



PLAINVILLE, CONNECTICUT 06062

SERVICE BULLETIN

INDEX CHANGES IN SERVICE & PARTS MANUAL
MODEL 70-15, 70-25 FORM 2515F

Several changes or modifications, have been made since the printing of this manual. These changes are noted below and refer to the particular page and item which is affected. May we suggest that you check these off against the specific pages referred to.

<u>PAGE</u>	<u>ITEM</u>	<u>ALTERATION</u>
16	4	Change S202-6 to S202-5
16	18	Change S355-250 to S356-250
20	48	Change (2) S251-832-6 to (2) S274N-832-6
20	49	Delete (2) S201-8
22	1	Change S251-356-14 3-56 x 7/8 to S251-356-12 3-56 x 3/4
22	3	Change S195-12 (2) to S195-14 (2)
22	5	Change 19481 to S195-4 (2) or S195-14
26	1	Change S301-5/16-24 to S321-5/16-24
26	3	Change S251-256-2 to S211B-256-2
26	4	Change S199-2 to S198-2
28	1	Change 48022 to 48022-P
30	4	Change 20761 to S253-172-5
37-A	10	Change 48193-1 to 48193
40	10	Change 11026 to 11026-1
40	7	Change S254-540-2 to M.S. 267 5-40 x 1/4 self tapping screw
40	16	Change 38001 to S360-9
40	20	Change S324-5-40 Hex Nut to S320-540, 5-40 "Keps" Nut
42	23	Change 47801 to 47916
42	23	Change 47762 to 47915
44	4	Change 23371 to 47936

AUDIO VISUAL · EDUCATIONAL TELEVISION PRODUCTS · FILM EDITING EQUIPMENT

KALART VICTOR® 16MM SOUND MOTION PICTURE PROJECTORS · CRAIG® SUPER 8MM, 16MM FILM EDITORS
TELE-BEAM® LARGE SCREEN TV PROJECTORS · 16MM TV FILM CHAIN PROJECTOR

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<u>PAGE</u>	<u>ITEM</u>	<u>ALTERATION</u>
44	11	Change 47803-A to 47935-A
46	4	Change 11120 to S195-7
46	14	Change M.S. 19 to M.S. 133
48	5	Change 36201 to S705-1-95, 1 Watt
48	51	Change 11026 to 11026-1
48A	9	Same as change on page 48
48A	5	" " " " " "
48A	51	" " " " " "
49	5	" " " " " "
49	9	" " " " " "
49	51	" " " " " "
49A	5	" " " " " "
49A	9	" " " " " "
49A	51	" " " " " "
49B	5	" " " " " "
49B	9	" " " " " "
49B	51	" " " " " "
50		Change 510K to 560K, 1 Watt
53		Under projection lens 70-25, transfer 2" F:1.6 field flattner to line below zoom lens. (Optional)
54	19A	Change 46230 to 20120 2" standard lens

