6665-94	Bottom Door Shield . . . . .	1
35	LSPR-00832-1108	Screw . . . . .	1
36	C-657-3	Door Frame (Hinge Sd.) . . . . .	1
37	E-108-97	Push Button Sw. . . . .	1
38	MSPB-00832-1108	Screw . . . . .	1
39	MSPT-00832-1112	Screw . . . . .	1
40	P-6416-4	Snap Ring . . . . .	1
41	C-933	Coin Cover . . . . .	1
42	C-655-4	Coin Cup (Dollar) . . . . .	1
43	P-6688-56	Trim Panel (Dollar) . . . . .	1

## FRONT VIEW 5 REEL WIDE

Index No.	Part No.	Description	No. Req.
1	P-6427	Lock Crank . . . . .	1
2	P-7120	Lock Sd. Door Shield . . . . .	1
3	P-6428	Lock Slide Guide . . . . .	1
4	A-2928	Lock Slide Assy. . . . .	1
5	A-2930	Lock Cam Assy. . . . .	1
6	M-281-40	Lock & Hardware . . . . .	1
7	C-1159-2	"Dollar Door" Upper Casting . . . . .	1
8	C-1154	"Dollar Door" Lower Casting . . . . .	1
9	C-657-2	Door Frame (Lock Side) . . . . .	1
10	P-6426	Scavenger Brkt. . . . .	1
11	LSPR-00832-1104	Screw . . . . .	4
12	SP-399-9	Torsion Spring . . . . .	1
13	A-2929	Scavenger Assy. . . . .	1
14	C-980-1	Window Frame . . . . .	1
15	A-3085	Scavenger Button Assy. . . . .	1
16	C-674-17	Coin Drop Casting . . . . .	1
17	SP-200-38	Compression Spring . . . . .	1
18	P-448-1	Snap Ring (1/4" Shaft) . . . . .	1
19	LSPR-00832-1108	Screw . . . . .	1
20	M-1376	Instruction Disc . . . . .	1
21	S-287-8	Button Housing . . . . .	1
22	A-3085-3	Push Button . . . . .	1
23	AS-2358-34	Display Case . . . . .	1
24	P-6665-304	Baffle (Anti-Wire Guard) . . . . .	1
25	CA-1188-21	Wood Panel . . . . .	1
26	AS-2548-10	Wood Panel Assy.w/Cup . . . . .	1
27	P-7209	Guard Plate . . . . .	1
28	P-3389-2	Retaining Ring . . . . .	2
29	P-6441-11	Trim Panel . . . . .	1
30	C-1160-Coin	Extruded Trim . . . . .	1
31	M-606-41	Weld Screw . . . . .	1
32	P-1925-164	Flat Plate . . . . .	1
33	N-01024-2112	Nut . . . . .	1
34	P-6665-272	Bottom Door Shield . . . . .	1
35	LSPR-00832-1108	Screw . . . . .	1
36	C-657-3	Door Frame (Hinge Sd.) . . . . .	1
37	E-108-97	Push Button Sw. . . . .	1
38	MSPB-00832-1108	Screw . . . . .	1
39	MSPT-00832-1112	Screw . . . . .	1
40	P-6416-4	Snap Ring . . . . .	1
41	C-933	Coin Cover . . . . .	1
42	C-655-4	Coin Cup (Dollar) . . . . .	1
43	P-6688-56	Trim Panel (Dollar Machine) . . . . .	1

NOTE:

THIS EXPLODED VIEW IS BEING USED WITH INDEX

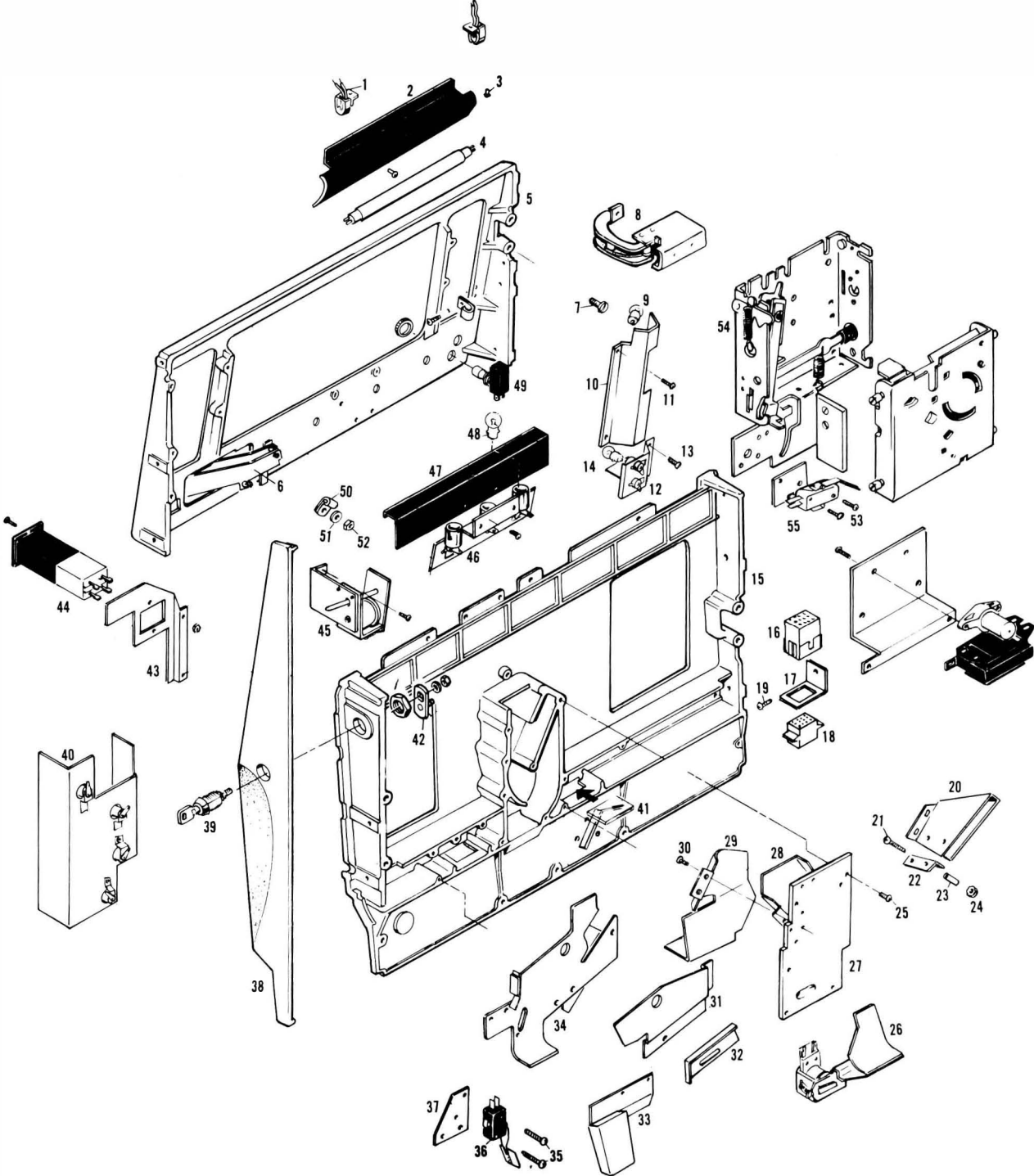
PARTS FOR BOTH \$1.00 MACHINES, THE 4 REEL

WIDE DOOR AND THE 5 REEL WIDE DOOR.

**ALWAYS GIVE MODEL AND PART NO. WHEN ORDERING SERVICE PARTS**

# FRONT DOOR ASSEMBLY

## REAR VIEW



NOTE:  
THIS EXPLODED VIEW IS BEING USED WITH INDEX  
PARTS FOR BOTH \$1.00 MACHINES, THE 4 REEL  
WIDE DOOR AND THE 5 REEL WIDE DOOR.

# FRONT DOOR ASSEMBLY

## REAR VIEW 4 REEL WIDE

Index No.	Part No.	Description	No. Req.
1	E-120-119	Socket . . . . .	2
2	P-7786-4	Reel Mask . . . . .	1
3	LSPR-632-1103	Screw . . . . .	
4	E-412-5	Flour. Tube . . . . .	1
5	C-1059-2	Top Door Casting . . . . .	1
6	A-2957-8	Coin Slide . . . . .	1
7	MSSB-25020-1108	Screw . . . . .	
8	A-2875-1	Hinge Assy. . . . .	2
9	E-125-6	Bulb #63 . . . . .	2
10	AS-2360-50	Light Shield & Socket Assy. . . . .	1
11	LSPR-832-1104	Screw . . . . .	
12	A-3096-3	Light Brkt. Assy. . . . .	1
13	LSPR-832-1104	Screw . . . . .	
14	E-125-5	Bulb #55 . . . . .	1
15	C-1054-5	Lower Door Casting . . . . .	1
16	E-660-1200	Male Molex . . . . .	2
17	P-1560-1	Bracket . . . . .	2
18	E-660-1200	Female Molex . . . . .	2
19	LSPR-832-1110	Screw . . . . .	
20	A-3018-74	Coin Exit Ramp . . . . .	1
21	LSPR-632-1112	Screw . . . . .	2
22	P-6665-512	Bracket . . . . .	1
23	M-1481-3	Spacer . . . . .	2
24	M-319-6	Nut . . . . .	2
25	LSPR-832-1105	Screw . . . . .	
26	AS-2517-11	Coin Diverter . . . . .	1
27	P-6429-10	Cover Plate . . . . .	1
28	P-569-98	Coin Chute . . . . .	1
29	P-6798-2	Coin Chute . . . . .	1
30	SFPP-832	Screw . . . . .	
31	P-6649-1	Coin Ramp Cover . . . . .	1
32	P-6702-1	Coin Guide Side . . . . .	1
33	A-3018-72	Coin Slide Assy. . . . .	1
34	A-3039-2	Coin Ramp Plate . . . . .	1
35	MSPR-440-1110	Screw . . . . .	
36	E-108-148	Coin Switch . . . . .	1
37	P-6805	Bracket . . . . .	1
38	C-657-2	Door Frame (Lock Side) . . . . .	1
39	M-281-40	Lock & Hardware . . . . .	1
40	AS-2360-50	Light Shield & Socket Assy. . . . .	1
41	G-348-Series	Glass Window . . . . .	1
42	A-2930	Lock Cam . . . . .	1
43	P-6442-159	Meter Brkt. . . . .	1
44	E-130-27	Meter . . . . .	1
45	AS-2452	Electric Door Lock . . . . .	1
46	AS-2360-63	Brkt. & Socket Assy. . . . .	1
47	A-2937-36	Light Baffle (22 SP) . . . . .	1
48	E-125-6	Bulb #63 . . . . .	2
49	E-188-97	Push Button Sw. . . . .	1
50	C-271-2	Cable Clip . . . . .	
51	PW-8-12	Washer . . . . .	
52	N-832-2112	Nut . . . . .	
53	MS-440-10-111	Screw . . . . .	
54	AS-277-163	Rejector Mount . . . . .	1
55	E-108-148	Switch . . . . .	1

## REAR VIEW 5 REEL WIDE

Index No.	Part No.	Description	No. Req.
11	E-120-119	Socket . . . . .	2
2	P-7786	Reel Mask . . . . .	1
3	LSPR-632-1103	Screw . . . . .	
4	E-112-5	Flour. Tube . . . . .	1
5	C-1159-2	Top Door Casting . . . . .	1
6	A-2957-8	Coin Slide . . . . .	1
7	MSSB-25020-1108	Screw . . . . .	
8	A-2875-1	Hinge Assy. . . . .	2
9	E-125-6	Bulb #63 . . . . .	2
10	AS-2360-50	Light Shield & Socket Assy. . . . .	1
11	LSPR-832-1104	Screw . . . . .	
12	A-3096-3	Light Brkt. Assy. . . . .	1
13	LSPR-832-1104	Screw . . . . .	
14	E-125-5	Bulb #55 . . . . .	1
15	C-1154-8	Lower Door Casting . . . . .	1
16	E-660-1200	Male Molex . . . . .	2
17	P-1560-1	Bracket . . . . .	2
18	E-660-1200	Female Molex . . . . .	2
19	LSPR-832-1110	Screw . . . . .	1
20	A-3018-74	Coin Exit Ramp . . . . .	1
21	LSPR-632-1112	Screw . . . . .	2
22	P-6665-512	Bracket . . . . .	1
23	M-1481-3	Spacer . . . . .	2
24	M-319-6	Nut . . . . .	2
25	LSPR-832-1105	Screw . . . . .	2
26	AS-2517-11	Coin Diverter . . . . .	1
27	P-6429-10	Cover Plate . . . . .	1
28	P-569-98	Coin Chute . . . . .	1
29	P-6798-2	Coin Chute . . . . .	1
30	SFPA-832-1104	Screw . . . . .	4
31	P-6649-1	Coin Ramp Cover . . . . .	1
32	P-6702-1	Coin Guide Side . . . . .	1
33	A-3018-72	Coin Slide Assy. . . . .	1
34	A-3039-2	Coin Ramp Plate . . . . .	
35	MSPR-440-1110	Screw . . . . .	2
36	E-108-148	Coin Switch . . . . .	1
37	P-6805	Bracket . . . . .	1
38	C-657-2	Door Frame (Lock Side) . . . . .	1
39	M-281-40	Lock & Hardware . . . . .	1
40	AS-2360-50	Light Shield & Socket Assy. . . . .	1
41	G-348	Glass Window . . . . .	1
42	A-2930	Lock Cam . . . . .	1
43	P-6442-159	Meter Bracket . . . . .	1
44	E-664-5	Meter . . . . .	1
45	AS-2452	Electric Door Lock . . . . .	1
46	A-2937-25	Brkt. & Socket Assy. . . . .	1
47	A-2937-34	Light Baffle (20 Sp.) . . . . .	1
48	E-125-6	Bulb #63 . . . . .	2
49	E-108-97	Push Button Switch . . . . .	1
50	C-271-2	Cable Clip . . . . .	
51	PW-8-12	Washer . . . . .	1
52	N-832-2112	Nut . . . . .	1
53	MS-440-10-111	Screw . . . . .	2
54	AS-277-163	Rejector Mount . . . . .	1
55	E-108-148	Switch . . . . .	

NOTE:

THIS EXPLODED VIEW IS BEING USED WITH INDEX

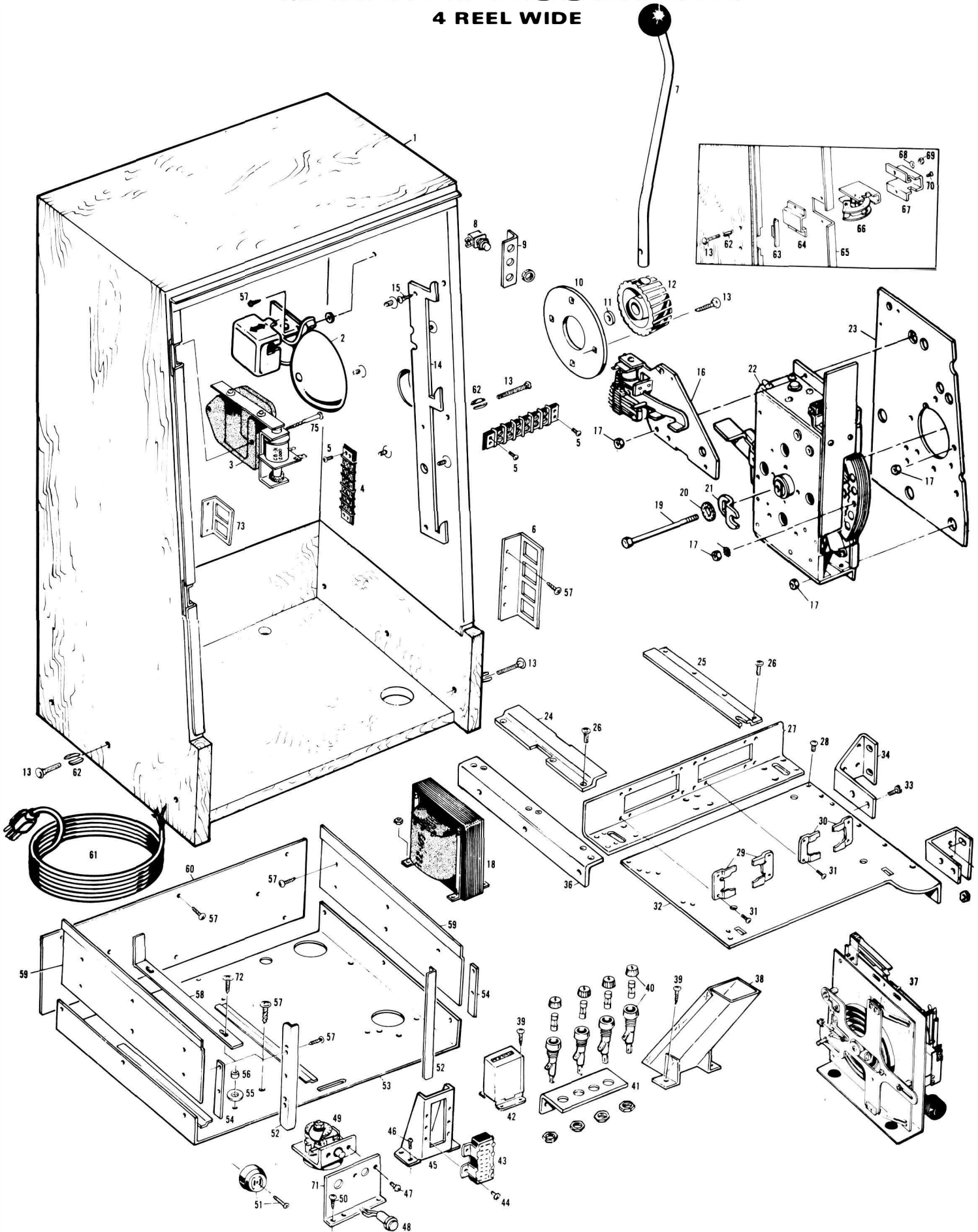
PARTS FOR BOTH \$1.00 MACHINES, THE 4 REEL

WIDE DOOR AND THE 5 REEL WIDE DOOR.



# CABINET ASSEMBLY

4 REEL WIDE



# CABINET ASSEMBLY

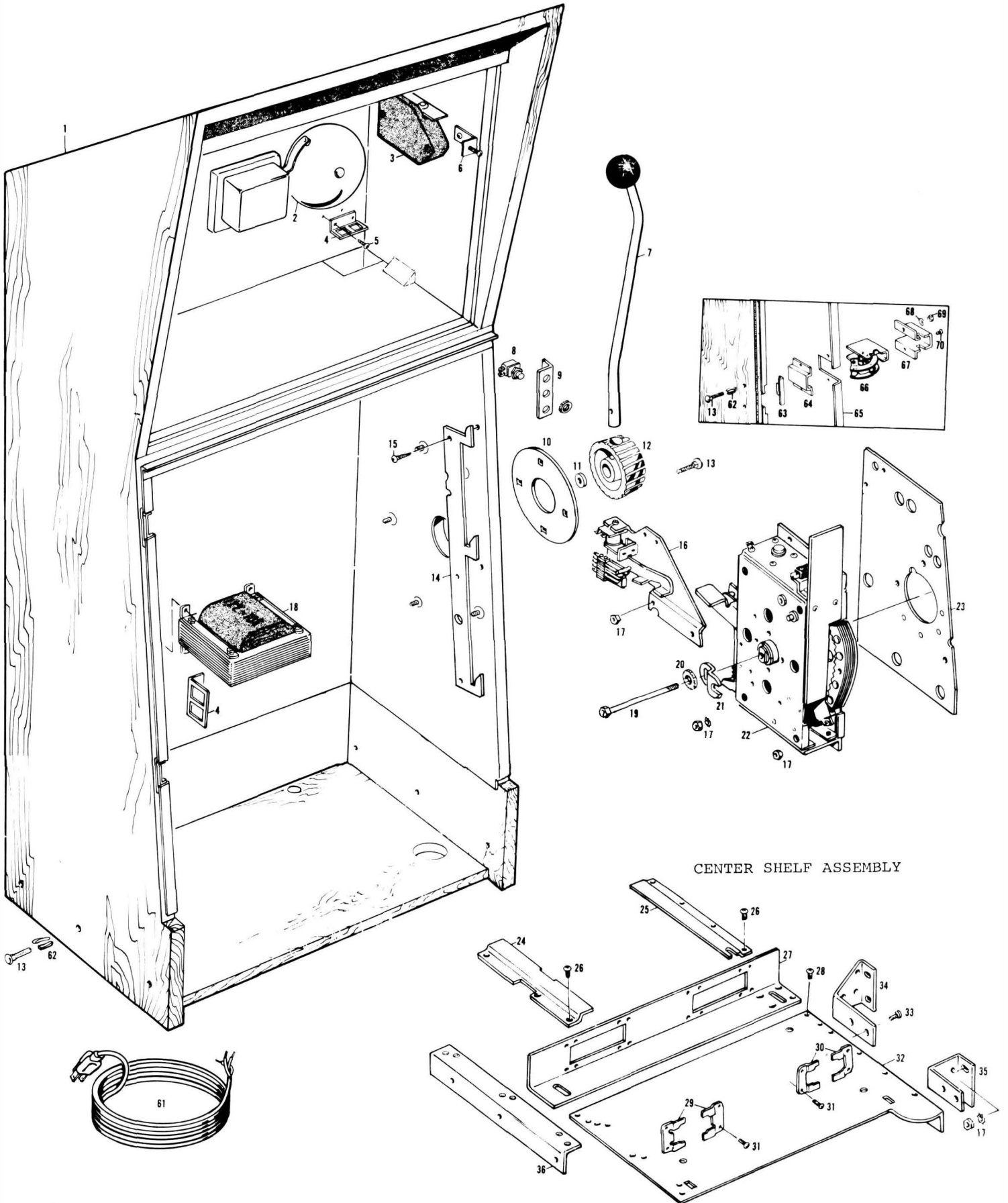
## 4 REEL WIDE

Index No.	Part No.	Description	No. Req.	Index No.	Part No.	Description	No. Req.
1	CA-1164-0401	Cabinet . . . . .	1	36	P-6665-345	Rail Assembly . . . . .	1
2	E-664-1	Bell Assembly . . . . .	1	37	AS-797-415	Payout Unit Assembly.	1
3	E-664-6	Chime Assembly . . . . .	1	38	A-3018-66	Coin Chute . . . . .	1
4	E-103-67	Terminal Strip . . . . .	2	39	WS-800-1108	Screw . . . . .	2
5	WSPR-800-1108	Screw . . . . .	4	40	E-148-13	Fuse Holder . . . . .	4
6	P-6417-3	Plug Bracket . . . . .	1	41	P-6500	Fuse Holder Brkt. . . . .	1
7	A-2303	Handle Assembly . . . . .	1	42	E-664-7	Counter . . . . .	1
8	E-108-106	Push Button Sw. . . . .	1	43	E-574-1	Beauplug . . . . .	1
9	P-6665-164	Switch Bracket . . . . .	1	44	LSPR-632-1103	Screw . . . . .	4
10	P-6280	Mtg. Disc . . . . .	1	45	P-6417-3	Socket Bracket . . . . .	1
11	P-1158-6	Washer . . . . .	1	46	SWPR-832-1105	Screw . . . . .	4
12	C-641	Hub . . . . .	1	47	LSPR-832-1104	Screw . . . . .	2
13	M-1348-1	Carriage Bolt . . . . .	As Req'd.	48	E-580	Indicator Lite . . . . .	1
14	P-6416-1	Bar Lock . . . . .	1	49	E-119-348	Timer Motor Unit . . . . .	1
15	WSPR-1000-1110	Screw . . . . .	3	50	WSPR-800-1108	Screw . . . . .	2
16	AS-435-Series	Handle Lockout Assy. (Specify Model) . . . . .	1	51	E-110-1	Convenience Outlet . . . . .	1
17	N-1024-2112	Nut . . . . .	2	52	P-6665-504	Panel Guide Brkt. . . . .	2
18	E-122-105	Transformer . . . . .	1	53	A-2974-21	Cabinet Bottom Plate . . . . .	1
19	M-1372	Bolt . . . . .	1	54	P-1973-383	Spacer . . . . .	2
20		5/16" Lockwasher . . . . .	1	55	P-801-107	Washer . . . . .	2
21	P-6288	Actvating Arm . . . . .	1	56	S-231-777	Bushing . . . . .	2
22	AS-2301-11	Handle Mech. Assy. . . . .	1	57	WSPR-800-1108	Screw . . . . .	As Req'd.
23	P-6281	Mounting Plate . . . . .	1	58	P-6665-273	Timer Reset Bar . . . . .	1
24	P-6406-74	Rail Guide . . . . .	1	59	P-6688-58	Side Plate . . . . .	2
25	P-6406-75	Rail Guide . . . . .	1	60	P-6688-60	Back Plate . . . . .	1
26	TFPP-1032-1806	Screw . . . . .	6	61	E-126-43	Cord Set . . . . .	1
27	P-6415-6	Plug Mounting Bracket	1	62	P-6641-3	Spacer Set . . . . .	As Req'd.
28	LSPR-1032-1106	Screw . . . . .	4	63	P-6455	Hinge Guard . . . . .	2
29	P-7444-2	18 Pt. Plug Mtg. Brkt.	2	64	P-6414-1	Hinge Protector Brkt.	2
30	P-7444-1	24 Pt. Plug Mtg. Brkt.	2	65	A-2919-17	Cabinet Liner . . . . .	1
31	LSPR-832-1104	Screw . . . . .	8	66	A-2875-1	Hinge Assembly . . . . .	2
32	P-511-1	Base Plate . . . . .	1	67	P-6295-1	Mtg. Plate Brkt. . . . .	2
33	SAPP-1032-1106	Screw . . . . .	4	68		1/4" Lockwasher . . . . .	4
34	P-6268-4	Rail Mtg. Bracket . . . . .	1	69	N-25020-2112	Nut . . . . .	4
35	P-6268-3	Rail Mtg. Bracket . . . . .	1	70	LSPR-1032-1104	Screw . . . . .	2
				71	P-6513-2	Timer Mounting Brkt.	1
				72	SAPT-800-1112	Screw . . . . .	2
				73	P-1560-2	Plug Mtg. Brkt. . . . .	1
				74	AS-2896-3	Stepping Unit Assy. . . . .	1
				75	WSPR-800-1132	Screw . . . . .	2

**ALWAYS GIVE MODEL AND PART NO. WHEN ORDERING SERVICE PARTS**

# CABINET ASSEMBLY

5 REEL WIDE

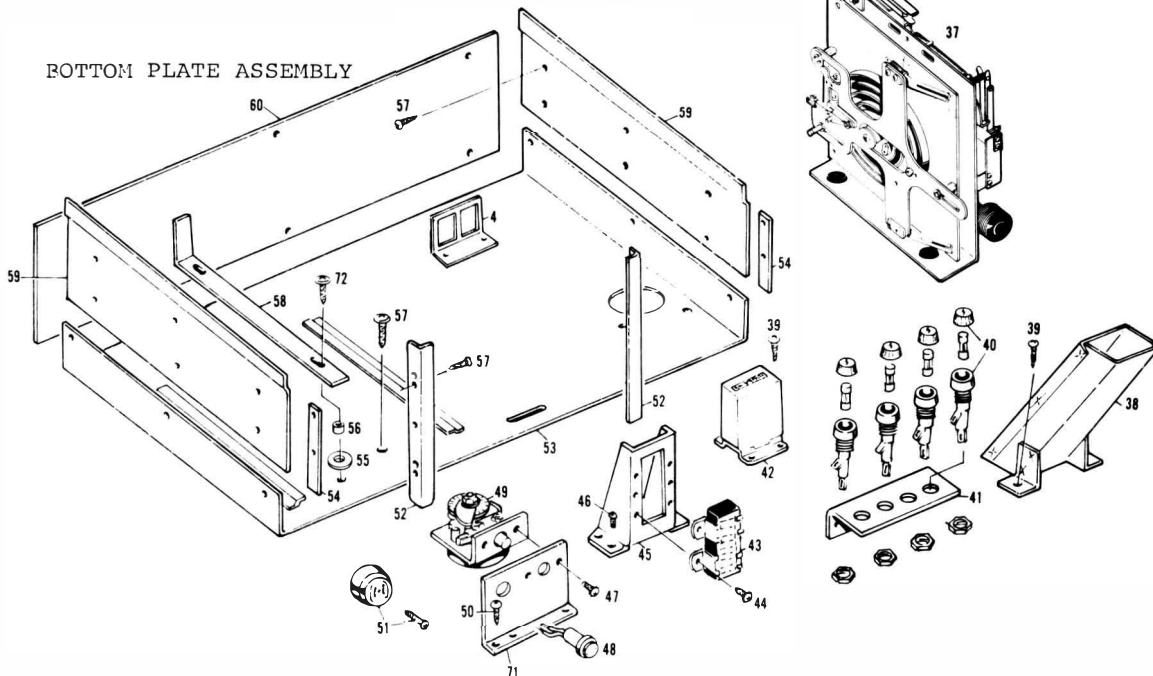


# CABINET ASSEMBLY

## 5 REEL WIDE

Index No.	Part No.	Description	No. Req.	Index No.	Part No.	Description	No. Req.
1	CA-1164-396	Cabinet . . . . .	1	38	A-3018-66	Coin Chute . . . . .	1
2	E-664-1	Bell Assembly . . . . .	1	39	WS-800-1108	Screw . . . . .	2
3	E-664-6	Chime Assembly . . . . .	1	40	E-148-13	Fuse Holder . . . . .	4
4	P-1560-2	Socket Brkt. . . . .	3	41	P-6500	Fuse Holder Brkt. . . . .	1
5	WSPR-800-1108	Screw . . . . .	2	42	E-664-7	Counter . . . . .	1
6	P-6665-160	Stop Brkt. (Insert) . . . . .	2	43	E-574-1	Beauplug . . . . .	1
7	A-2303	Handle Assembly . . . . .	1	44	LSPR-632-1103	Screw . . . . .	4
8	E-108-106	Push Button Sw. . . . .	1	45	P-6417-3	Socket Bracket . . . . .	1
9	P-6665-164	Switch Bracket . . . . .	1	46	SWPR-832-1105	Screw . . . . .	4
10	P-6280	Mounting Plate . . . . .	1	47	LSPR-832-1104	Screw . . . . .	2
11	P-1158-6	Washer . . . . .	1	48	E-580	Indicator Lite . . . . .	1
12	C-641	Hub . . . . .	1	49	E-119-348	Timer Motor Unit . . . . .	1
13	M-1348-1	Carriage Bolt . . . . .	As Req'd.	50	WSPR-800-1108	Screw . . . . .	2
14	P-6416-1	Bar Lock . . . . .	1	51	E-110-1	Convenience Outlet . . . . .	1
15	WSPR-1000-1110	Screw . . . . .	3	52	P-6665-504	Panel Guide Brkt. . . . .	2
16	AS-435-Series	Handle Lockout Assy. . . . . (Specify Model) . . . . .	1	53	A-2974-18	Cabinet Bottom Plate . . . . .	1
17	N-1024-2112	Nut . . . . .	2	54	P-1973-383	Spacer . . . . .	2
18	E-122-105	Transformer . . . . .	1	55	P-801-107	Washer . . . . .	2
19	M-1372	Bolt . . . . .	1	56	S-231-777	Bushing . . . . .	2
20		5/16" Lockwasher . . . . .	1	57	WSPR-800-1108	Screw . . . . .	As Req'd.
21	P-6288	Actuating Arm . . . . .	1	58	P-6665-273	Timer Reset Bar . . . . .	1
22	AS-2301-11	Handle Mech. Assembly . . . . .	1	59	P-6688-58	Side Plate . . . . .	2
23	P-6281	Mounting Plate . . . . .	1	60	P-6688-57	Back Plate . . . . .	1
24	P-6406-74	Rail Guide . . . . .	1	61	E-126-43	Cord Set . . . . .	1
25	P-6406-75	Rail Guide . . . . .	1	62	P-6641-3	Spacer Set . . . . .	As Req'd.
26	TFPP-1032-1806	Screw . . . . .	6	63	P-6455	Hinge Guard . . . . .	2
27	P-6415-8	Plug Mounting Bracket . . . . .	1	64	P-6414-1	Hinge Protector Brkt. . . . .	2
28	LSPR-1032-1106	Screw . . . . .	4	65	A-2919-15	Cabinet Liner . . . . .	1
29	P-7444-2	18 Pt. Plug Mtg. Brkt. . . . .	2	66	A-2875-1	Hinge Assembly . . . . .	2
30	P-7444-1	24 Pt. Plug Mtg. Brkt. . . . .	2	67	P-6295-1	Mtg. Plate Brkt. . . . .	2
31	LSPR-832-1104	Screw . . . . .	8	68		1/4" Lockwasher . . . . .	4
32	P-511-2	Base Plate . . . . .	1	69	N-25020-2112	Nut . . . . .	4
33	SAPP-1032-1106	Screw . . . . .	4	70	LSPR-1032-1104	Screw . . . . .	2
34	P-6268-4	Rail Mtg. Bracket . . . . .	1	71	P-6513-2	Timer Mounting Brkt. . . . .	1
35	P-6268-3	Rail Mtg. Bracket . . . . .	1	72	SAPT-800-1112	Screw . . . . .	2
36	P-6665-345	Rail Assembly . . . . .	1				
37	AS-797-398	Payout Unit Assembly . . . . .	1				

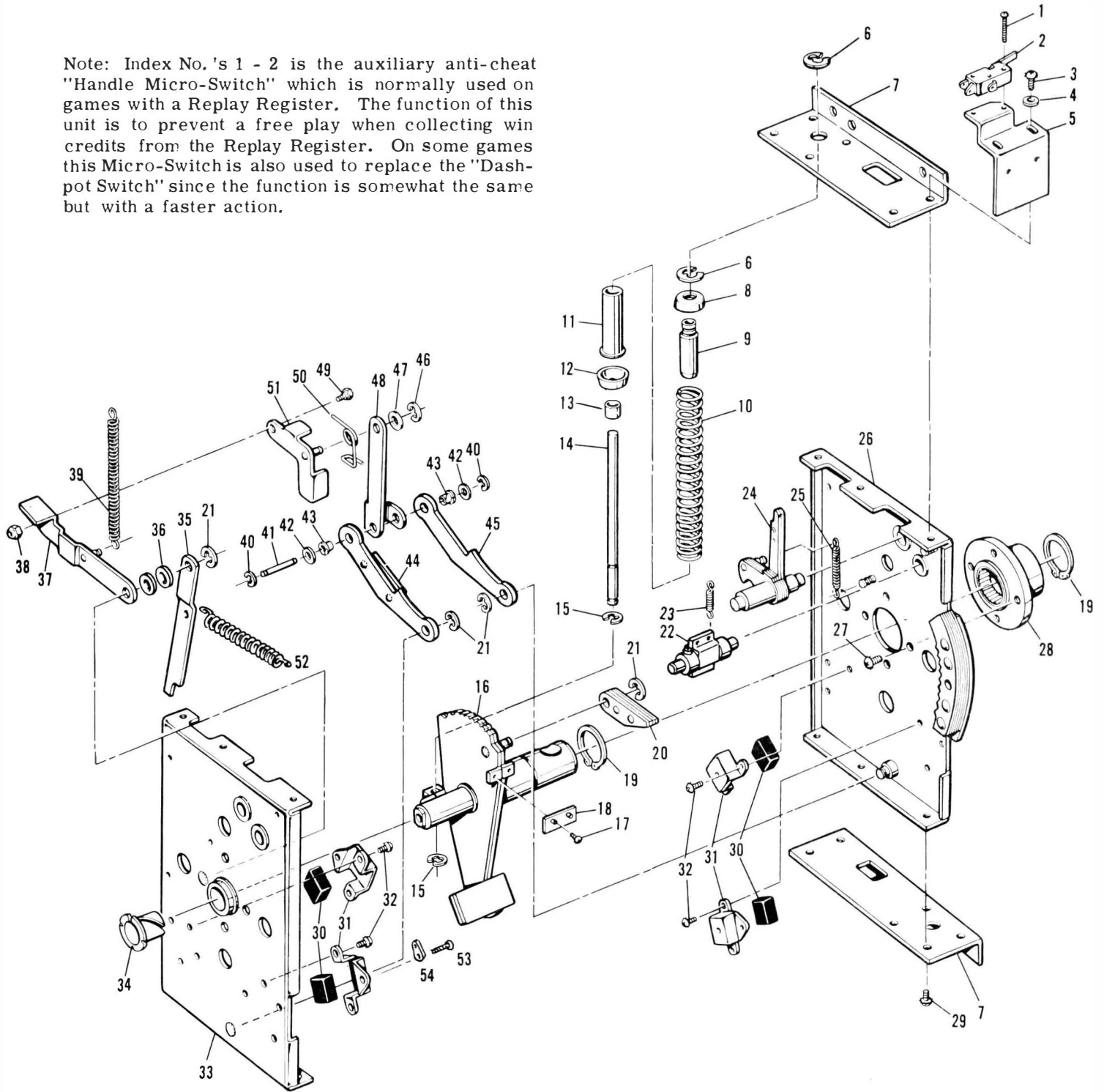
BOTTOM PLATE ASSEMBLY



# HANDLE MECHANISM ASSEMBLY

## USED ON MACHINES THRU MAY 77

Note: Index No.'s 1 - 2 is the auxiliary anti-cheat "Handle Micro-Switch" which is normally used on games with a Replay Register. The function of this unit is to prevent a free play when collecting win credits from the Replay Register. On some games this Micro-Switch is also used to replace the "Dash-pot Switch" since the function is somewhat the same but with a faster action.



ALWAYS GIVE MODEL AND PART NO. WHEN ORDERING SERVICE PARTS

# HANDLE MECHANISM ASSEMBLY

## USED ON MACHINES THRU MAY 77

Index No.	Part No.	Description	No. Req.	Index No.	Part No.	Description	No. Req.
1	MSPR-00440-1108	Screw . . . . .	2	26	A-3411	Front Plate Assy. . .	1
2	E-108-91	Micro-Switch . . . . .	1	27	LSPR-25020-1106	Screw . . . . .	4
3	LSPR-01032-1106	Screw . . . . .	2	28	A-2904	Handle Bearing Assy. .	1
4	PW-010-10	Washer . . . . .	2	29	LSPR-01032-1105	Screw . . . . .	10
5	P-7242-1	Mtg. Brkt. & Shield . . . . .	1	30	R-116	Rubber Bumper . . . . .	4
6	P-2891-8	"E" Ring (3/8" Shaft) . . . . .	2	31	P-474	Bumper Housing . . . . .	4
7	P-6279	Angle Mtg. Brkt. . . . .	2	32	LSPR-00832-1103	Screw . . . . .	12
8	P-2293-6	Cup Washer . . . . .	1	33	A-203-2	Bearing Stop Plate Assy.	1
9	S-475-11	Sleeve Shaft . . . . .	1	34	C-537-30	Nyliner . . . . .	1
10	SP-200-163	Compression Spring . . . . .	1	35	P-6535-1	Pawl (new) . . . . .	1
11	C-662	Sleeve . . . . .	1	36	P-800-2	Washer . . . . .	2
12	P-2293-7	Cup Washer . . . . .	1	37	A-3060	Actuating Link Assy. .	1
13	S-231-665	Spacer . . . . .	1	38	M-319-2	Elastic Stop Nut . . . . .	1
14	S-475-12	Shaft . . . . .	1	39	SP-100-1	Extension Spring . . . . .	1
15	P-2891-6	"E" Ring (1/4" Shaft) . . . . .	2	40	P-6316-4	"E" Ring (3/16" Shaft).	2
16	A-3410	Rack Lock Lever & Shaft Assembly . . . . .	1	41	S-739-192	Pin . . . . .	1
17	LSPR-00632-1103	Screw . . . . .	2	42	P-801-528	Washer . . . . .	2
18	P-1973-243	Plate (fast pull adjust.) . . . . .	1	43	C-537-24	Nyliner . . . . .	2
19	P-712-2	Retaining Ring(1" tru arc) . . . . .	2	44	A-2873-6	Lock Link Assy. (new)	1
20	A-3412	Latch Pawl Assy. (anti-fast pull unit) . . . . .	1	45	P-1972-15	Lock Link . . . . .	1
21	P-2891-7	"E" Ring (5/16" Shaft) . . . . .	4	46	P-2891-6	"E" Ring (1/4" Shaft) .	1
22	AS-2766	Full Stroke Pawl Assy. (new) . . . . .	1	47	P-800-10	Washer . . . . .	1
23	SP-100-12	Extension Spring (pawl) . . . . .	1	48	P-6737	Support Link . . . . .	1
24	A-181-1	Lock Pawl Assy. . . . .	1	49	S-1784-3	Hex. Stud . . . . .	1
25	SP-100-7	Extension Spring . . . . .	1	50	SP-399-21	Return Spring . . . . .	1
				51	A-3059	Pivot Link Assembly . .	1
				52	P-405-58	Lug . . . . .	1
				53	LSPR-832-1106	Screw . . . . .	1

### HANDLE MECHANISM SERVICE

It is the Handle Mechanism which initially receives the impact of a hard Handle pull. Because of the tough service requirements, this unit must be of the strongest construction. As a safety factor the Handle Mechanism is built to specifications ten times the necessary strength to protect the Reel Mechanism from the most aggressive player.

There have been several new developments designed to strengthen & protect the Handle Mech. First an anti-fast pull Speed Lock (Note Ratchet) was added in 1970. In mid-1973 the Full Stroke Pawl & Locking Links were redesigned & strengthened. If you check the Exploded View Parts List, you will notice that these improvements can be incorporated on older machines. It is also suggested that the new front, Anti-Wiring Shield be in place at all times.

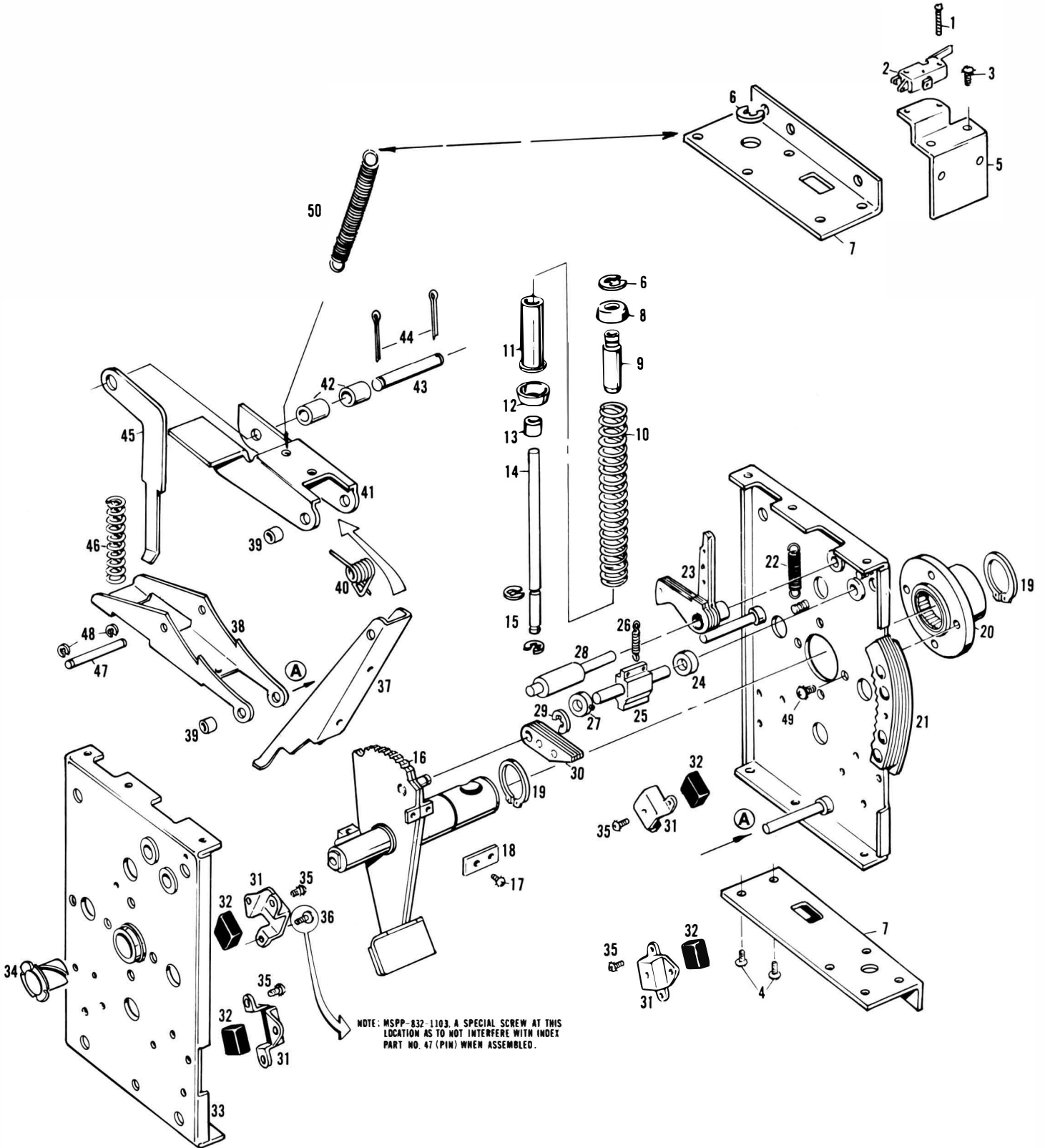
Because of the heavy duty use, the Handle Mech. should be lubricated periodically. Use our Lubriplate No. 1 Oil on the light duty pivot points & our Hydrotex Lube #651 on points of heavy stress & sliding parts.

Be sure the anti-fast pull, Speed Lock Pawl swings freely on its pivot, since it engages the Ratchet on a centrifugal force principle (do not lubricate).

NOTE: SEE OVERLEAF FOR NEW HANDLE MECH. IN PRODUCTION AS OF JUNE '77.

# HANDLE MECHANISM ASSEMBLY

NEW HANDLE MECH. IN PRODUCTION ,JUNE 77 MACHINES



ALWAYS GIVE MODEL AND PART NO. WHEN ORDERING SERVICE PARTS

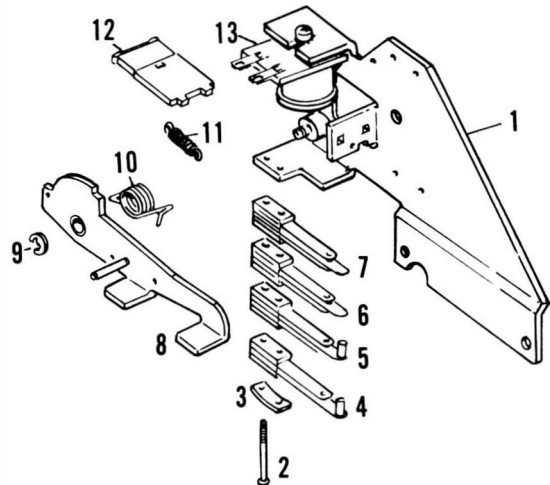
# HANDLE MECHANISM ASSEMBLY

## NEW HANDLE MECH. IN PRODUCTION ,JUNE 77 MACHINES

Index No.	Part No.	Description	No. Req.	Index No.	Part No.	Description	No. Req.
1	MSPR-440-1108	Screw . . . . .	2	26	SP-100-12	Spring . . . . .	1
2	E-108-91	Micro Switch . . . . .	1	27	S-143-30	Spacer (w/Allen Screw) . . . . .	1
3	TFPP-1032-1806	Screw . . . . .	10	28	S-423-201	Shaft . . . . .	1
4	RLPP-1032-1804	Screw . . . . .	2	29	P-2891-7	"E" Ring . . . . .	2
5	P-7242-1	Brkt. & Shield . . . . .	1	30	A-3412	Latch Pawl (Anti-Fast Pull Unit) . . . . .	1
6	P-2891-8	"E" Ring . . . . .	2	31	P-474	Bumper Housing . . . . .	4
7	P-6279	Angle Brkt. . . . .	2	32	R-116	Rubber Bumper . . . . .	4
8	P-2293-6	Cup Washer . . . . .	1	33	A-203-3	Bearing Stop Plate . . . . .	1
9	S-475-11	Sleeve Shaft . . . . .	1	34	C-537-30	Nyliner . . . . .	1
10	SP-200-163	Compression Spring . . . . .	1	35	LSPR-832-1103	Screw . . . . .	10
11	C-662	Sleeve . . . . .	1	36	MSPP-832-1103	Screw (See Note on Pw.) . . . . .	2
12	P-2293-7	Cup Washer . . . . .	1	37	P-6629-118	Lock Pawl . . . . .	1
13	S-231-665	Spacer . . . . .	1	38	P-6629-116	Lock Link . . . . .	1
14	S-475-12	Shaft . . . . .	1	39	S-231-818	Spacer . . . . .	3
15	P-2891-6	"E" Ring . . . . .	2	40	SP-399-40	Spring . . . . .	1
16	A-3410	Rack Lock Lever & Shaft . . . . .	1	41	P-6629-117	Actuating Lever . . . . .	1
17	LSPR-632-1104	Screw . . . . .	2	42	S-231-817	Spacer . . . . .	2
18	P-1973-243	Plate (Fast Pull Adjustment) . . . . .	1	43	S-739-219	Pin . . . . .	1
19	P-712-2	Retaining Ring . . . . .	2	44	M-1721-0	Cotter Pin . . . . .	2
20	A-2904	Handle Bearing Assy. . . . .	1	45	P-6717-31	Support Link . . . . .	1
21	A-3411-1	Front Plate . . . . .	1	46	SP-200-208	Spring . . . . .	1
22	SP-100-7	Spring . . . . .	1	47	S-739-218	Pin . . . . .	1
23	A-181-3	Lock Pawl Assy. . . . .	1	48	P-2891-5	"E" Rings . . . . .	2
24	S-231-790	Spacer . . . . .	1	49	LSPR-25020-1106	Screw . . . . .	4
25	S-2100	Ratchet Pawl . . . . .	1	50	SP-200-208	Spring . . . . .	1

### HANDLE LOCKOUT ASSEMBLY

Index No.	Part No.	Description	No. Req.
1	A-636-19	Relay Frame & Mtg. Assembly . . . . .	1
2	MSPR-540-1824	Screw . . . . .	2
3	P-126-154	Plate . . . . .	1
4	ASW-A1-48	Switch . . . . .	1
5	ASW-A3-10	Switch . . . . .	1
6	ASW-A2-13	Break Sw. . . . .	1
7	ASW-A1-10	Make Sw. Handle Release . . . . .	1
8	A-2867-4	Latch Arm Assy. . . . .	1
9	P-2891-5	"E" Ring . . . . .	1
10	SP-341	Return Spring . . . . .	1
11	SP-100-38	Extension Spring . . . . .	1
12	A-637-5	Armature . . . . .	1
13	F-31-2100	Handle Release Coil . . . . .	1



### OPERATION & SERVICE

On your Slot Machine Schematic the Handle Lockout Unit components are usually referred to as the "Handle Release Coil & Switches".

The Handle Lockout Unit is activated by a pulse from a Coin Relay Switch (via the Coin Drop's Coin Switch). At this time the energized Handle release Coil releases the Armature Latch Lever which drops in front of the Handle Mechanism's top Lock Pawl. With the Handle Mech. Lock Pawl thus en-

gaged the Handle can now be pulled. Also at this time the Released armature latch lever has operated the Handle Release Switches whose various functions are described in the previous Reel Mech. Function Section. As the Handle is pulled to initiate play the Handle Mechanism's Reset Shaft mechanically resets the Armature Latch Lever just prior to the Reels kick-off & spin. At this time the Handle Lockout & Switch Units are reset & ready for another play cycle.

The Lockout Unit needs very little service except for occasional switch cleaning and spring, coil and latch inspection.

**ALWAYS GIVE MODEL AND PART NO. WHEN ORDERING SERVICE PARTS**

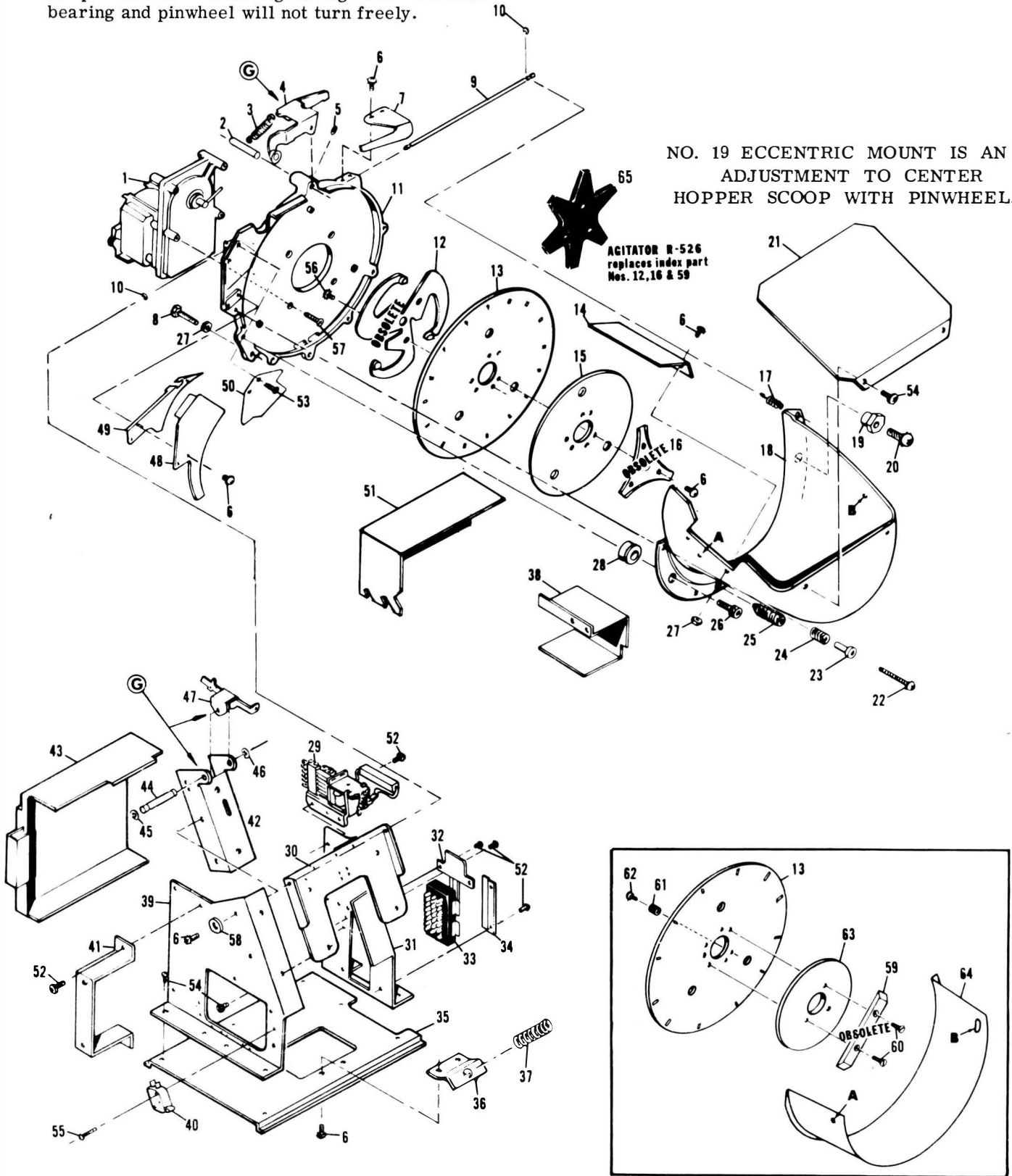


# HOPPER ASSEMBLY

## NICKEL QUARTER

Adjustments: No. 2 Rocker Pin. Draw Hex Set Screw No. 5 snugly so that all play is taken up in rocker pin no. 2. Over-tightening will overload bearing and pinwheel will not turn freely.

NO. 19 ECCENTRIC MOUNT IS AN ADJUSTMENT TO CENTER HOPPER SCOOP WITH PINWHEEL.



ALWAYS GIVE MODEL AND PART NO. WHEN ORDERING SERVICE PARTS

# HOPPER ASSEMBLY

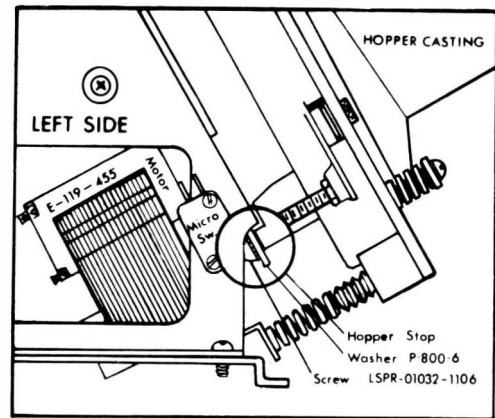
## NICKEL QUARTER

Parts Index No.s 12, 16 and 59 are obsolete, use new agitator R-526 for all coins using bushing and screw index parts 61 & 62 which drive the pinwheel with motor E-119-455.

Index No.	Part No.	Description	No. Req.	Index No.	Part No.	Description	No. Req.
1	E-119-455	Motor . . . . .	1	53	MSPF-00832-1106	Screw . . . . .	2
2	S-2020	Rocker Pin . . . . .	1	54	SFPP-01032-1106	Screw . . . . .	8
3	SP-100-310	Ext. Spring . . . . .	1	55	MSPR-00400-1110	Screw . . . . .	2
4	A-2893-5	Pivot Roller Assy. . . . .	1	56	MSP-01032-1104	Screw . . . . .	3
5	M-1715-1	Hex Set Screw . . . . .	17	57	MSPF-01032-1106	Screw . . . . .	4
6	LSPR-01032-1106	Screw . . . . .	17	58	P-801-353	Washer . . . . .	1
7	P-845	Wiper . . . . .	1	59	M-01708	Agitator (DOLLAR) . . . . .	1-obs.
8	CSOH-01032-1112	Screw . . . . .	1	60	MSPF-01032-1108	Screw . . . . .	2
9	S-2018	Pivot Rod . . . . .	1	61	S-231-269	Bushing . . . . .	1
10	P-2891-5	"E" Ring . . . . .	2	62	LSPR-01032-1108	Screw . . . . .	1
11	C-840	Wheel Housing . . . . .	1	63	P-847-4	Shelf Wheel (DOLLAR) . . . . .	1
12	A-3750	Cone Spider Assy. . . . .	1-obs.	64	P-834	Hopper Liner (DOLLAR) . . . . .	1
13	P-842 16 Pins	Pin Wheel . . . . .	1	65	R-526	Agitator (All Coins) . . . . .	1
	P-842-1 12 Pins	Pin Wheel . . . . .	1				
14	P-6717-16	Inlet Slide . . . . .	1				
15	P-847(Specify Coin)	Shelf Wheel . . . . .	1				
16	P-837	Agitator . . . . .	1-obs.				
17	SP-100-309	Spring . . . . .	1				
18	C-841	Hopper . . . . .	1				
19	S-2119	Eccentric Mount . . . . .	1				
20	LSPR-01032-1110	Screw . . . . .	1				
21	P-6657-2	Scoop Cover . . . . .	1				
22	LSPR-01032-1116	Screw . . . . .	3				
23	S-2109	Mount . . . . .	3				
24	SP-200-191	Spring . . . . .	3				
25	M-1590-1	Set Screw . . . . .	1				
26	CSAE-25028-1810	Hex Screw . . . . .	2				
27	N-01032-1112	Nut . . . . .	3				
28	M-1689	Ball Bearing . . . . .	3				
29	AS-2662	Payout Relay . . . . .	1				
		(Specify model no.) . . . . .	1				
30	P-843	Pivot Bracket . . . . .	1				
31	P-6312-11	Rt. Side Mtg. Brkt. . . . .	1				
32	P-7646	Plug Retaining Plate . . . . .	1				
33	E-573-1	24 Pt. Male Beauplug . . . . .	1				
	E-573-4	30 Pt. Male Beauplug . . . . .	1				
34	P-6375-1	Plug Retaining Brkt. . . . .	2				
35	P-6311	Platform Brkt. . . . .	1				
36	P-840	Spring Mount . . . . .	1				
37	SP-200-192	Spring . . . . .	1				
38	P-6329-1	Relay Cover . . . . .	1				
39	P-6312-14	Lft. Side Mtg. Brkt. . . . .	1				
40	E-108-148	Sw. (Level Detector) . . . . .	1				
41	P-6264-120	Handle . . . . .	1				
42	P-6307	Support Bracket . . . . .	1				
43	A-3178-1	Counter Cover . . . . .	1				
44	S-739-164	Pivot Pin . . . . .	1				
45	P-2891-6	"E" Ring (1/4" Shaft) . . . . .	1				
46	P-6317-10	Bowed "E" Ring . . . . .	1				
47	A-2893-4	Pivot Arm . . . . .	1				
48	P-838	Outlet Cover . . . . .	1				
49	P-846	Knife . . . . .	1				
50	P-839	Coin Deflector . . . . .	1				
51	A-3751	Rocker Cover . . . . .	1				
52	SFPP-00832-1106	Screw . . . . .	13				

### HOPPER COUNTER BALANCE ADJUSTMENT

Adjustment is made by first filling the Hopper with the desired level of coins. Then start the adjustment with the Micro Switch (No. 40) in the up position, adjust Set Screw (No. 25) screwed into a clockwise position. Now back off adjustment Set Screw counter clockwise very gradually until Micro Switch clicks into the down position. Now Hopper is set at the given desired capacity.

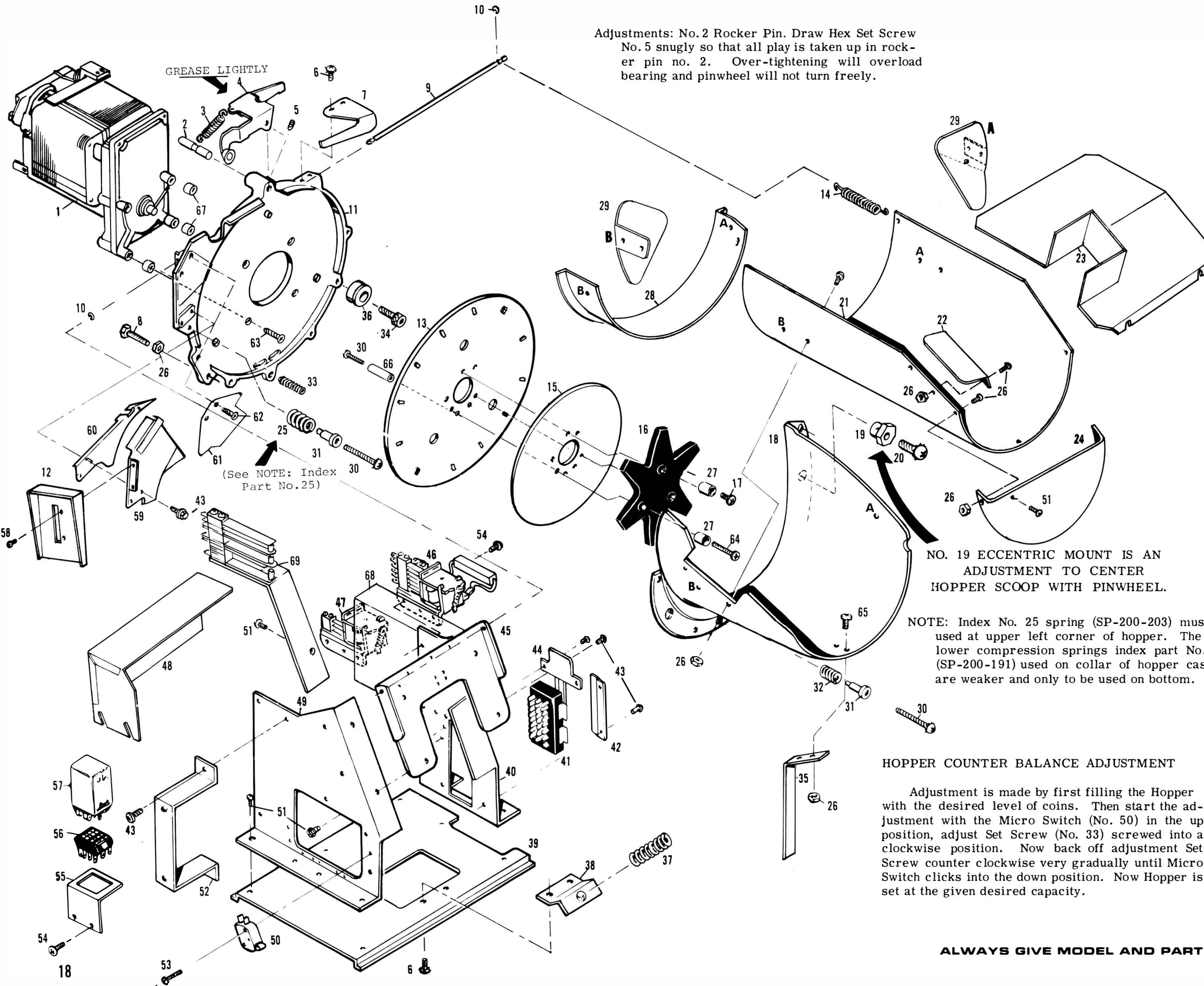


NOTE: The above side Illustrations shows the Hopper Stop, a Screw and Washer which screws into lower back of Wheel Housing Casting. (Not shown in Exploded View) 2-Washers P-800-6, 2 Screws-LSPR-01032-1106.

**ALWAYS GIVE MODEL AND PART NO. WHEN ORDERING SERVICE PARTS**

# DOLLAR HOPPER ASSEMBLY

Adjustments: No. 2 Rocker Pin. Draw Hex Set Screw No. 5 snugly so that all play is taken up in rocker pin no. 2. Over-tightening will overload bearing and pinwheel will not turn freely.



Index No.	Part No.	Description	No. Req.
1	E-119-472	Motor (\$1.00 Hopper)	1
2	S-2020	Rocker Pin	1
3	SP-100-326	Ext. Spring	1
4	A-2893-5	Pivot Roller Assy.	1
5	M-1715-1	Hex Set Screw(NYLOK)	1
6	LSPR-1032-1106	Screw	14
7	P-845	Wiper	1
8	CSOH-01032-1112	Bolt	1
9	S-2018	Pivot Rod	1
10	P-2891-5	"E" Ring	2
11	C-840	Wheel Housing	1
12	A-3838	Baffle Assy.	1
13	P-842-1	Pin Wheel (12 Pins)	1
14	SP-100-327	Extension Spring	1
15	P-847-6	Shelf Wheel (\$1.00)	1
16	R-526	Agitator (\$1.00)	1
17	MSPT-1032-1108	Screw	2
18	C-841-3	Hopper Casting	1
19	S-2119-1	Eccentric Mount	1
20	LSPR-01032-1110	Screw	1
21	P-2495	Scoop Extender (5 Reel Wide)	1
	P-2495-1	Scoop Extender (4 Reel Wide)	1
22	P-6717-16	Inlet Slide (5 reel wide)	1
	P-6717-35	Inlet Slide (4 reel wide)	1
23	A-2940-5	Scoop Cover Assy. (5 Reel Wide)	1
	A-2940-6	Scoop Cover Assy. (4 Reel Wide)	1

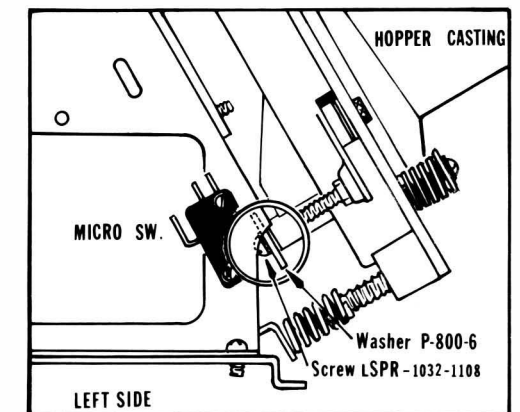
(PARTS LISTING CONTINUED OVERLEAF)

NO. 19 ECCENTRIC MOUNT IS AN ADJUSTMENT TO CENTER HOPPER SCOOP WITH PINWHEEL.

NOTE: Index No. 25 spring (SP-200-203) must be used at upper left corner of hopper. The two lower compression springs index part No. 32 (SP-200-191) used on collar of hopper casting are weaker and only to be used on bottom.

## HOPPER COUNTER BALANCE ADJUSTMENT

Adjustment is made by first filling the Hopper with the desired level of coins. Then start the adjustment with the Micro Switch (No. 50) in the up position, adjust Set Screw (No. 33) screwed into a clockwise position. Now back off adjustment Set Screw counter clockwise very gradually until Micro Switch clicks into the down position. Now Hopper is set at the given desired capacity.

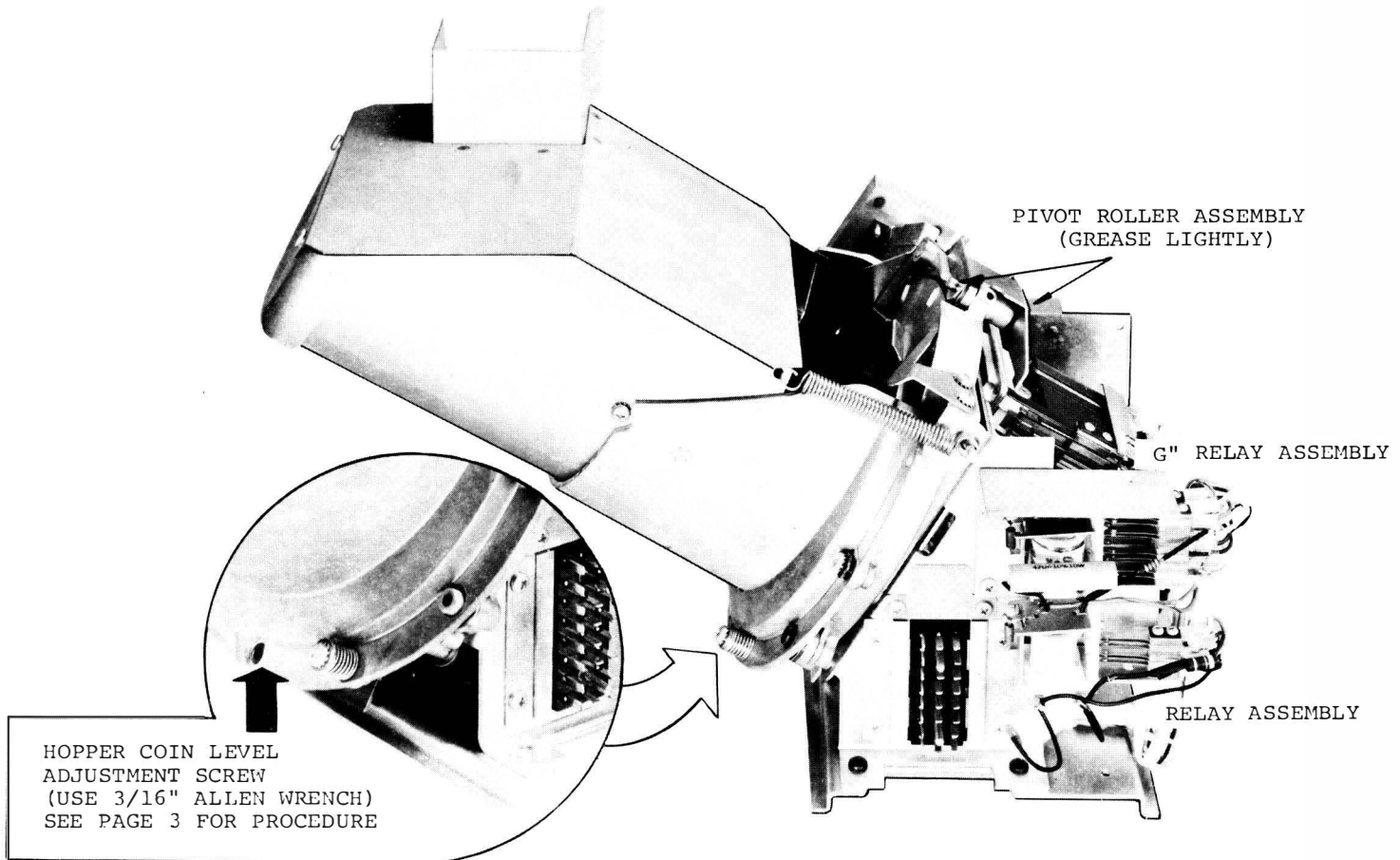


NOTE: The above side Illustration shows the Hopper Stop, a Screw and Washer which screws into lower back of Wheel Housing Casting. (Not shown in Exploded View) 2-Washers P-800-6, 2 Screws LSPR-01032-1106.

ALWAYS GIVE MODEL AND PART NO. WHEN ORDERING SERVICE PARTS

# DOLLAR HOPPER ASSEMBLY

Index No.	Part No.	Description	No. Req.	Index No.	Part No.	Description	No. Req.
24	C-841-4	End Cap . . . . .	1	48	A-3751	Rocker Cover Assy. . .	1
25	SP-200-203	Spring (upper left) . .	1	49	P-6312-14	Lft. Side Mounting Brkt.	1
26	N-01032-2112	Nut . . . . .	12	50	E-108-148	Switch (Level Detector)	1
27	S-231-825	Agitator Bushing . . .	3	51	TFPP-01032-1806	Screw . . . . .	10
28	P-834	Hopper Liner . . . . .	1	52	P-6264-120	Handle . . . . .	1
29	P-2540-1	Coin Baffle (w/bend) . .	2	53	MSPR-440-1110	Screw . . . . .	2
	P-2540	Coin Baffle (no bend)		54	TFPP-832-1106	Screw . . . . .	14
30	LSPR-01032-1116	Screw . . . . .	4	55	P-7558-040	Socket Mtg. Brkt. . .	1
31	S-2109-1	Mount . . . . .	3	56	E-596-1	Socket . . . . .	1
32	SP-200-191	Spring . . . . .	2	57	E-146-788	CR Relay . . . . .	1
33	M-1590-1	Set Screw . . . . .	1	58	SAPR-600-1104	Screw . . . . .	2
34	CSAE-25028-1810	Hex Screw . . . . .	2	59	A-3795-3	Outlet Cover Assy. . .	1
35	P-2452	Scoop Support Brk. . .	1	60	P-846	Knife . . . . .	1
36	M-1689	Ball Bearing . . . . .	3	61	P-839	Coin Deflector . . . .	1
37	SP-200-202	Spring . . . . .	1	62	MSPF-832-1106	Screw . . . . .	2
38	P-840	Spring Mount . . . . .	1	63	MSPF-1032-1112	Screw . . . . .	4
39	P-6311-8	Platform Brkt. . . . .	1	64	MSPT-1032-1120	Screw . . . . .	1
40	P-6312-11	Rt. Side Mounting Brkt.	1	65	MSPF-1032-1106	Screw . . . . .	2
41	E-573-1	24 Pt. Male Beauplug .	1	66	S-231-826	Drive Bushing . . . .	1
42	P-6375-1	Plug Retaining Brkt. . .	2	67	S-231-827	Spacer (Motor) . . . .	4
43	RLOC-1032-1810	Screw . . . . .	2	68	P-6665-426	Relay Brkt. . . . .	1
44	P-7646	Plug Retaining Plate . .	1	69	AS-982-1135	Sw. & Brkt. Assm. . .	1
45	P-843	Pivot Bracket . . . . .	1		P-126-742	Bracket . . . . .	1
46	AS-2662-340	"G" Relay Assy. . . . .	1		ASW-A10-13	Top Switch . . . . .	1
47	AS-2510	Relay Assembly . . . . .	1		ASW-A10-12	2nd Sw. . . . .	1
					ASW-C3-5	3rd Switch . . . . .	1



ALWAYS GIVE MODEL AND PART NO. WHEN ORDERING SERVICE PARTS

# HOPPER PAYOUT UNIT INTRODUCTION

The Hopper Payout Unit is the virtual brain of the Slot Machine controlling the vital banking functions. Some of these functions are the retention & storage of incoming coins (enough to cover repeated jackpot payouts), the flawless payout and accounting of all winners and the diversion of incoming coins to the Cashbox when there is sufficient reserve in the Hopper. In addition a variety of Re-

lays and Switches are mounted in the Unit according to the requirements of the game. Relays normally installed on the Hopper Payout Unit are the Payout Relay, Hopper Mixer Relay (operates Hopper Motor occasionally to level coins), the Delay Relay (Safety Timer System) & "Plum", "Cherry", & "Jackpot" Relays which assist complex win circuits in the Reel Contact Plate Discs.

## PAYOUT COUNTER UNIT

### PAYOUT SAFETY TIMER SYSTEM

The Safety Timer System is designed to protect the Hopper Payout Unit from overpayments, if a malfunction should occur, by shutting down the game. Two types of Timer Systems are used, a standard System & a Delay Relay System. The Standard System is used on the majority of Mechanically Stepped Counters. This Timer is set to cover the top machine payout (usually a 200 payout measured in seconds) then cut-off. The normal factory Timer Setting is 45 Seconds for Nickels & Dimes, and 50 Seconds for Quarters. The Timer is adjustable with a range of 112 seconds.

The Delay Relay Safety Timer System is used on both Mechanical and Electrically Stepped P.O. Counters.

Many times a malfunction situation is caught even before the payout is complete. This system uses a constantly repeating timer reset cycle of several seconds in duration during a payout with a factory Timer Setting of only 15 Seconds (adjustable). So the maximum over-run is less than 15 seconds and then only if the malfunction occurred at the end of a payout cycle. Check the included Schematic with the Delay Timer Circuit for further details.

### TIMER UNIT OPERATION

If the Hopper unit runs for a longer time than required to dispense largest payout (plus margin), the cam on the Timer Motor operates the safety sw. which opens the power supply to machine and lights the neon pilot lite indicating "trouble." After correcting the trouble, the machine can be put back in service by manually resetting the safety switch. The time cycle on the safety timer motor can be adjusted by loosening the lock nut holding the cam and setting the pointer to the number of seconds desired, as indicated on the dial under the cam. The time adjustment varies from 5 seconds to 112 seconds. When the desired time setting is made, lock the cam securely and check by cycling cam several times.

### ELECTRICALLY STEPPED COUNTER CIRCUIT FUNCTION

The payout circuit as shown illustrates a three oranges winner. You see the three Reel Mechanism Wipers completing a win circuit on the Reel Mech.'s Contact Plate Discs (Note: Or-Or-Or/Bar = 10) to the P.O. Counter Printed Circuit Disc 10 pay segment. The P.O. Counter Wiper picks up this "hot" circuit & energizes the P.O. Relay. The "hot" P.O. Relay Switches now complete circuits to the Hopper Motor, Over-Ride Solenoid, Safety Timer System and a hold-in circuit to the P.O. Relay. The Unit is now conditioned to dispense coins.

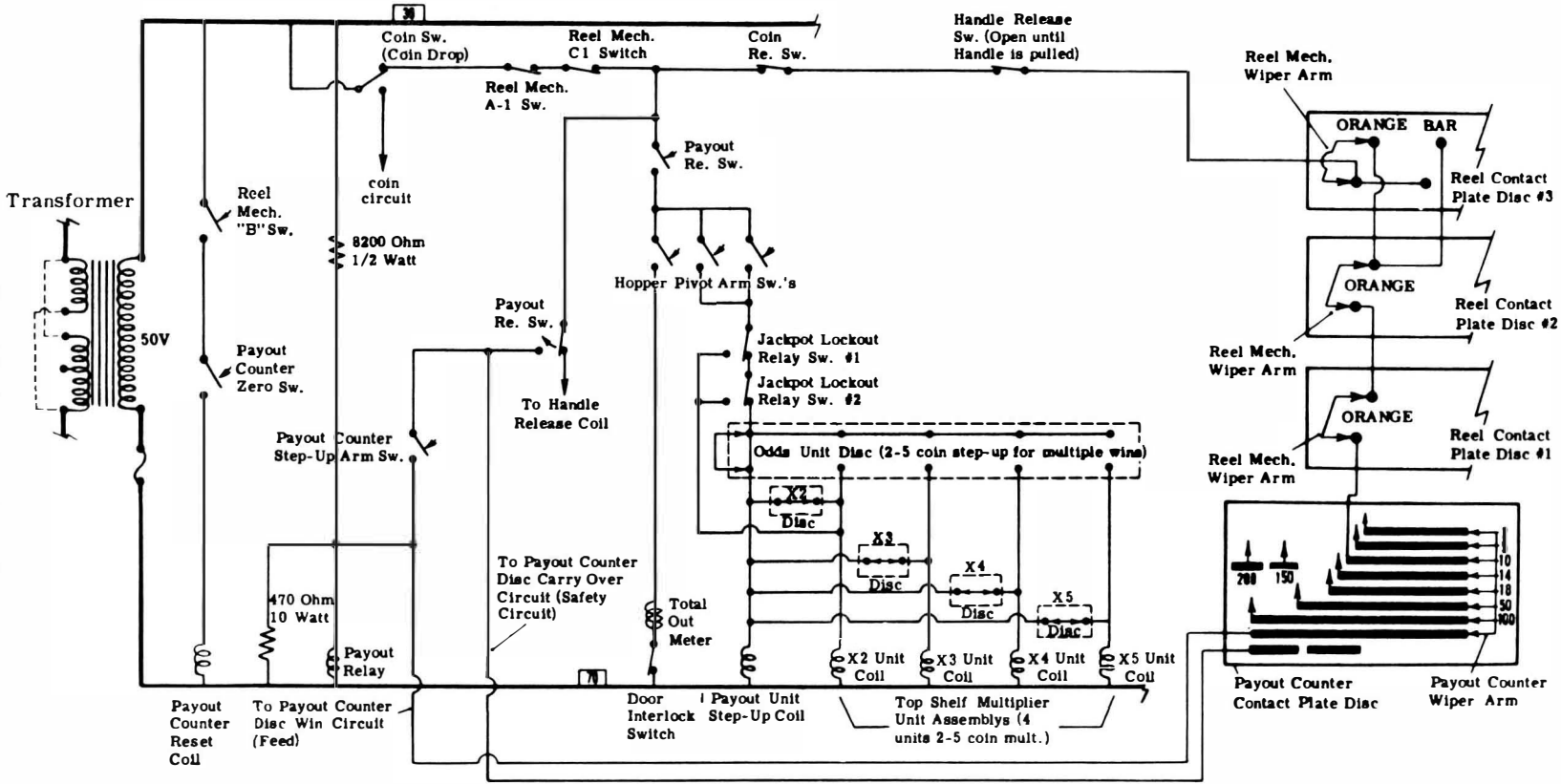
As the coins are being dispensed the action of the coins rolling out under the Pivot Arm pulses the three Pivot Arm Switches. This action in turn completes circuits to the Total-Out Meter & the Payout Unit Step-Up Coil (via the Odds Disc & Multiplier Units). When more than one coin is played (2-5) the Odds Unit advances completing a circuit to one of the Multiplier Units. On a winner the specific Multiplier Unit pulses the Payout Unit Step-Up Coil on a proportional basis. As an example, if 3 coins were played the P.O. Counter advances once for 3 coins dispensed. This action provides the multiplication factor in payout amounts.

When the P.O. Counter advances to a point where it steps off the "hot" 10 pay segment on the P.O. Counter Disc, the payout is complete & the entire circuit is de-energized (P.O. Relay cuts off all circuits & the Over-Ride Solenoid cuts off coin flow). The P.O. Counter is reset on the next pull of handle as the Reel Mech "B" Switch (just as reels kick off) the Reset Coil (via closed Carriage Zero Switch). The Reset Circuit now opens itself & the payout cycle is complete.

**ALWAYS GIVE MODEL AND PART NO. WHEN ORDERING SERVICE PARTS**

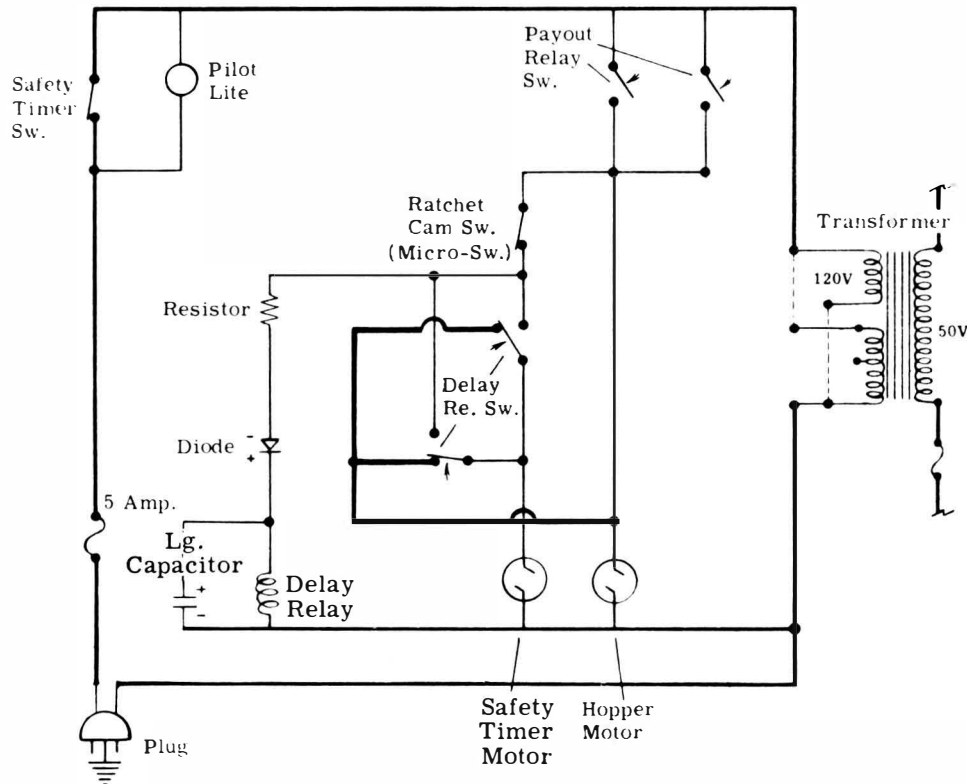
# HOPPER PAYOUT UNIT FUNCTION

## ELECTRICALLY STEPPED COUNTER CIRCUIT FUNCTION



# HOPPER PAYOUT UNIT FUNCTION

## DELAY RELAY SAFETY TIMER SYSTEM CIRCUIT FUNCTION



The Delay Relay Timer has the advantage of a very quick coin cut-off if a payout malfunction or over-run situation occurs. This system uses a cam operated Micro Switch Unit installed on the P. O. Counter Ratchet Gear causing the circuit to the Safety Timer to open every few seconds during a payout. This action causes the Timer to constantly reset itself every few seconds (every 5th step) until the payout is complete. Because the timer cycle is only a few seconds in duration the Timer over-run is adjusted to only 15 seconds (factory set-adjustable). This means if a malfunction occurs causing an inability of the counter to step, this fault will be immediately caught (at anytime during payout) and the Timer will quickly run out (15 sec. maximum). In many cases this will cut off the game even before a payout is complete which is in contrast to the 45 - 50 second run of the Standard Timer System.

The Delay Relay itself protects the Timer System in two ways. When the P. O. Relay Switches energize the circuit, the Delay Relay Switches (2 for

insurance) complete a circuit from the Ratchet Cam Micro Switch to the Safety Timer. As the Counter steps-up, the Ratchet Cam Micro Switch opens every 5th step causing the Timer circuit to open & reset. The Delay Relay remains energized momentarily (Lg. Capacitor) to allow sufficient time for the timer to reset & at the same time momentarily preventing the second Safety Circuit (heavier line) from connecting into the circuit. If this Micro-Switch Circuit does not pulse (counter does not step) & the Micro Switch does not open, the 15 seconds on the Timer will run out & shut off the game.

If the Micro-Switch is stuck in an open position (Counter not stepping), circuit continuity to this Timer is maintained by a second safety circuit (heav. line). At this time the momentary charge held by the Delay Relay Capacitor will be gone, de-energizing the Delay Relay. Now circuit continuity to the timer will be maintained via the Hopper Motor Feed (heavier line). Again the Timer will be allowed to run out cutting off the game.

# HOPPER CUTOFF CIRCUIT

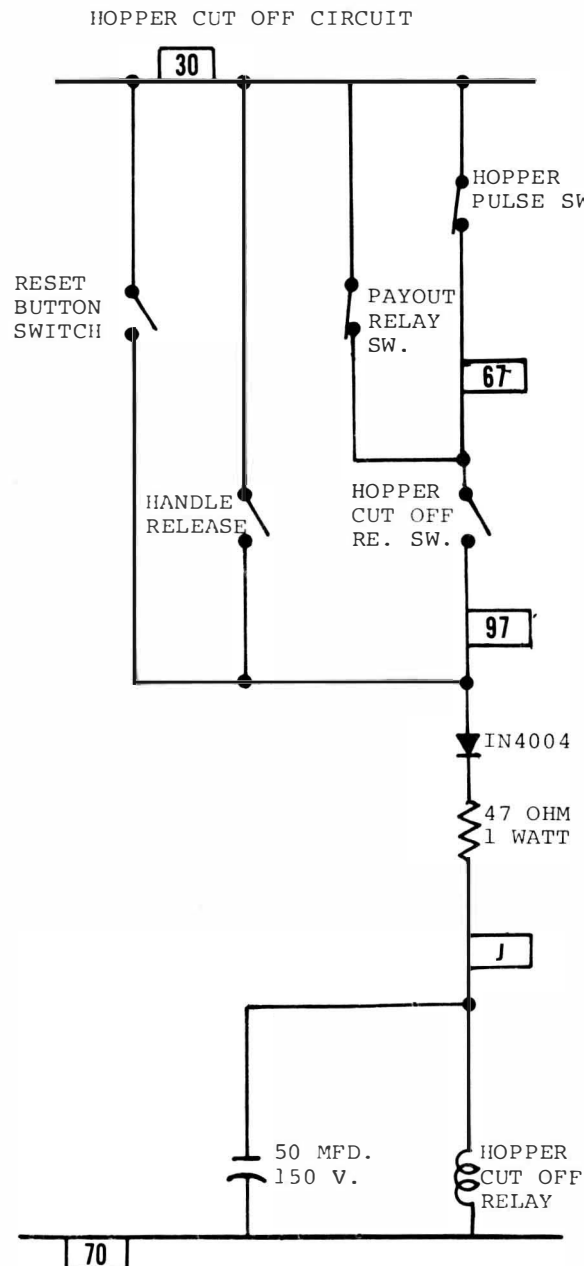
USED IN DOLLAR MACHINES AND HIGH CAPACITY HOPPER MACHINES

## HOPPER CUT OFF RELAY

The primary purpose of this circuit is to prevent cheating by means of a wire being inserted thru the coin outlet chute, holding up the hopper roller arm and preventing the payout counter from stepping during a payout.

The hopper cut off relay is pulled in when the handle release trips or by pushing the reset button. Once energized, the relay is held in thru its own make switch and the parallel combination of normally closed payout relay and hopper pulse switches.

for current to keep the hopper cut off relay held in is thru the hopper pulse switch, which opens for only a very short period of time as a coin passes under the roller. This is not long enough to discharge the capacitor to the point where the relay will drop out. The components in this circuit have been selected so as to provide a 300 milli-second time delay. This is approximately the amount of time it takes for 2 coins to pass under the roller. When the hopper cut off relay drops out, it disables the payout relay and lights the TILT light.



ALWAYS GIVE MODEL AND PART NO. WHEN ORDERING SERVICE PARTS



# HOPPER SERVICE

## HOPPER SERVICE INTRODUCTION

Hopper payout stepping units are either electrically or mechanically stepped. The dollar machines are electrically stepped with the payout counter unit mounted separately from the hopper. Machines of lesser denominations such as half dollars, quarters and nickels will have the payout counters mounted to the hopper. In machines where multiple coin step-up odds are featured, electrically stepped payout counters are used. Other machines such as single coin or multiple pay line machines use the mechanical step-up payout counters.

## HOPPER PAYOUT UNIT SERVICE

First a good cleaning of the unit is in order. An aerosol type de-greaser or contact cleaner can be used, however all parts must be wiped off with a clean cloth to remove any residue & dissolved scum, especially on electrical contacts & printed circuits.

For a complete service overhaul of the Hopper Payout Unit, remove the unit from the game & disassemble the various protective shields & scoop cover. Now follow the general point by point procedure.

Now check the Hopper Knife (case hardened). The forward edge should fit as close to the disc as possible with no binding. No coin should be able to wedge itself between the blade & the coin disc when being dispensed. The forward point of the knife should ride down as close as possible in the coin channel without binding. Absolutely no grease or oil should be applied to the area or any other area that comes in contact with coins.

## PAYOUT COUNTER ADJUSTMENTS

II. Now the Payout Counter can be adjusted. Remove the top mounting screw, detach the step-up arm spring link (where applic.) & swing the counter down in a service position. Be sure the following adjustments are made in the order presented.

### SPRING ADJUSTMENTS

A. First check out the springs for good tension & proper operation. The torsion spring should have enough strength to reset any step-up amount back to zero. This spring is installed with 2 turns on the shaft for proper initial tension (do not allow coils of spring to lap over). When the unit is in a reset position both pawls should be free of the gear teeth & the ratchet should be free to rotate (spring loaded). At this point check out the ratchet teeth for good condition. The ratchet teeth are lightly greased.

B. Now check out the pawls for binding against the frame & for bent or broken parts. The pawls should engage the ratchet gear at a 90° angle & pick up a tooth on the first step (see zero stop & step-up arm stop adjustments). Because the pawls are case hardened bending can easily crack off parts, extreme care in adjusting or replacement is recommended.

The pawl pivot points should be lubricated with our lubriplate #1 oil & the point where the step-up arm rides on the frame (reset pawl engage) should be greased.

### STEP-UP ARM STOP

C. The step-up arm has two stop adjustments. One stop (lower stop bracket) controls the amount of overtravel so that only one tooth is picked up at a time. The other stop (top tab) limits the return stroke so that the trailing reset arm picks up its tooth with MINIMUM OF BACKLASH.

A correctly adjusted step-up arm pawl has a 1/64" of 1/32" overtravel beyond the full down stroke. This overtravel is adjusted by moving the bracket up or down. If the overtravel is too much, the unit advances with an uneven or jerky motion (& poss. 2 steps at a time). If there is no overtravel the unit may not pickup teeth on high jackpot amounts (affected by torsion spring pressure).

NOTE: This stop is not installed on electrically stepped counters.

The return stroke stop (top tab) is adjusted so that there is approx. 1/64" overtravel between the reset pawl & the face of the ratchet tooth when it is engaged. This tab is usually formed down to achieve a proper stroke. If there is too much back stroke action, certain amount of backlash can occur & an extra payout step may result. This stop is used on both mechanical & electrically stepped counters.

### CONTACT PLATE DISC CLEANING

D. Before we adjust the step-up & zero switch action it is suggested that the contact plate disc spiral cam & wiper be thoroughly cleaned. Probably the biggest single cause of payout malfunctions is a dirty printed circuit on the contact plate disc. For proper access remove the carriage unit, cam & wiper unit. Now clean & wipe off this disc until it is spotless. A very small amount of lubrication is recommended however. Put a drop of fine oil on the tip of your finger & wipe around on the printed circuit & then wipe off with clean cloth - this will leave just enough lubrication to prevent excess wiper friction. Now clean & reassemble the wiper & carriage units. Check the wipers for good even contact plate pressure.

**ALWAYS GIVE MODEL AND PART NO. WHEN ORDERING SERVICE PARTS**

# HOPPER SERVICE

E. Now make adjustments to Printed Circuit Disc.

Proper position of disc is indicated by resetting the counter unit to zero and manually stepping the outside finger on the rotating wiper should be centered in the segment identified on the wiring tab at the bottom of the disc by the number 10. On the next step, this finger should move off and clear the segment. This position may be checked at the tabs marked 2-5-10-14 and 18. If the printed circuit disc is not properly positioned, the 2 hex head screws should be loosened slightly to allow the disc to be rotated to the proper position by tapping at a corner. When the proper position is reached the 2 hex head screws should be tightened securely.

F. Now we can adjust the carriage unit's zero stop.

This adjustable rubber cushioned stop unit performs several functions. First, it controls the position of the ratchet (& wiper) so that the pawls can engage the ratchet gear teeth correctly, picking up the first tooth & stepping-up the unit smoothly during a payout. Secondly, it stops & absorbs the reset action of the wiper & spiral cam after a payout cycle. Third, the stop controls the zero switches. The "open at zero switch" (71 & 48 wires) controls a payout counter reset coil circuit & a "closed at zero switch" (hold & draw machines only) de-energizes the draw relay preventing a second play after a win.

When the printed circuit disc is moved to its proper position relative to the finger wiper (paragraph E), the zero stop adjustment must be checked. This is done to coordinate the action of the step-up pawl & nylon ratchet drive on the reverse side of the Counter unit.

To check the setting of the zero stop, step the unit manually several steps. Now rotate the spiral cam manually until the unit has made 1 rotation of at least 360 degrees or 100 steps. Manually depress the plunger on the reset coil and allow the unit to reset to zero. This will latch both pawls out of the ratchet tooth & insure zero position.

The zero stop is adjusted so that when the counter makes its first step-up stroke from zero the reset pawl falls smoothly in front of a tooth face on the ratchet gear (engaged into the gear & not on a peak). the step-up pawl should then engage into the ratchet gear & make one step-up with the reset pawl trailing. To move the ratchet gear into this correct initial position for a smooth pawl engagement the zero stop is adjusted.

On machines produced before August 1973 the zero stop is a concentric rubber washer which has an adjustable cam effect which can move the zero position. On new post - August 1973 - zero stops, a set screw & lock nut controlled zero stop is adjusted.

## FEED CARRY-OVER CIRCUIT

G. Now adjust the Outboard Wipers. To check top wiper which carries the 100 step circuit, step unit to 100 steps position. The top finger of the wiper should be off of the contact segment and have enough clearance to that the circuit stays open when the carriage is moved manually to the extremities of the clearances. If adjustment is necessary, the 2 screws holding the wiper assembly should be loosened sufficiently to allow the wiper assembly to be moved to the proper position and when properly positioned, tightened securely.

To check the lower wiper which carries the 200 Steps circuit, repeat the procedure above when the unit is stepped to the 200 step position.

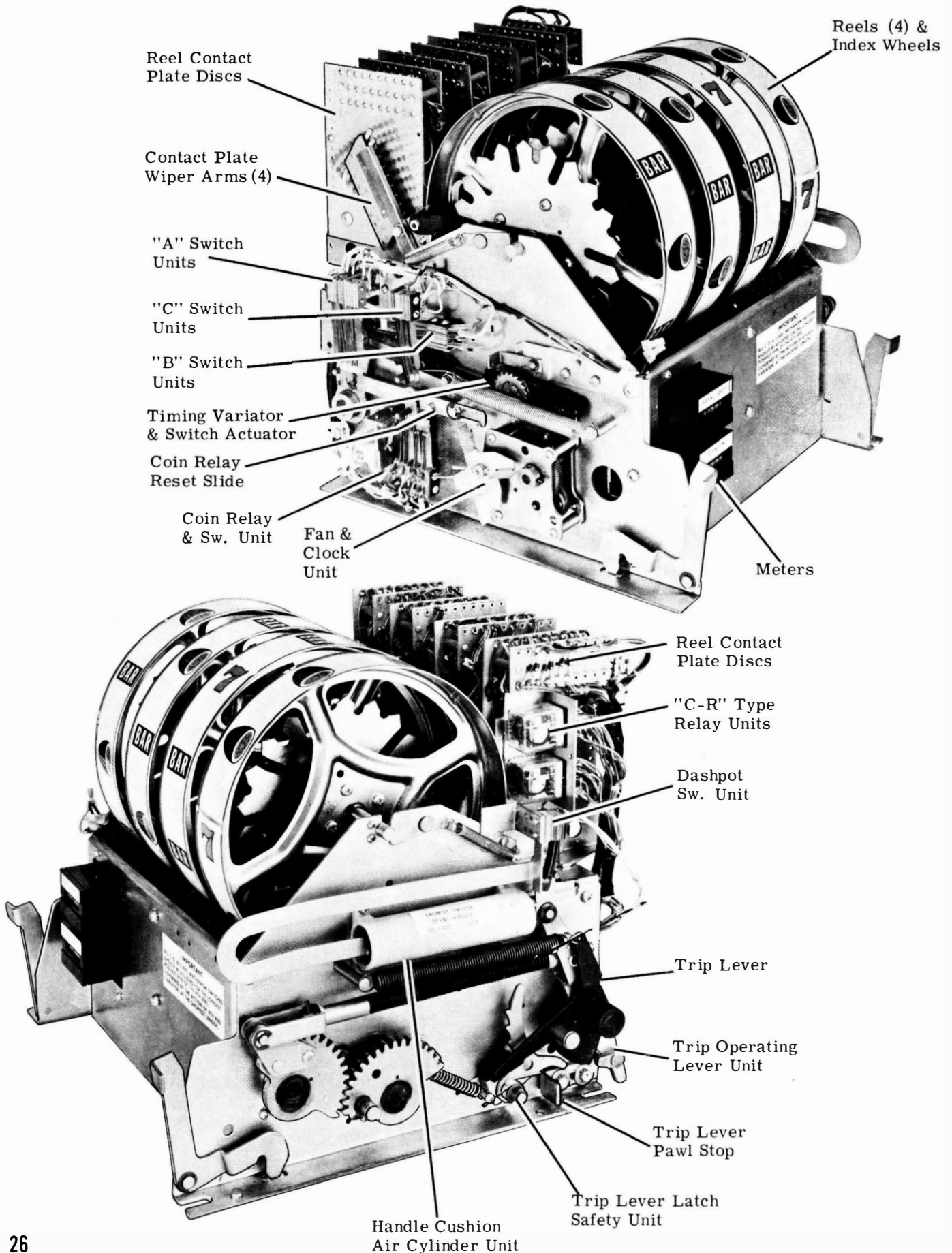
H. Now adjust Step Up Arm Lower Switch the N.C. switch with wire colors grey yellow, grey black). This adjustment is very important to the life of the printed circuit disc as this switch takes the arc generated by the collapse of the payout relay coil. Although this switch is pre-set electrically, the above adjustments change the original setting, therefore the setting is made as follows. Step the payout counter manually to 9 steps; now step once more, but do not release the step-up arm yet; now slowly release the arm and observe that the wiper arm fingers must move off the printed circuit 10 strip before the step up arm switch opens. As a guide, if the switch contacts have moved together to a gap of 1/32 this should take care of the setting.

## DELAY RELAY MICRO-SWITCH ADJUSTMENT

I. On machines using a Delay Relay type Safety Timer System an additional micro-switch cam is installed on the counter ratchet gear. This cam operated micro-switch circuit has a five step pulse which energizes the safety timer motor (See the Schematic circuit explanation). The micro-switch position is adjustable. When the counter is at zero the micro-switch should be on the first step of its five step cycle (circuit is closed). On the counters fourth step the micro-switch follower should drop into the gear through which opens the circuit (Fifth Micro-Switch position). As the counter continues to step-up, the micro-switch opens its circuit every fifth step during a payout cycle. Adjust accordingly.

# REEL MECHANISM INTRODUCTION

4 REEL GAME SHOWN



# REEL MECHANISM FUNCTION

## INTRODUCTION

The purpose of this Chapter is to acquaint you with the General Reel Mechanism electro-mechanical switch functions & sequence of switch operation.

On the Reel Mechanism's left side you will notice the Coin Relay Unit, "A" Switches, "B" Switches and "C" Switches. When the Game is coined it is the Coin Relay which initially releases a trip arm which actuates Coin Relay Switches (& in-turn the Handle Release Unit). The Game is now ready to play. On the downward stroke of the Handle the Trip Shaft Lever operates the "A" Switches. The Timer Link (with "B" & "C" Switch actuation & Timer Shaft activation) & the Coin Unit Reset Lever. Also on the downward handle stroke the Handle Mech. resets the Handle Release Unit.

As the reels kickoff the Trip Shaft Lever closes the "A" Switches. The spring loaded Timer Shaft which is Clock controlled now resets the Timer Link (note Variator) which pulses the "B" Switch and closes the "C" Switches.

Note: On all new Schematics the "C-1", "C-2" & "C-3" Switches correspond to the "C", "D" & "E" Switches. This is just a change in nomenclature. The Number 1 indicates this Sw. is closest to the Actuator, then "C-2", "C-3" etc. This also indicates they are part of the same switch unit.

On the Right Side of the Reel Mechanism is the Reel's start motion & trip system operated via the Handle Mechanism. You will also notice the Air Cylinder Pump which cushions the shock of hard handle pulls and gives a smooth handle return. The Dashpot Switch is also operated via the Air Cylinder Pump.

Toward the rear of the Reel Mechanism you notice the Reel Contact Plate Discs & Wiper Arm Units. It is the position of the Wipers that bridge win contact circuit patterns in the Contact Plate Disc which determines winners. The position of the Wiper on the Disc is determined by its engagement in the different Reel Index Plate slotted stops. These stops have a specific slot depth which correspond to each symbol on the Reel.

## SWITCH FUNCTION SEQUENCE

The sequence of Reel Mechanism related switch operations from the initial coin deposit thru the Handle pull to the reel index is as follows:

1. Game is Coined.
  - A. Coin Relay Unit is energized & actuated.
  - B. Handle Release Unit is energized & actuated.
2. Initial Handle Pull
  - A. Dashpot Switch opens.
  - B. "A" Switches Open.
  - C. "C" Switches Open.
  - D. Coin Relay Unit Resets.
  - E. Handle Release Unit Resets.
3. Reels Kick & Spin
  - A. "B" Switch(es) are pulsed.
  - B. "A" Switches close.
4. Reels Index
  - A. "C" Switches close.
5. Handle Return
  - A. Dashpot switch closes.

## COIN RELAY UNIT OPERATION

The Coin Relay Unit is a major coil operated (trip arm) switching unit on the left side of the Reel Mech. This unit is energized by a pulse from the Coin Drop Sw. & is mechanically reset by a Timer Shaft Lever as the Reels trip off.

When the Coin Relay Unit is activated the the switch functions are as follows:

1. The circuit to the Coin Relay Coil is de-energized after tripping the switches.
2. The circuit to the "Insert Coin" Lite is transferred to "Coin Accepted" Lite.
3. The Feed Circuit to the Reel Mech. Contact Plate Discs is instantly opened to prevent any possibility of the Payout Relay from being energized (P.O. Counter malfunction) before the play cycle has been completed.
4. After the initial coin has been deposited (single coin game) the Coin Lockout Coil is de-energized to return any further deposited coins until the play cycle is complete. Multi-coin games use additional Odds/Line Coin Limit Switches & Jackpot Lock-Up Switches in this circuit.
5. The circuit to the Handle Release Coil & Total-In Meter is now energized. The handle Release Coil releases a spring loaded Armature Latch & actuates its Switches which perform the following functions:
  - A. The released Armature Latch acts against the Handle Mech. Lock Pawl allowing the Handle to be pulled.
  - B. A Handle Rel. Sw. de-energizes the Handle Release Coil after the Latch Arm is released.
  - C. A Feed Circuit to the Reel Mech. Contact Plate Discs is opened until the Reels trip off (payout safety circuit).

Note: The Handle Release Unit is mechanically reset by the Handle Mech. just as the reels kickoff.

# REEL MECHANISM FUNCTION

## DASHPOT SWITCH OPERATION

At the onset of the game it should be noted until the Handle is fully back in a reset position the Dashpot Switch will prevent the Handle Lockout Coil & Handle Release Coil from being energized. This feature forces a Player to complete a full Handle stroke in either direction (in conjunction with Handle Mech. full stroke features).

## A, B & C SWITCH OPERATION

The detailed functions of the various Dashpot, "A", "B" & "C" Switches as the Handle is being pulled is as follows (in sequence):

1. As the Handle is initially pulled the Dashpot Sw. opens, dropping out the Coin Lockout Circuit & assuring that the Handle Release Coil is de-energized.
2. As the Handle movement engages the Reel Mech. (first click) the Trip Shaft Lever opens the "A" Switches assuring that all Reel Disc & Payout Circuits are Open. The "A" Switches then reset when the Reels kickoff.
3. A few more inches into the Handle Pull (second click) & the Timer Link Lever opens the "C" Switches. The "C" Switches remain open until a moment after the Reels have indexed. This action assures that the Reel Disc Feed remains open ("C-1" with brown & gray-red Wires), until the Reel Mech Wipers have come to a rest on the Disc Contacts & after all other Reel Sw. Units have completed their tasks. At this time the Game is conditioned for a possible payout cycle. Other "C" Switches have closed a Handle Release Circuit & closed a "Insert Coin" Lite Circuit (multiple coin games only) conditioning the Game for another play cycle.
4. The "B" Sw. is pulsed by the Timer Link Lever just as the Reels kickoff. This action resets the Payout Counter back to zero if there was a winner on the previous Games play cycle. As you remember on a win the P.O. Counter steps-up until its Wiper steps off the "hot" printed circuit segment on the Disc. The "Open at Zero" Carriage Sw. also closes as the Counter steps-up. It is the action of the "B" Sw. which energizes the Counter Reset Coil, resetting the previous winner & opening this circuit again. This entire action is completed before the reel spin is complete, so that the P.O. Counter is conditioned for another win cycle as the reels index.
5. Upon completion of the play cycle & the return of the Handle, the Dashpot Sw. closes. This action closes a circuit to the Coin Lockout Coil which allows a deposited coin to be accepted for a new game.

## ANTI-CHEAT RELAY OPERATION

On many new Slots there is an additional Anti-Cheat Relay Safety Switch installed on the Feed Circuit to the Reel Mech. Contact Plate Discs (not shown on the illustrated Schematic). This Anti-Cheat Relay is energized via a pulse from a Reel Mech. "A-1" Transfer Switch. A lock-in circuit keeps this Relay continuously energized until shut-off or its Tilt-Switch circuit is disturbed.

The main reason for this Tilt Switch Anti-Cheat Circuit (sensitive 3-way Tilt action) is to prevent vigorous handle pounding pulls and general abuse to the Machine. If the Tilt-Switch causes the Relay to de-energize the Feed Circuit to the Reel Mech. Contact Plates is opened ending any payout possibilities instantly. At this time the Machine must be re-coined & a new game initiated. This circuit is reset on the next pull of the Handle when the "A-1" Switch re-energizes the Relay.

## SCHEMATIC INTERPRETATION

The Schematic shows a simplified 3 Reel, single coin game, showing the various Reel Mechanism Switch Functions. Assume that you are looking at the game the moment the Reels have indexed, the 10 pay "Orange" win has not yet energized the payout circuit. All Relays, Coils & Switches are in their normal de-energized or reset position.

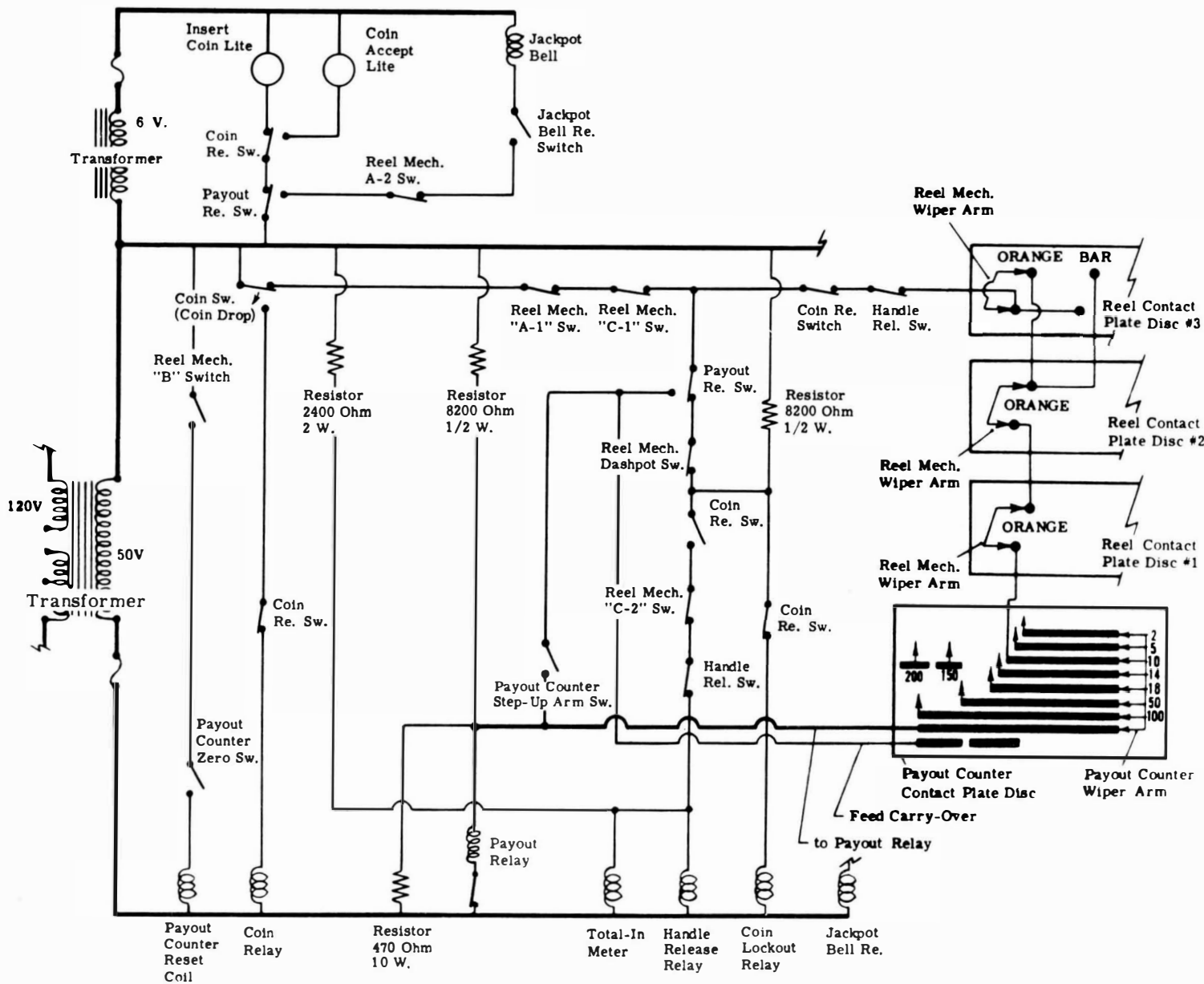
Also assume that this Game has a Mechanically Stepped P.O. Counter & that all jackpots are machine paid (50, 100, 150, 200 - no lock-ups). This Jackpot Circuit is also tied into a Jackpot Bell Relay, which when energized completes a circuit to the Jackpot Bell. The Bell in this instance rings until the jackpot has been paid & P.O. Relay drops out. Bell operation is usually custom ordered per casino requirements so check your Schematic for specialized circuitry. You will find many games set to ring on 20 coin winners & up. On multiplier type slots a Jackpot Lock-Up System is used on large jackpot wins (400 & up). In these games a common set-up has the J. P. Bell set to ring until the Attendant releases the Game Lock-Up & the Player pulls off the winner.

The biggest circuit difference between the single coin game as shown & a multiple coin game (multiplier on 3- 5 Line Pay type) is the addition of a Line or Odds Stepping Unit. This Line/Odds Unit conditions the game for multiple coin play, with Limit Sw. action on the Coin Lockout & "Insert Coin" Light. In addition the Total-In circuit is altered & the Line/Odds Unit Disc provides additional payout circuitry.

**ALWAYS GIVE MODEL AND PART NO. WHEN ORDERING SERVICE PARTS**

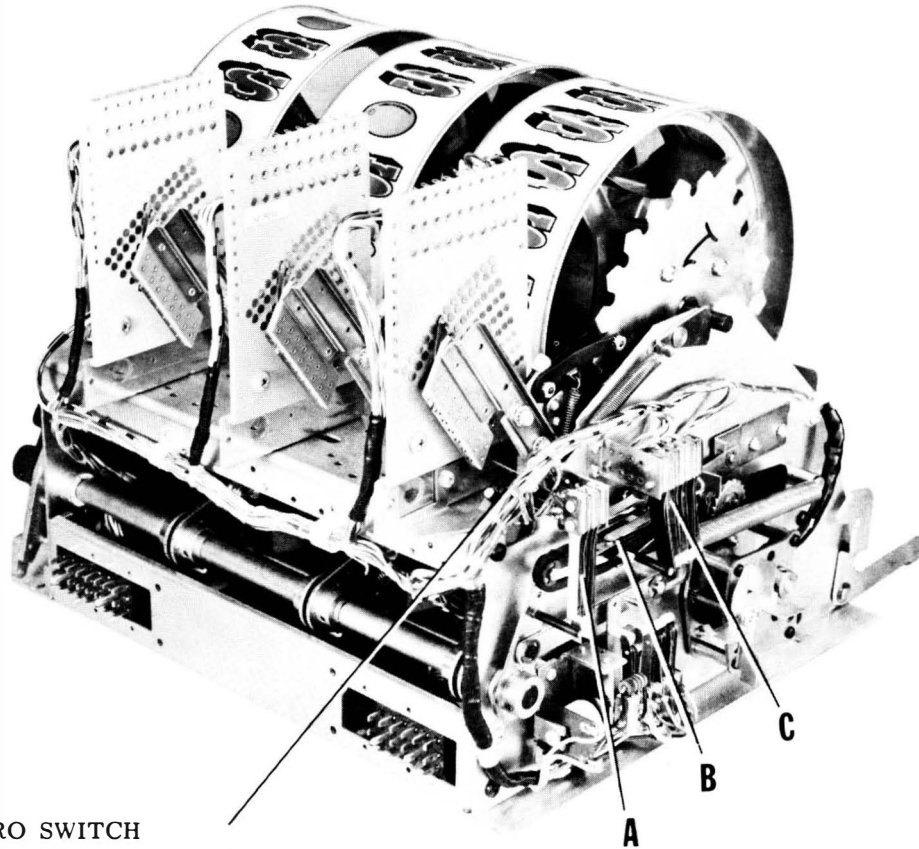
# REEL MECHANISM FUNCTION

## SCHEMATIC INTERPRETATION



**MECHANICALLY STEPPED COUNTER**

# REEL MECHANISM FUNCTION



## MICRO SWITCH

Common circuit to multiple coin machines prevents inadvertent resetting of odds when last coin is dropped and handle is pulled before last coin passes coin switch.

A Transfer Sw., breaks pay circuit and handle release circuit.

B1 Resets Win Meter

B3 Resets Payout Counter

C1 Breaks Payout and Handle Release Circuits

C2 Feed Insert Coin Light

C3 Breaks Handle Release Circuit

C4 Completes Circuit to Coin Scavenger Coil

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## NOTES

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ALWAYS GIVE MODEL AND PART NO. WHEN ORDERING SERVICE PARTS

# REEL MECHANISM SERVICE

## INTRODUCTION

Adjusting the Switches is facilitated by a good knowledge of the Schematic, the Switch & Coil functions and the sequence of electro-mechanical operation. The various Switches & Coils can easily be identified thru Schematic wire color code information & labels on the machine itself.

With the Reel Mechanism out of the Game, operate it with the auxiliary Service Handle (avail. thru Bally Service Dept.). Now watch the action of the Switches for correct actuation good contact follow through & reset action (hold the fan to control reset speed). Adjust the switches accordingly. Also clean the Contacts (if necessary) using a fine bur-nishing tool & wipe clean with soft paper.

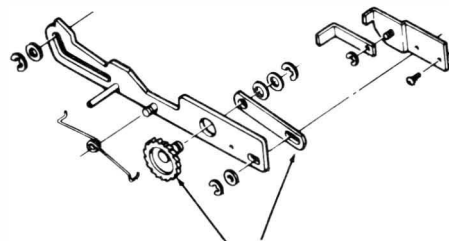
The Switch Actuating Arms & Bars should be free of grime & excess grease and move freely with good reset action (check springs). The slides & pivot points should be lightly greased with our new Hydrotex Lub #651.

As a final check look over the Mechanism to see if the Wires are properly tied down as not to interfere with moving levers & arms (note rear Plug Wires). Also check for good soldered switch connections.

## REEL MECH. SWITCH ADJUSTMENTS

The next series of adjustments deals with the various Switches on the Reel Mechanism.

- A. On the right side of the Reel Mech. is the Dashpot Switch. The preliminary adjustment of this Switch can be done with the unit outside of the machine but the final adjustment must be made when the Reel Mech is installed into the cabinet. When in rest position, Dashpot Switch is normally closed and the Link Assembly Arm is approximately 3/16" from the Stop Plate.
- B. The next set of Switches to adjust are on the left side of the Reel Mech. First, there is the "A" Switch Stack. With Index Arm in deepest Reel Index Slot (which causes wiper arm to make last row of rivets on contact plate). The "A" Switch should be open.
- C. Perpendicular to the "A" Switch stack are the "B" Switches. To adjust, set the timer link to its longest stroke by turning the Variator Counterclockwise until the Scrambler Arm reaches its shortest length. Hold the Fan and trip out Reel Mech. "B" Switch should make. The "B" Switch should make clean and stay made until it is off the Timer Link ramp. Now turn the var-



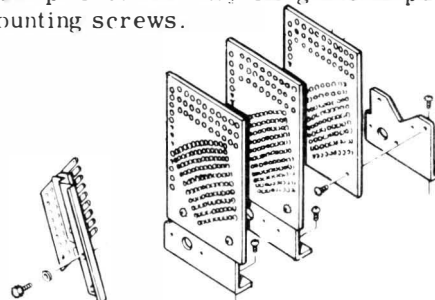
iator until the Scrambler Arm reaches its longest length. Hold the Fan and trip out Reel Mech. Again "B" Switch should make. Now turn Variator to longest length. Repeat procedure as a double check. If the Switches are properly adjusted in the first case, they will automatically be adjusted in the second case.

- D. To adjust the "C" Switch located just opposite of the "A" Switch you turn the 3rd Reel Variator to its shortest length. While holding the Variator Latch away from the Variator, pull Handle slightly. The Latch will now stay clear of Variator. Hold Fan and trip out Mech., allow the Clock to run slowly until the last reel indexes. At that exact point stop the Fan, the "C" Switch must be open. This Switch should be made only after the clock has been released & the Clock Unit has come to a complete stop.

## CONTACT PLATES & WIPER ARMS

Probably the biggest problem with the Contact Plate Disc & Wiper Units is dirt & grease deposits which foul up the payout circuits. If there is a payout malfunction of any kind check the Contact Plates first. For proper operation the Contacts must be perfectly clean & shiny with very small amount of a good non-conductive lubricant (Bally LB550X lube) wiped in over the face. The Wipers must center on the contact rows in all positions with even finger pressure. Tough corrosion on the Contacts can be removed with a Plastic Scouring Pad designed for Teflon surfaces.

Centering the Wiper Fingers on the Contacts can be accomplished thru adjusting the Wiper Arm via the mounting screws.



It is very important not to put too much Wiper Pressure on the Contact Plate Discs. Too much wiper drag can prevent the Index Lever Arms from disengaging from the Reel Index Wheels causing erratic Reel "holds" during game play.



# REEL MECHANISM SERVICE

## CLOCK UNIT OPERATION

The Clock controls the timed return action of the Timer Shaft after the Reels kick off. Its the Timer Shaft Lever Action which drops out the Reel Trip Pawls (Toggle Levers are released). This Clock controlled action allows the Index Lever Arms to index back into the Reel Stops to halt the spin. The Clock is precision engineered to take heavy duty use but it must be cleaned & lubricated occasionally (use our Lubriplate No. 1 Oil).

Complete Clock Unit Parts Information is shown in the Reel Mech. Left Side Exploded View. Also note the new anti-magnetic Brass Fan & Anti-Wiring shield. These new parts are also available from Bally Parts & Service.

## SPRING IMPROVEMENTS

The included Reel Mechanism Exploded Views show the latest (March '74) improvements in play operation via new spring developments. All of the included Spring changes can be incorporated on earlier models.

Refer to the Reel Mech. Center Exploded View. The following important changes have been made (Jan. 74):

- A. A new stronger Toggle Spring is now used for improved Index & Wiper Lever Arm return action. See Index No. 34.
- B. The Timer Idler - Latch Pawl Extension Springs are now all the same (all Reels - applies to 3, 4 & 5 reel games). See Index No. 19.
- C. The Index Lever Extension Spring on "Hold & Draw" Games is stronger to prevent reel bounce on "holds". See Index No. 37.

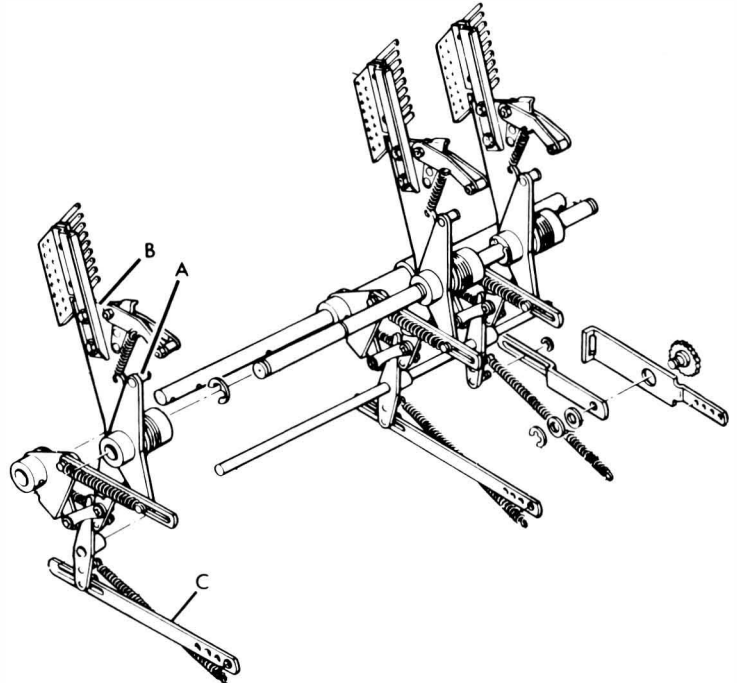
Now refer to the Reel Mech. - Right Side Exploded View. The following important changes have been made (Jan. 74):

- A. The Trip Lever Extension Spring is now stronger for a better reel spring. See Index No. 23.
- B. The Drive Shaft Compression Spring is also stronger to compensate for the heavier Trip Spring, install as a pair. See Index No. 33 & 34
- C. The Drive Gear Return Torsion Spring has now been replaced by a more accessible & reliable Extension Spring. To convert older machines simply order the new Spring Bushing & longer Screw - fits on old gear (old Torsion Spring can be released & left on shaft). See Index No.'s 17 - 19.

## REEL MECH. INTERNAL SERVICE & ADJUSTMENTS

For good service access to the internal working parts, remove the Reel Unit. Now wipe off excess grease & grime. The Unit can now be lightly lubricated with our lubriplate #1 Oil. Slides & units with heavy duty loads can be lightly greased using our Hydrotex Lube #651.

The only internal part variations are different Drive Lever Arms (20, 22, & 25 stop units) Contact Wipers, Index Arms for 22 & 25 "Hold & Draw" Games & Timer Latch Arms Links. The Timer Latch Links have slightly different length adjustments (longer to shorter) so that the Index Lever Arms can release in a timed 1 - 2 - 3 (-4) (-5) reel stop sequence. See the exploded view for adjustments.



With the Reel Unit out of the mechanism you can easily see if the Trip Operating Lever is tripping off the Stop Bracket at the correct moment (Note: Reel Mech-Right Side Stop Brkt. Adjust. Illustration). The stop Bracket Adjustment can be checked by observing the action of the Toggle Levers as the Handle is slowly pulled.

Observe the Toggle Levers as they rise up to the point where they almost touch the Toggle Stop Shaft (M). At this time the Latching Pawls will move under the Toggles, latching them in place (making a clicking sound as they latch up). At this exact moment the Trip Arm should be ready to trip off the Stop Bracket to fire off the Reels. See the Right Side Reel Mech. Adjustments.

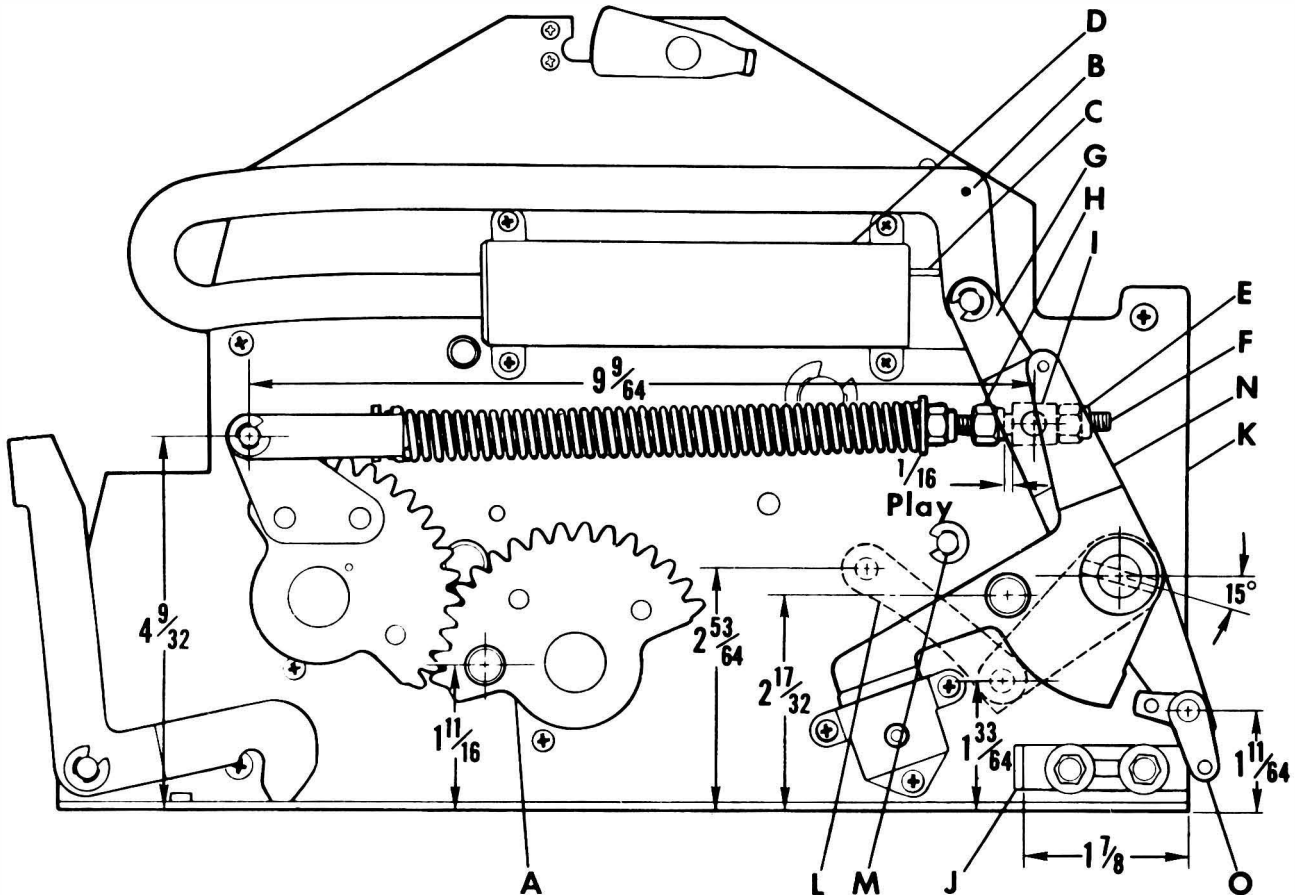
**ALWAYS GIVE MODEL AND PART NO. WHEN ORDERING SERVICE PARTS**

# REEL MECHANISM SERVICE

## RIGHT SIDE REEL TRIP & SPIN ADJUSTMENTS

The following Illustrations show the Right Side of the Reel Mechanism in the 3 positions prior to Kick-off. These Illustrations show the factory standard average settings of the Trip Arm Stop Bracket (J) & Trip Arm Drive Shaft (G). Also shown

are the center line dimensions & operating distances of various levers & Shafts (as per engineering design). It should also be noted that because of variations in tolerances, these given dimensions are a general guide & may need calibrating when working on an individual machine.



### REST POSITION ADJUSTMENT

The illustration of the Reel Mechanism is shown in a rest position with all adjustments completed for a proper operating mechanism. The dimensions shown are reference points for checking an adjusted unit.

Set the reel mechanism on a flat surface. The first setting to be made is the height of the Roller Stud on the 1 2 Gear Assembly "A". When checking the dimension be sure Link Assembly "B" is against Stop Plate "C" at rear of Cylinder "D".

To make this adjustment, turn the outer nut "E" on the threaded Drive Shaft "F" of the Trip Operating Lever "G" to obtain a 1-11/16" dimension shown.

The inner nut "H" is now adjusted to give a minimum of 1/16" to a maximum of 3/32" of play between nut and coupling "I" as shown.

These figures are dependent on the Trip Arm Stop Bracket "J" being adjusted exactly as described above.

# REEL MECHANISM SERVICE

## RIGHT SIDE REEL TRIP & SPIN ADJUSTMENTS

### STOP BRACKET ADJUSTMENT

The next setting to be made is the Stop Bracket "J". This is done by moving the bracket to a position when measured, that should read approximately 1-7/8" from the end of the Side Plate "K" to the inside form of bracket (see previous page).

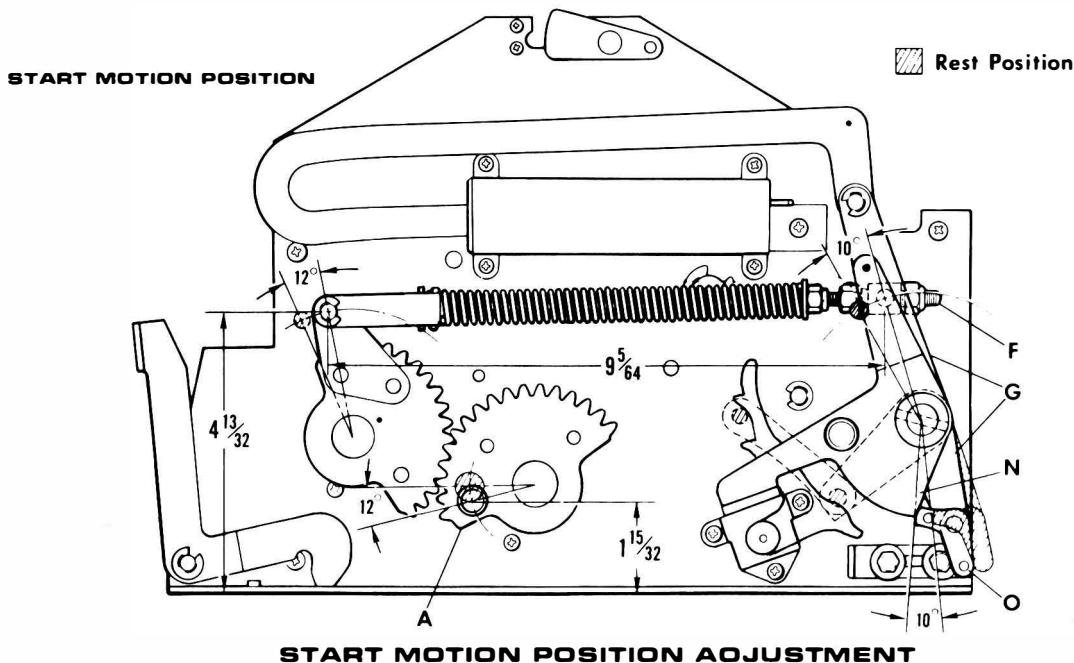
If the Stop Bracket is set in too far the Trip Arm will fire off before the Toggles are locked up (Latch Pawl) causing a uncoordinated reel spin. If the Stop Bracket is set out too far the Trip Operating Lever Pawl cannot trip off the Stop Bracket because the Handle is in a full "down" position (full stroke limit). At this time the Handle will stick in a down position until a Service Man opens the Machine & manually releases the Trip Pawl.

The setting of the Trip Arm Stop Bracket is extremely critical for a proper kick-off & spin. As you see in the Reel Mechanism's Trip Position Illustration the Toggle Levers (L) are in a "full up" position against the Toggle Stop Rod (M) & the Timer Latch Pawl (P) has moved under the Toggle Levers almost against the Toggle Stop Rod Locking the Toggles in a "up" position (in-turn cocking back the Index Levers which releases the Reels). Also notice that the Trip Operating Lever Pawl (O) is against the Stop Bracket & ready to fire off. This is the correct Stop Bracket adjustment position.

### TRIP ARM DRIVE SHAFT ADJUSTMENT

The Trip Arm Drive Shaft Adjust. "F" is factory set according to the dimensions shown in the First Illustration. This setting gives a full stroke to the Trip Arm Levers & aligns the roller stud (actuating Gear) with the Handle Mech. Actuating Arm. The alignment into the Handle Mech. Actuating Arm is essential so that the Handle Mechanism's full stroke actuation corresponds to the Trip Operating Levers full stroke actuation & trip-off. When installing a Reel Mech. back into the Cabinet see that the Roller Stud aligns perfectly with the Handle Mech. Actuating Arm.

If a Reel Mech. is malfunctioning & it appears the trip-off timing is off, first check the Trip Arm Stop Bracket. If the Stop Bracket adjustment appears correct checkout the Trip Arm Drive Shaft Adjustment. Many times a half turn on the Nuts solves the problem. It should be noted that a mal-adjusted Stop Bracket or Drive Shaft cause similar problems. If a Drive Shaft is adjusted too long the Trip Operating Lever will trip off too soon (Toggles not latched up) causing an uncoordinated Reel spin. If the Drive Shaft is adjusted too short the Trip Operating Lever cannot trip off the Stop (too long stroke) causing the Handle to lock in a "down" position (Reels still cocked). However, the essential Drive Shaft Adjustment is the proper engagement into the Handle Mech. Actuator for co-ordinated full stroke action.



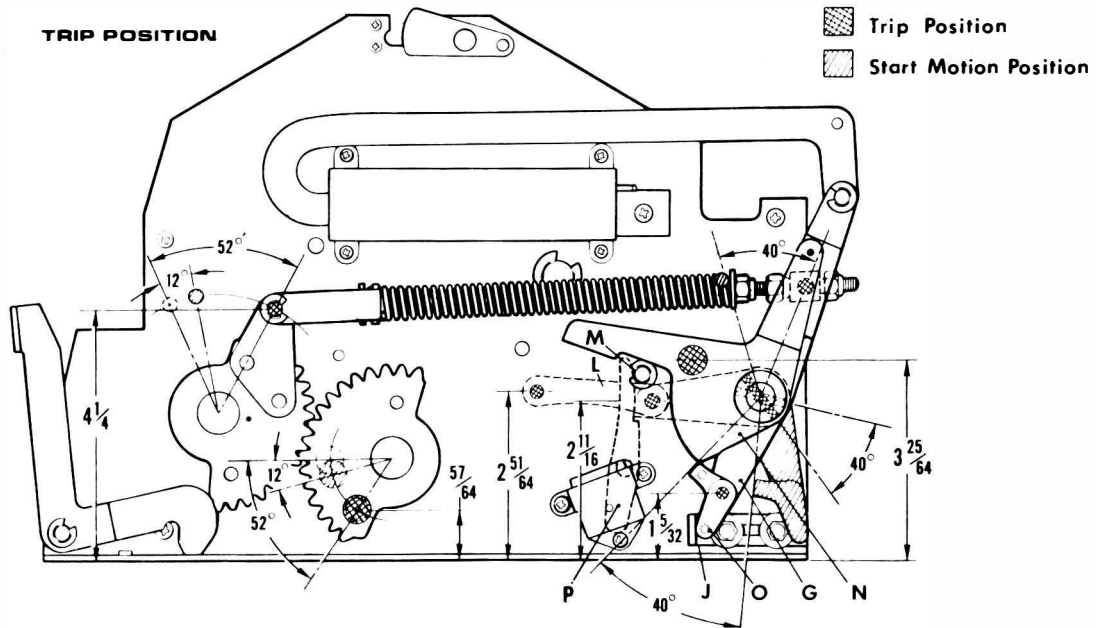
This illustration shows the starting movement of the 1/2 Gear Assembly "A", Threaded Shaft Assembly "F" and Trip Operating Lever Assembly Pawl "O"

until making contact with Trip Lever Assembly "N". At this point the internal mechanism's cycle begins its motion for cocking the Reels.

**ALWAYS GIVE MODEL AND PART NO. WHEN ORDERING SERVICE PARTS**

# REEL MECHANISM SERVICE

## RIGHT SIDE REEL TRIP & SPIN ADJUSTMENTS



**TRIP POSITION ADJUSTMENT**

This illustration shows the cocked mechanism just at the time of tripping the Trip Operating Lever Pawl "O" which in turn fires the Drive Lever (not

shown) to spin the Reels and unlatch the Latch Pawl Assembly "P".

### AIR CYLINDER OPERATION & SERVICE

The Air Cylinder Unit cushions the Reel Mechanism from stress caused by hard & fast Handle pulls (in conjunction with the Drive Shaft Compression Spring) and also provides a smooth Handle return. If it appears there is undue resistance to a Handle Pull check to see if the tiny hole in the end of Cylinder (center) is plugged (causing compression resistance. If it appears there is no delay action to cushion hard, fast handle pulls, you may need a new Piston Cup Seal. The Piston Cylinder should be greased occasionally.

It is very important that this Unit function correctly to prevent undue strain on the Trip Shaft's Levers & Arms, and also to prevent erratic Reel motion during repeated fast, jerking Handle pulls.

### REEL UNIT OPERATION & SERVICE

The Reel Units should spin smoothly and freely on the Shaft with no resistance. They should also spin straight & true with no warpage or wobble.

The Reel Hubs are equipped with Needle Bearings for top performance & long life. Lubricate this Hub Unit (note Hole) occasionally with a drop

our Lubriplate No. 1 Oil, then wipe the Unit off to prevent any oil spin-off on the Reel Tapes.

You will also notice a Screw Operated Brake on the Hub. At the present time factory adjusted machines do not use the Brakes. It is felt that a good spin gives the best reel symbol mix. However the Breaking Screw has certain applications where an excess Reel Speed must be controlled. A high speed Reel spin is difficult to index without excessive Reel bounce & noise. In this case a small amount of breaking pressure is advised.

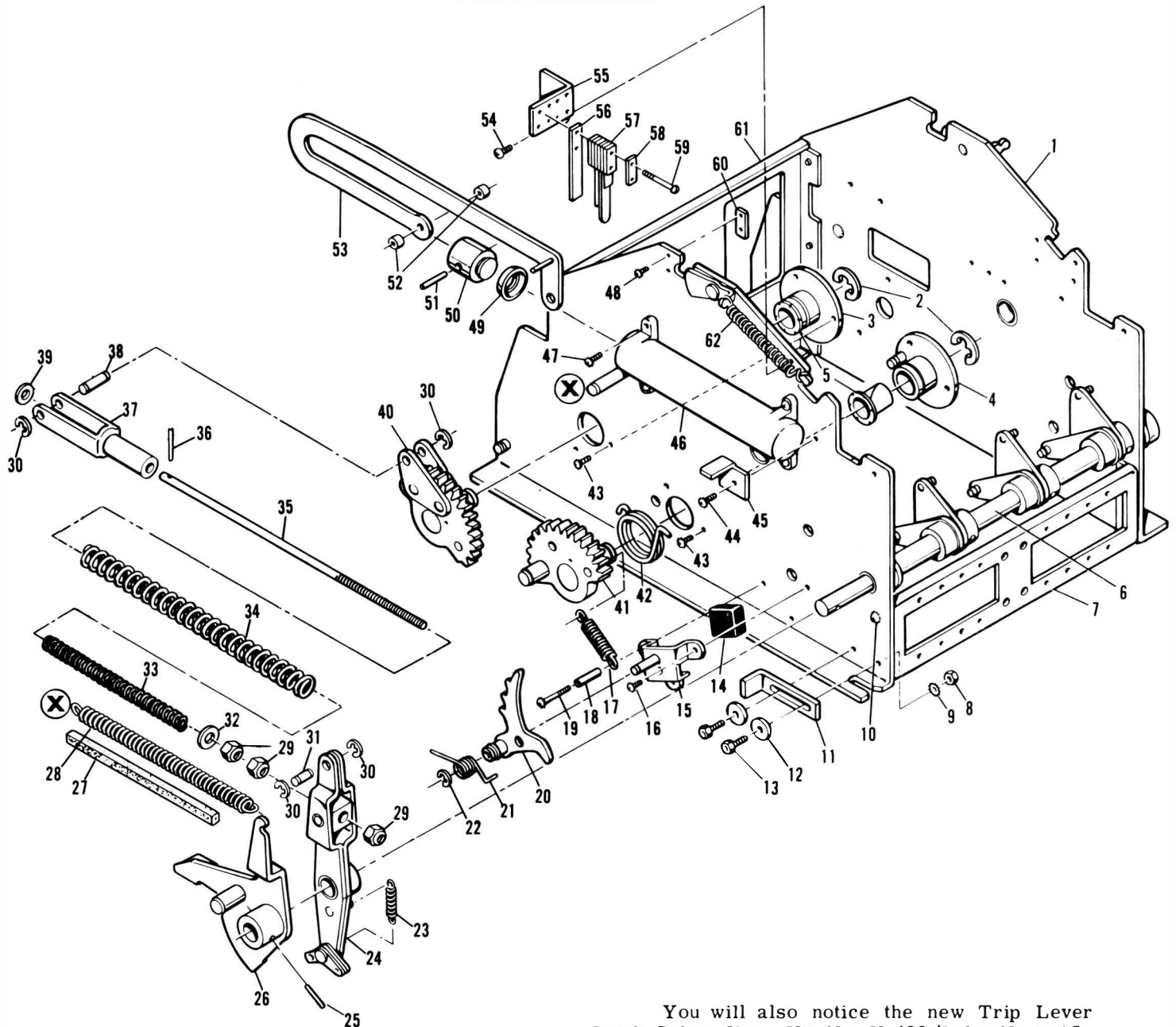
In 1973 Bally introduced a new stainless steel, anti-magnetic reel as standard equipment. This Reel is now available as a replacement part from Bally Parts & Service. When re-installing or replacing Reel Tapes be sure they are securely fastened. The Reel Tapes are plastic laminated & have a very tough smooth surface which is virtually stain proof & indestructible. Because of the very slick surface, the Tape must be properly clamped down in the Reel gripping edge or slippage can occur. Any slippage can throw off the relationship of the Symbol to the Index Wheel causing a confused payout pattern.

It should also be noted that there is a slight difference in the 20, 22 & 25 stop index wheel diameters. The correct 20, 22 or 25 stop drive lever must be used for proper engagement & kick-off. Note exploded view parts list.

# REEL MECHANISM - RIGHT SIDE DETAIL

## REEL START MOTION AND TRIP MECHANISM

ALL MODELS



Note: This Exploded View shows many of the new improvements incorporated into the Bally Reel Mechanism (Nov. 1974). You will notice new Springs shown at Index No. 's 17, 23, 28, 33 & 34. These new Springs are designed to give the Reel Unit a better reel spin, added performance & longer life. Also note that Index No. 42 has been replaced with Index No. 's 17 - 19.

The new Springs can be installed on older 3, 4 & 5 reelers (1964-) if Index No.'s 18, 19, 26, 32, & 35 (new) are also installed.

You will also notice the new Trip Lever Latch Safety Unit, Kit No. K-438 (Index No. 's 15, 18-23). This new safety unit gives added full stroke anti-cheat protection to the Reel Unit as the Handle is being pulled. In operation the spring loaded Safety Latch Ratchet engages the Trip Lever in three stages as the handle is pulled prior to the reel kick-off & spin. This ratchet action assures effective one-way, full stroke handle motion & thus ends handle pounding & trick manipulations.

The new Trip Lever Latch Safety Unit can also be installed on all Bally slots manufactured since 1964. It's an easy five minute installation (no drilling). Order Kit No. K-438.

**ALWAYS GIVE MODEL AND PART NO. WHEN ORDERING SERVICE PARTS**

# REEL MECHANISM - RIGHT SIDE DETAIL

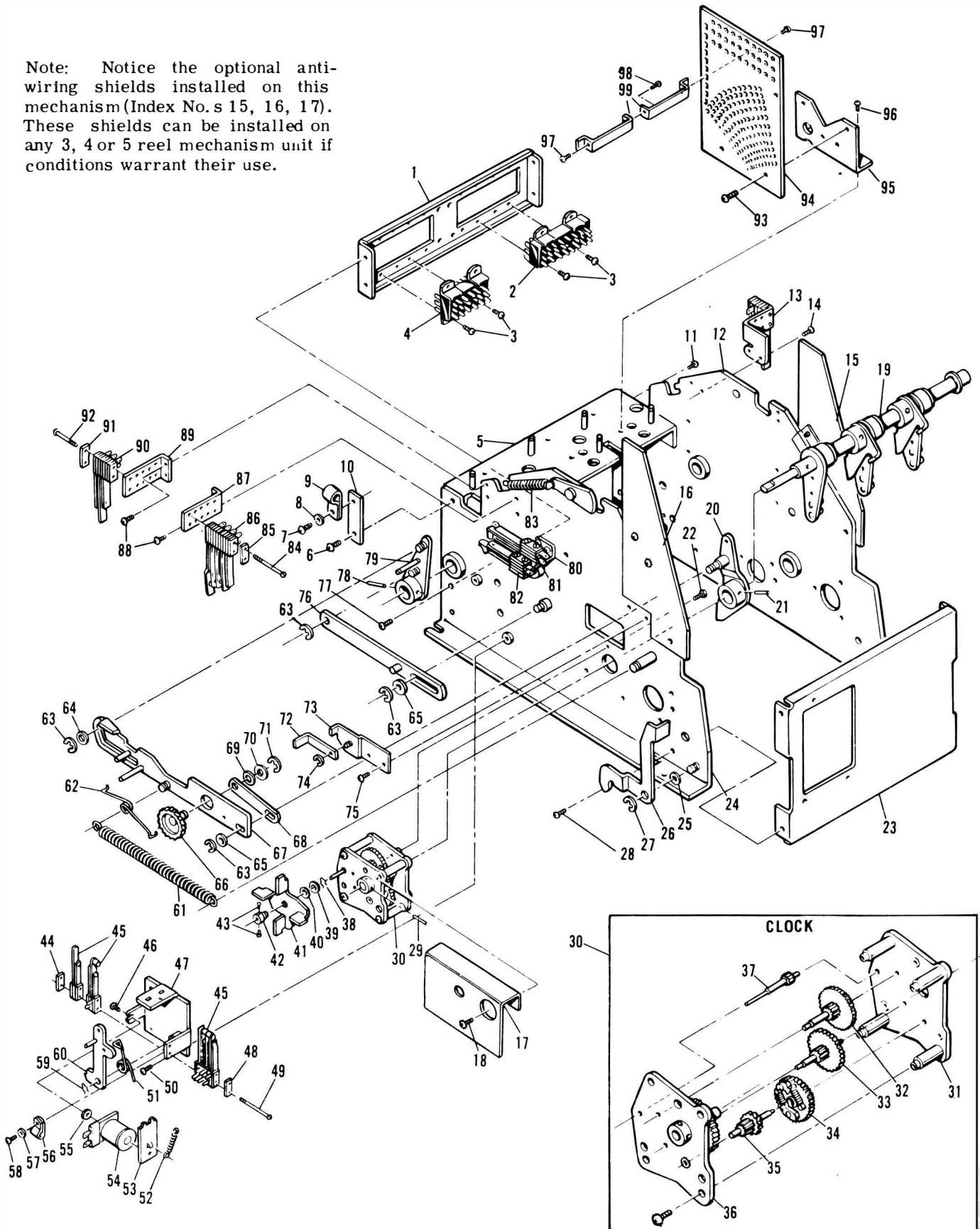
## REEL START MOTION AND TRIP MECHANISM

Index No.	Part No.	Description	No. Req.	Index No.	Part No.	Description	No. Req.
Note: This Parts List covers all 3, 4, & 5 Reel Machines.				29	M-319-10	Elastic Stop Nut . . . . .	3
1	A-2874-2	Side Plate Assy. . . . .	1	30	P-2891-6	"E" Ring (1/4" shaft) . . . . .	4
2	P-2891-11	"E" Ring (5/8" Dia. Shaft)	2	31	S-739-160	Coupling Pin . . . . .	1
3	A-2903	Gear Plate Assy. (shown w/Nyliner in place) . . . . .	1	32	P-801-589	Washer (new). . . . .	1
4	A-2903-1	Gear Plate & Pin Assy. . . . .	1	33	SP-214-4	Inner Compression Spring - Left Hand Wound (new) . . . . .	1
5	C-537-31	Nyliner . . . . .	2	34	SP-214-5	Outer Compression Spring - Ring Hand Wound(new) . . . . .	1
6	AS-2294-1	Trip Shaft Assy. (3 reel) . . . . .	1	35	S-2033-1	Drive Shaft (new) . . . . .	1
	AS-2294-5	Trip Shaft Assy. (4 reel) . . . . .	1	36	P-1637-11	Roll Pin . . . . .	1
	AS-2294-7	Trip Shaft Assy. (5 reel) . . . . .	1	37	A-171-1	Overtravel Fork Unit . . . . .	1
7	P-6373-3	Tie Bar Brkt. (3 reel) . . . . .	1	38	S-739-157	Coupling Pin . . . . .	1
	P-6373-4	Tie Bar Brkt. (4 reel) . . . . .	1	39	P-800-2	Washer . . . . .	1
	P-6373-5	Tie Bar Brkt. (5 reel) . . . . .	1	40	A-2865-1	Cam Gear Assy. . . . .	1
8	N-01032-2112	Nut . . . . .	2	41	A-2865	Gear Assembly . . . . .	1
9		#10 Lockwasher . . . . .	2	42	SP-399-6	Torsion Spring (Obsolete - replaced by Index No. 17 April 1974) . . . . .	As Req.
10	LSPR-01032-1104	Screw . . . . .	2	43	LSPR-00832-1104	Screw . . . . .	6
11	P-6287	Trip Lever Stop Brkt. . . . .	1	44	LSPR-01032-1106	Screw . . . . .	1
12	P-800-6	Washer . . . . .	2	45	P-6451	Stop Bracket . . . . .	1
13	LSOD-01032-1168	Screw . . . . .	2	46	C-112	Air Cylinder . . . . .	1
14	R-116	Rubber Bumper . . . . .	1	47	LSPR-00832-1106	Screw . . . . .	4
Note: Index No.'s 15, 18-23 comprise the Trip Lever Safety Latch Assy., Kit No. K-438 (Standard Equipment as of April 1974.)				48	LSPR-00540-1103	Screw . . . . .	2
15	A-3048-1	Bumper Housing & Latch Pivot Shaft Assy. . . . .	1	49	R-121-1	Neoprene Piston Cup Seal	1
16	LSPR-00832-1103	Screw . . . . .	2	50	S-369	Piston . . . . .	1
17	SP-100-312	Gear Return Spring . . . . .	1	51	S-1071-83	Coupling . . . . .	1
Note: This Extension Spring replaces the less accessible Torsion Spring (Index No. 42). For easy installation on older models simply release the Torsion Spring from the Gear Pin (can be left on shaft) & install the Extension Spring on the same Gear Pin & Index No.'s 18-19.				52	S-231-41	Bushing . . . . .	2
18	M-1481-27	Bushing . . . . .	1	53	A-2931-	Link & Pin Assembly . . . . .	1
19	LSPR-00832-1116	Screw . . . . .	1	Note: Index No.'s 54-59 comprise the Dashpot Switch Assy. #AS-982-516 (Single N. C. Unit) or #AS-982-623 (two N. C. Sw. Units).			
20	A-3757	Latch Lever Spring . . . . .	1	54	LSPR-00632-1103	Screw . . . . .	2
21	SP-341	Return Spring . . . . .	1	55	P-126-512	Sw. Bracket . . . . .	1
22	P-6316-5	Retaining Ring . . . . .	1	56	P-126-513	Sw. Plate . . . . .	1
23	SP-100-12	Trip Pawl Extension Spring (new - stronger) . . . . .	1	57	ASW-A1-34	Dashpot Sw. (Single Type)	1
24	A-199-2	Trip Operating Lever Assy. . . . .	1		ASW-A1-52	Dashpot Sw. (Double Type Inside Sw.) . . . . .	1
25	F-1637-56	Roll Pin . . . . .	1		ASW-A1-51	Dashpot Sw. (Double Type, Outside Sw.) . . . . .	1
26	A-178-3	Trip Lever Assy. (new) . . . . .	1	58	P-137-5	Spring Plate . . . . .	1
27	M-331-1	Felt Plug (fits inside spring)	1	59	MSPR-00540-1112	Screw . . . . .	2
28	SP-100-268	Extension Spring (new - faster Reel Spin) . . . . .	1	60	P-126-541	Reel Shaft Lock Plate . . . . .	1
				61	P-704-6	Front Plate - 3 Reel Unit.	1
					P-704-9	Front Plate - 4 Reel Unit.	1
					P-704-14	Front Plate - 5 Reel Unit.	1
				62	SP-100-266	Extension Spring (Reel Shaft Lock) . . . . .	1

ALWAYS GIVE MODEL AND PART NO. WHEN ORDERING SERVICE PARTS

# REEL MECH. ASSEMBLY - LEFT SIDE

Note: Notice the optional anti-wiring shields installed on this mechanism (Index No. s 15, 16, 17). These shields can be installed on any 3, 4 or 5 reel mechanism unit if conditions warrant their use.



ALWAYS GIVE MODEL AND PART NO. WHEN ORDERING SERVICE PARTS

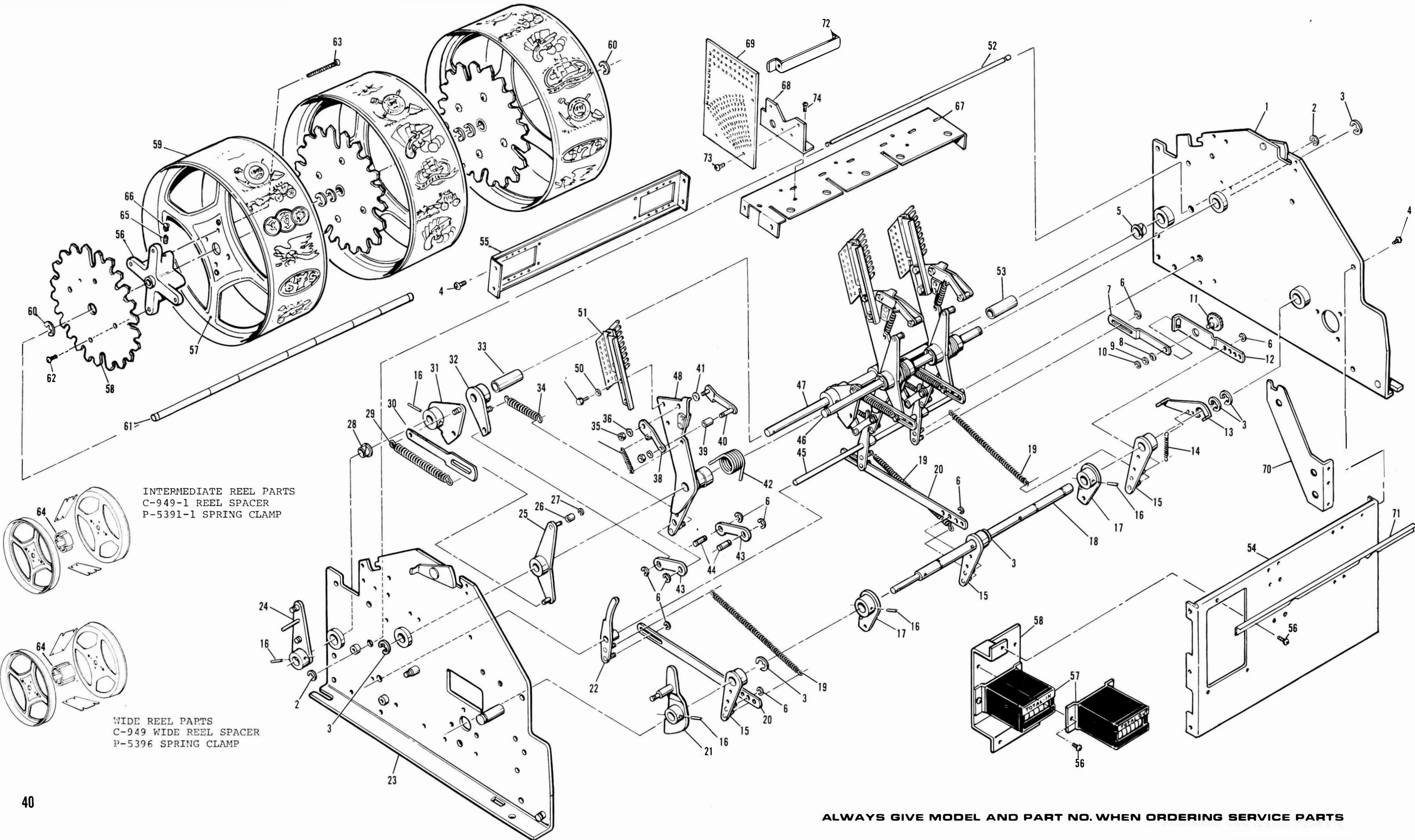
# REEL MECH. ASSEMBLY - LEFT SIDE

Index No.	Part No.	Description	No. Req.	Index No.	Part No.	Description	No. Req.	Index No.	Part No.	Description	No. Req.
1	P-6373-3	3 Reel, Tie Bar Brkt. . . . .	1	30	AS-353-2	Clock Assy. . . . .	1	75	LSPR-00832-1104	Screw . . . . .	2
	P-6373-4	4 Reel, Tie Bar Brkt. . . . .	1	31	A-305-1	Clock Base Assy. . . . .	1	76	A-2869-1	Reset Link . . . . .	1
	P-6373-5	5 Reel, Tie Bar Brkt. . . . .	1	32	A-301	Pinion & Gear Assy. . . . .	1	77	LSPR-01032-1104	Screw (tie bar) . . . . .	2
2	E-573-1	Beau Plug, 24 pt. Male . . . .	1	33	A-302	Pinion & Gear Assy. . . . .	1		LSPR-01032-1106	Screw (w/cable clip) . . . .	1
3	LSPR-00632-1103	Screw . . . . .	8	34	A-307-1	Gear & Pawl Assy. . . . .	1	78	P-1637-53	Roll Pin . . . . .	1
4	E-573	Beauplug, 18 Pt. Male . . . .	1		SP-100-31	Extension Spring (pawl) . . . .	2	79	A-205-7	Sw. Operating Lever . . . . .	1
5	P-495-12	3 Reel, Selector Base - Std. . .	1	35	A-634-1	Pinion & Ratchet Assy. . . . .	1	80	P-126-520	"B" Sw. Brkt. - std. . . . .	1
	P-495-13	4 Reel, Selector Base - Std. . .	1	36	A-306-2	Cover & Gear (Note: oil bearings freq.) . . . . .	1		P-126-616	"B" Sw. Brkt.(w/"B-3" Sw. Provision) . . . . .	As Req.
	P-495-14	5 Reel, Selector Base - Std. . .	1	37	A-300	Fan Shaft & Pinion . . . . .	1	81	ASW-A1X-3	"B-1" Sw. . . . .	1
	A-638-5	3 Reel, Selector Base & Stud Assy. (Hold & Draw type). . .	1	38	M-254	Hair Pin . . . . .	1		ASW-A3-X	"B-2" Sw. (top unit) . . . . .	As Req.
	A-638-8	4 Reel Selector Base & Stud Assy. (Hold & Draw Type - first 3 Reels only) . . . . .	1	39	P-800-10	Washer . . . . .	1	82	ASW-CLX-3	"B-3" Sw. . . . .	As Req.
6	LSPR-01032-1106	Screw . . . . .	1	40	P-1158-3	Spring Washer . . . . .	1	83	SP-100-266	Extension Spring . . . . .	2
7	LSPR-00832-1106	Screw . . . . .	1	41	P-608-14	Fan (brass, non-magnetic) . .	1				
8	PW-008-11	Washer . . . . .	1	42	S-1158	Hub . . . . .	1				
9	C-291-8	Cable Clip . . . . .	1	43	MSSL-00256-1123	Screw . . . . .	2				
10	P-1973-274	Cable Plate (for Hold & Draw clearance as shown) . . . . .	1			Note: Index No.'s 44-60 comprise the Coin Unit Assy. - Series. These units are all the same except for Switches. Specify your Model No. - Specify sw. with a drawing indicating location.					
	P-6683	Cable Shield - Std. (not shown)	1	44	P-126-154	Retaining Plate . . . . .	1	84	MSSR-00540-1120	Screw . . . . .	2
11	LSPR-01032-1104	Screw . . . . .	4	45	ASW-Series	Coin Sw. . . . .	As Req.	85	P-137-5	Spring Plate . . . . .	1
12	A-2874	Side Plate Assy. - Right . . .	1	46	LSPR-00832-1106	Screw . . . . .	1	86	ASW-Series	"C-1" - inside, "C-2"- Middle "C-3" - Outside Sw. Specify Model & Sw. No. . . . .	As Req.
13	AS-982-Series	Dash Pot Sw. Unit (specify single or double sw.) . . . . .	1	47	A-636-15	Relay Frame Assy. . . . .	1	87	P-126-84	Switch Brkt. . . . .	1
14	LSPR-00632-1103	Screw . . . . .	2	48	P-137-5	Spring Plate . . . . .	1	88	LSPR-00632-1104	Screw . . . . .	4
		Note: Index No.'s 15-17 are optional Anti- Wiring Shields, used primarily on games with no steel cab. liner.		49	MSSR-00540-1126	Screw . . . . .	2				
15	P-7118-1	Reel Mech. Baffle - Rt. . . . .	1	50	LSPR-00632-1105	Screw (mtg.) . . . . .	2				
	P-6442-89	Mtg. Brkt. . . . .	1	51	SP-341	Torsion Spring . . . . .	1				
	LSPR-00832-1104	Screw . . . . .	2	52	SP-100-38	Extension Spring . . . . .	1	89	P-126-84	Sw. Brkt. . . . .	1
16	P-7118-2	Reel Mech. Baffle - Left . . .	1	53	A-637-5	Armature Plate . . . . .	1	90	ASW-Series	"A-1" - Inside, "A-2" Outside Sw. (Specify Model & Sw. No.) . . . . .	As Req.
	P-6442-89	Mtg. Brkt. . . . .	1	54	F-31-1500	Coin Re. Coil . . . . .	1	91	P-137-5	Spring Plate . . . . .	1
	LSPR-00832-1104	Screw . . . . .	2	55	P-801-15	Washer . . . . .	1	92	MSSR-00540-1115	Screw . . . . .	2
17	P-7605	Fan Guard . . . . .	1	56	C-271-4	Cable Clip . . . . .	1	93	MSPT-01032-1106	Screw . . . . .	6
18	LSPR-00832-1104	Screw . . . . .	2	57	PW-006-11	Washer . . . . .	1	94	A-184-Series	Contact Disc (riveted) . . . .	3-4-5
19	AS-2294	3 Reel, Timer Shaft Assy. . . .	1	58	SAST-00600-1106	Screw . . . . .	1		W-1041-Series	Contact Plate Disc (rivet & wired - give complete model no. & reel no.) . . . .	3-4-5
	AS-2294-4	4 Reel, Timer Shaft Assy. . . .	1	59	M-254-2	Hair Pin . . . . .	1		A-184-49	Auxiliary Terminal Strip (if ordering a W-1041- Series it is included if nec.) . . . . .	As Req'd.
	AS-2294-7	5 Reel, Timer Shaft Assy. . . .	1	60	A-635-7	Armature Latch Assy. . . . .	1	95	P-494-6	Contact Plate Brkt. . . . .	3-4-5
	(includes index no.'s 20 & 21)			61	SP-100-241	Extension Spring (trip lever) .	1	96	SFPB-00832-1106	Screw . . . . .	6-8-10
20	A-2860	Timer Lever Assy. . . . .	1	62	SP-253	Torsion Spring (variator) . . .	1	97	LSPR-00632-1104	Screw (ends) . . . . .	2
21	P-1637-53	Roll Pin (timer shaft) . . . . .	3-4-5	63	P-2891-6	"E" Ring (1/4" Shaft) . . . . .	4	98	LSPR-00632-1106	Screw . . . . .	1-2-3
22	LSPD-00632-1106	Hex Hd. Screw (clock). . . . .	3	64	P-801-513	Washer . . . . .	1	99	P-6635-2	Stiffener Bracket . . . . .	2-3-4
23	P-704-6	3 Reel, Front Plate . . . . .	1	65	P-801-10	Washer . . . . .	2				
	P-704-9	4 Reel, Front Plate . . . . .	1			Note: Index No.'s 66-71 comprise the Timer Link & Variator Assy. - Series. Specify your game model no.					
	P-704-14	5 Reel, Front Plate . . . . .	1	66	A-432-6	Variator Ratchet . . . . .	1				
24	A-2874-2	Side Plate Assy. - Left . . . . .	1	67	A-196-Series	Timer Link & Stud Assy. (specify model no.) . . . . .	1				
25	P-1158-25	Spring Washer . . . . .	2	68	P-1973-129	Ratchet Link . . . . .	1				
26	P-6282-8	Lock Lever - Left . . . . .	1	69	P-1158-23	Spring Washer . . . . .	1				
	P-6282-7	Lock Lever - Right . . . . .	1	70	P-801-214	Washer . . . . .	1				
27	P-2891-7	"E" Ring (5/16" shaft) . . . . .	2	71	P-6316-8	"E" Ring . . . . .	1				
28	LSPR-01032-1105	Screw . . . . .	4	72	P-6644	Variator Ratchet Pawl . . . . .	1				
29	P-1637-11	Roll Pin . . . . .	1	73	A-3016-1	Variator Brkt. Assy. . . . .	1				
				74	P-2891-5	"E" Ring (3/16" shaft) . . . . .	1				

ALWAYS GIVE MODEL AND PART NO. WHEN ORDERING SERVICE PARTS



# REEL MECHANISM ASSEMBLY-CENTER

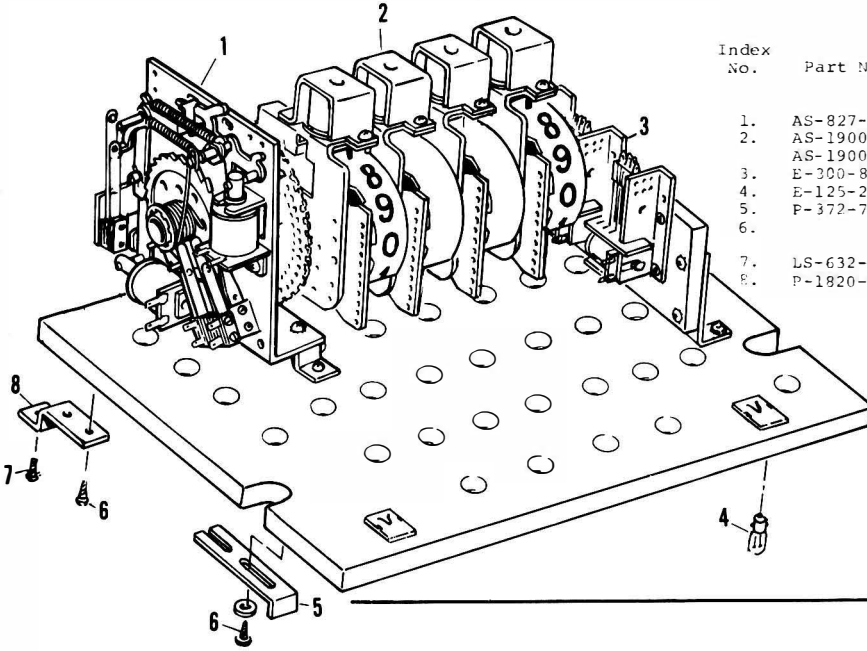


# REEL MECHANISM ASSEMBLY

Index No.	Part No.	Description	No. Req.	Index No.	Part No.	Description	No. Req.
1	A-2874	Side Plate Assy. - Rt. . . .	1	50	P-801-35	Washer . . . . .	6
2	P-2891-6	"E" Ring (1/4" Shaft) . . .	10	51	A-3013-3	Contact Wiper Assy. . . .	3
3	P-2891-10	"E" Ring (1/2" Shaft) . . .	8	52	S-739-190	Toggle Stop Rod (5 Reel) .	1
4	LSPR-01032-1106	Screw . . . . .	21		S-739-178	(4 Reel) . . . . .	1
5	C-537-20	Nyliner (trip shaft - rt.) . .	1		S-739-159	(3 Reel) . . . . .	1
6	"E"	"E" Ring (3/16" shaft) . . .	15	53	S-231-804	Trip Shaft Bushing (Rt. Side)	1
7	P-6771	Link (3rd reel variator) . . .	1	54	P-704-15	Front Plate (5 Reel) . . .	1
8	P-1158-23	Spring Washer . . . . .	1		P-704-20	(4 Reel) . . . . .	1
9	P-801-214	Washer . . . . .	1		P-704-6	(3 Reel) . . . . .	1
10	P-6316-8	"E" Ring (3/8" Shaft) . . .	1	55	P-6373-5	Tie Bar Brkt. (5 Reel) . .	1
11	A-432-7	Timer Ratchet & Stud Assy. .	1		P-6373-4	(4 Reel) . . . . .	1
12	P-6770	Timer Link . . . . .	1		P-6373-3	(3 Reel) . . . . .	1
13	P-6769	Ratchet Pawl (Variator Actuation) . . . . .	1	56	A-631-2	Hub & Bearing Assy. . . .	3
14	SP-100-248	Extension Spring (Variator Actuation) . . . . .	1	57	P-658-4	Reel (2 per Tape) . . . .	6
15	A-2861	Timer Link Idler Assy. . . .	3	58	P-484-Series	20 Stop Index Wheel - Reel No. 1 (Specify Model No. & Reel No.) . . . . .	1
16	P-1637-53	Roll Pin . . . . .	7		P-684-Series	22 Stop Index Wheel - Reel No. 1 (Specify Model No. & Reel No.) . . . . .	1
17	A-194-7	Crank (Timer Index Lever Release) . . . . .	2		P-584-Series	25 Stop Index Wheel - Reel No. 1 (Specify Model No. & Reel No.) . . . . .	1
18	S-1912-3	3 Reel Timer Shaft (clock)	1	59		Reel Tapes not listed here, order Tapes according to the numbers listed on old Tapes or give game no., name, and specify percentage if possible.	
19	SP-100-240	Ext. Spring (Latch Pawls)	3	60	P-2891-8	"E" Ring . . . . .	6
20	P-917-2	Timer Latch Link . . . . .	2	61	S-181-75	Reel Shaft (5 Reel) . . . .	1
21	A-2860	Timer Lever Assy. . . . .	1		S-181-79	(4 Reel) . . . . .	1
22	A-174-2	Latch Pawl Assy. . . . .	3		S-181-46	(3 Reel) . . . . .	1
23	A-2874-2	Side Plate Assy. - Left . . .	1	62	LSPR-1032-1106	Screw . . . . .	12
24	A-205-7	Switch Operating Lever (trip shaft) . . . . .	1	63	LSPR-832-1128	Screw R-H . . . . .	12
25	A-167-2	Drive Lever Assy. -20 Stop	3	64	C-949	Spacer (Wide Reel) . . . .	
	A-167-6	Drive Lever Assy. -22 Stop	3		C-949-1	Spacer (Intermediate) . . .	
	A-167-3	Drive Lever Assy. -25 Stop	3	65	SP-200-165	Compression Spring . . . .	3
26	S-231-41	Bushing (Kicker) . . . . .	3	66	M-1715	Set Screw . . . . .	3
27	P-6316-4	Retaining Ring . . . . .	3	67	P-495-17	Selector Base (5 Reel) . . .	1
28	C-537-21	Nyliner (Trip Shaft - Lf.) . .	1		P-495-19	(4 Reel) . . . . .	1
29	SP-10021	Ext. Spring (Drive Lever)	3		P-495-9	(3 Reel) . . . . .	1
30	P-466-2	Drive Link . . . . .	3	68	P-494-6	Contact Plate Brkt. . . . .	3
31	A-194-6	Crank - Trip Shaft . . . . .	3	69	A-3013-3	Wiper Plate Assy. . . . .	3
32	A-168-1	Toggle Lever & Link Assy. . .	1	70	P-7726	Reel Shaft Support . . . . .	2
33	S-231-41	Trip Shaft Bushing . . . . .	2	71	P-6665-458	Frnt. Reel Mech. Baffle . .	1
34	SP-100-311	Ext. Spring (Index Return)	2	72	P-6635-4	Stiffener Bracket . . . . .	2
35	N-00632-1111	Nut . . . . .	6	73	MSPT-01032-1106	Screw . . . . .	6
36		#6 Lockwasher . . . . .	6	74	SFPB-00832-1106	Screw . . . . .	6
37	SP-100-240	Ext. Spring (Std. Index Arm)	3				
38	P-491-5	Index Lever Arm . . . . .	3				
39	S-231-43	Bushing (Index Stop) . . . .	3				
40	A-332	Index Lever Arm Assy. . . . .	3				
41	P-1158-22	Spring Washer . . . . .	3				
42	SP-311	Torsion Spring . . . . .	3				
43	P-471	Toggle Link . . . . .	6				
44	S-739-158	Pivot Pin . . . . .	6				
45	S-413-432	Latch Pawl Shaft (5 Reel)	1				
	S-413-395	Latch Pawl Shaft (4 Reel)	1				
46	S-181-74	Index Lever Shaft (5 Reel)	1				
	S-181-78	Index Lever Shaft (4 Reel)	1				
	S-181-47	Index Lever Shaft (3 Reel)	1				
47	S-164-58	Trip Shaft (5 Reel) . . . . .	1				
	S-164-60	(4 Reel) . . . . .	1				
	S-164-52	(3 Reel) . . . . .	1				
48	A-193-1	Wiper Lever Assy. . . . .	3				
49	LSOD-01032-1106	Hex Hd. Screw. . . . .	6				
6	P-2891-5						

# INSERT ASSEMBLY

## HIGHBOY STYLE 5 REEL WIDE

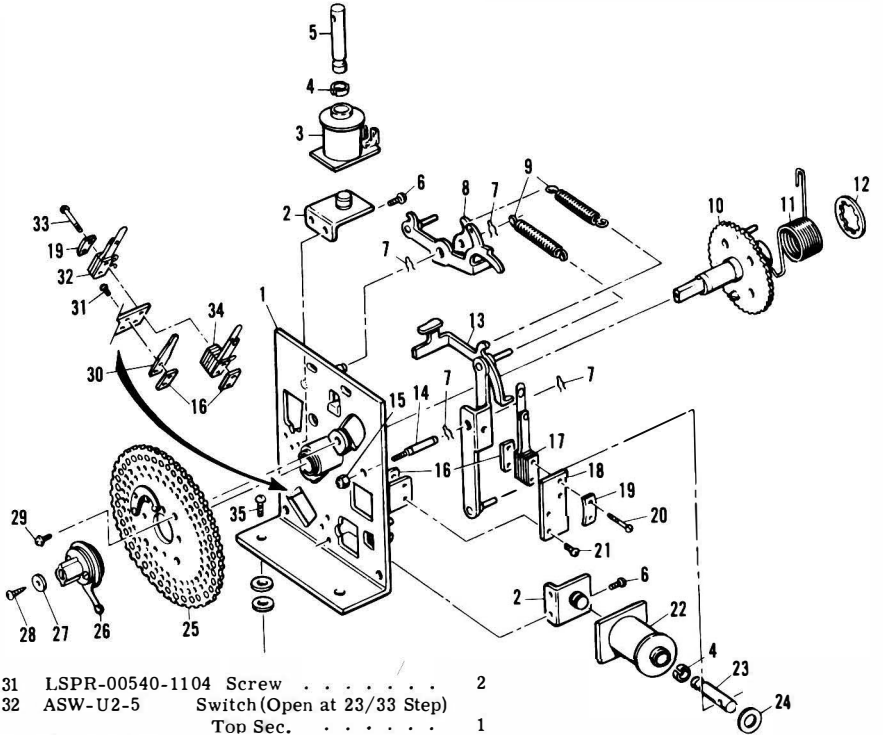


Index No.	Part No.	Description	No. Required
1.	AS-827-650	Coin Unit Assembly . . . . .	1
2.	AS-1900-113	Multiplier Unit Assembly (12 Step) . . . . .	2
	AS-1900-114	Multiplier Unit Assembly (10 Step) . . . . .	2
3.	E-300-859	G Relay Assembly . . . . .	1
4.	E-125-22	No. 44 Bulbs . . . . .	46
5.	P-372-7	Latch Bracket . . . . .	2
6.		Binder Hd. Screw #8 X 1/2" . . . . .	
7.	LS-632-511	Lg. Sheet Metal . . . . .	2
8.	P-1820-2	Screw . . . . .	2
		Hinge Bracket . . . . .	2

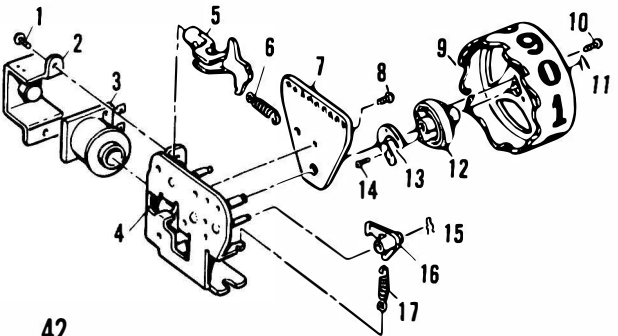
Index No.	Part No.	Description	No. Req'd
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Note: Index No.'s 1-34 comprise the Jack-pot Count Stepping Unit, #AS-327-307ND.

1	A-1768	Base Plate Assembly . . . . .	1
2	A-613-33	Core Plug Assembly . . . . .	2
3	C-28-1100	Reset Coil . . . . .	1
4	C-342	Guide Ring . . . . .	2
5	S-496-101	Plunger . . . . .	1
6	SFPB-00832-1106	Screw, #8-32 x 3/8" Lg. Parker . . . . .	4
7	M-254	Hair Pin . . . . .	4
8	A-1766	Reset Arm Assembly . . . . .	1
9	SP-100-113	Extension Spring . . . . .	2
10	C-1051-7	Ratchet & Shaft . . . . .	1
11	SP-370	Torsion Spring . . . . .	1
12	P-3389	Retaining Ring . . . . .	1
13	A-1765-8	Step-Up Arm Assy. . . . .	1
14	S-737-48	Pivot Pin . . . . .	1
15	M-319-3	Elastic Stop Nut . . . . .	1
16	P-126-154	Plate . . . . .	4
17	ASW-U1-23	E.O.S. Switch . . . . .	1
18	P-126-247	Sw. Mounting Plate . . . . .	1
19	P-137-5	Spring Plate . . . . .	2
20	MSSR-00540-1112	Screw . . . . .	2
21	KSOR-00540-1105	Screw . . . . .	2
22	B-27-1300	Step-Up Coil . . . . .	1
23	S-496-100	Plunger . . . . .	1
24	P-1158-6	Spring Washer . . . . .	1
25	A-1402-237	Contact Plate Disc . . . . .	1
	W-1093	Disc (Wired) . . . . .	1
26	AS-1046-532	Wiper Assembly . . . . .	1
27	P-801-107	Washer . . . . .	1
28	SAPR-00800-1112	Screw, #8 x 3/4" Lg. Sheet Metal . . . . .	1
29	MSSD-00832-1104	Screw . . . . .	2
30	P-3384	Spring Stop . . . . .	1



31	LSPR-00540-1104	Screw . . . . .	2
32	ASW-U2-5	Switch (Open at 23/33 Step) Top Sec. . . . .	1
33	MSSR-00540-1118	Screw . . . . .	2
34	ASW-U0	Bottom Sec. Sw. Spacer . . . . .	1
	ASW-U2-2	Switch (Open at Zero) Bottom Sec. . . . .	1
35	LSPR-00832-1108	Screw . . . . .	4

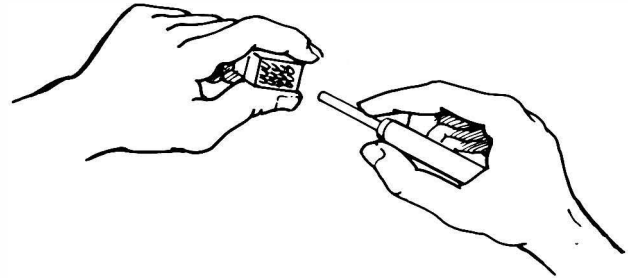


1	SFPB-00832-1106	Screw . . . . .	2
2	A-613-94	Core Plug Assembly . . . . .	1
3	CD-29-1600	Coil . . . . .	1
4	A-2214-26	Base Plate Assembly . . . . .	1
5	AS-2293-5	Drive Pawl Assy. . . . .	1
6	SP-100-121	Extension Spring . . . . .	1
7	A-2212-7	Contact Plate Disc . . . . .	1
8	LSPR-00540-1103	Screw . . . . .	1
9	C-720-5-8	Wheel . . . . .	1
10	SAPB-00400-1106	Screw . . . . .	3
11	M-254	Hair Pin . . . . .	1
12	C-704	Ratchet . . . . .	1
13	A-1618-3	Wiper Assembly . . . . .	1
14	SAPB-00400-1104	Screw . . . . .	2
15	M-254-1	Hair Pin . . . . .	1
16	C-708	Hold Pawl . . . . .	1
17	SP-100-80	Extension Spring . . . . .	1

# MOLEX PLUG SERVICE

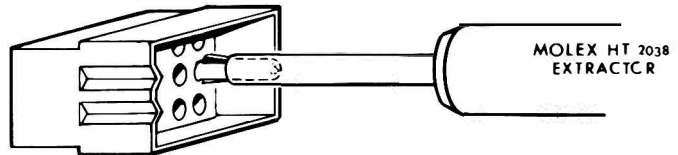
## MOLEX HT 2038 EXTRACTOR & PIN

NOTE: The Molex Pin Extractor Tool enables easy service of the Molex Plug, Pins both male and female are removable. Holding Extractor Tool as shown in Illustration, placing Forefinger over shaft as to hold it from turning (as shown), push Shaft over Pin giving Tool a slight twist allowing the Pin Fins to compress easily, thus enabling the Pin to be pushed through Nylon Housing.

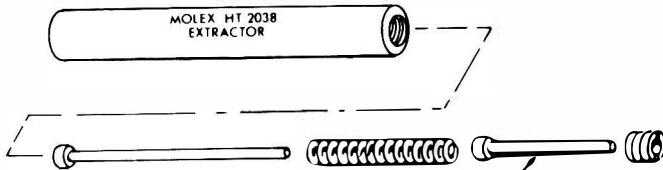
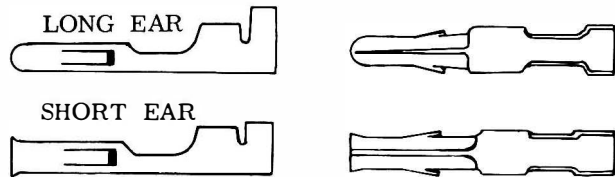


BALLY NO.	MOLEX NO.	TYPE
FEMALE E-663-2	02-09-1104	1190
FEMALE E-663-4	02-09-1119	1381
MALE E-661-2	02-09-2103	1189
MALE E-661-4	02-09-2118	1380

TYPE 1189-90 LONG EAR  
 TYPE 1380-81 SHORT EAR  
 HAND CRIMPING TOOL HT-1031



NOTE: REPLACEMENT ITEMS CAN BE ORDERED THRU BALLY DIST. OR NEAREST MOLEX REP. IN COUNTRY OF USE.



REPLACEMENT PART HT 1010-232

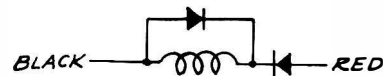
### MOLEX PLUG RECEPTACLES

	MALE	FEMALE
2 PIN PLUG	660-2	662-2
4 PIN PLUG	660-4	662-4
12 PIN PLUG	660-12	662-12

### D.C. COUNTER SERVICE

#### D.C. Counter Service

The only replacement available for any non-resettable counter used in Bally slot machines is part No. E-130-29. There are two advantages in using this counter. The first is that it is more accurate. The second is that, when properly connected, it prevents a loop thru the meter circuit which occurred when the door interlock switch was open.



NOTE:

WHEN USED ON D.C., POSITIVE SUPPLY MUST BE CONNECTED TO RED LEAD.

DIODES IN 4007 OR EQUIVALENT MOUNTED INTERNALLY AND CONNECTED AS SHOWN IN THE ABOVE DIAGRAM.

**ALWAYS GIVE MOEL AND PART NO. WHEN ORDERING SERVICE PARTS**