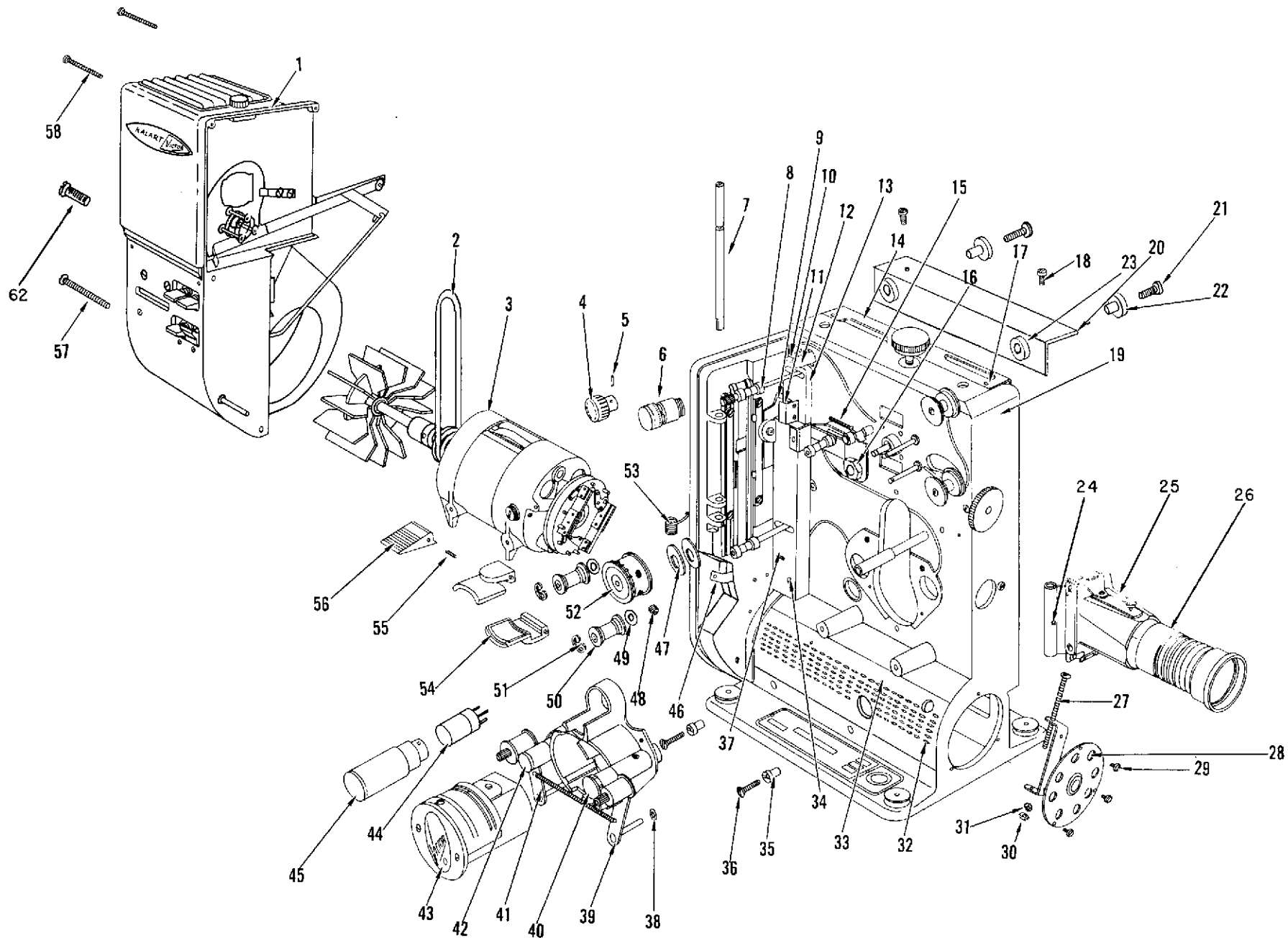
PROJECTOR HEAD — OPERATOR'S VIEW

No.	Part No.	Part Name	Page	Qty.	No.	Part No.	Part Name	Page	Qty.
	47689A	Projector mech. assem. complete		1					
1	47544-A	Lamp house casting assembly	33	1	33	S290-0-3	#0 x 3/16 Drive screw		2
2	47609	O ring drive belt		1	34	S251-540-16	5-40 x 1" Round head screw		1
3	47660A	Motor assembly	37	1	35A	19015	Motor support sleeve		* 1
4	47629	Framing knob		1	35	30520	Motor support sleeve		3
5	S277-540-2	5-40 x 1/8 Socket set screw		1	36A	S252-832-6	8-32 x 3/8 Flat head screw		1
6	46212	Pilot light cap		1	36	S250-832-8	8-32 x 1/2 Truss head screw		3
#7	47657	Lens mount pivot		1	37	S277-540-3	5-40 x 3/16 Socket set screw		1
8	46145AR	Automatic trip lever assembly	29	1	38	19482	Thrust washer		As req'd
9	19303	Lens mount lock plate spacer		2	39	26726AR	Sound sprocket tension arm assem	31	1
10	S254-540-2	5-40 x 1/8 Binder head screw		1	40	30368-A	Sound sprocket assembly		1
11	46160	Lens mount lock plate		1	41	26725AR	Reverse loop tension arm assem	31	1
12	28130	Pilot lamp		1	42	30369-A	Shaft assembly loop roll		1
13	46150-A	Trip cover assembly		1	43	30428-A	Sound core assembly	31	1
14	46376	Belt separator		1	44	19210	Photo electric cell		1
15	S253-540-12	5-40 x 3/4 Fillister head screw		2	45	46163-A	Photo cell cover		1
16	S321-5/16-24	5/16-24 Hex cap nut		1	46	47635	Starting lever	23	1
17	S251-440-3	4-40 x 3/16 Rd. head screw		2	47	19494	Thrust washer		As req'd
18	S254-832-6	8-32 x 3/8 Binder head screw		2	48	S277-832-2	8-32 x 1/8 Socket set screw		1
19	47505-A	Body casting assembly	17	1	49	19369	Shim washers		As req'd
20	47586	Casting mounting bracket		1	50	36159A	Film roll assembly		2
21	S254-832-8	8-32 x 1/2 Binder head screw		2	51	S235-3	#3 "E" ring		2
22	S196-2	Eyelet washer		2	52	36154	Feed sprocket (solid)		1
23	S589-2	Rubber grommet		2	53	47685	Lens mount spring		1
24	20046	Lens mount plate screw		1	54	47515-A	Film shoe assembly	31	2
*25	48033-AR	Lens mount assembly	29	1	54A	48034-A	Film shoe assembly - stainless steel		
26	46230	Lens projection field flattener 2" F1.6		1	55	S277-540-3	5-40 x 3/16 Socket set screw		1
26A	20120	Lens projection standard 2" F1.6		1	56	47863	Starting lever tab		1
27	S2511-632-36	6-32 x 2 1/4 Brass round head screw		1	57	S251-832-20	8-32 x 1 1/4 Round head screw		1
28	19019-2R	Body plate assembly		1	58	S253-540-12	5-40 x 3/4 Fillister head screw		2
29	S254-540-3	5-40 x 3/16 Binder head screw		3	62	S254-540-5	5-40 x 5/16 Binder head screw		1
30	S324-632	6-32 Hex nut		1					
31	S200-6	#6 Internal tooth lockwasher		1					
32	47841	Silent-sound nameplate		1					

*See page 29 for additional information.

#48031 Pivot - lens mount assem. new style 28-29

* Note motor support sleeve 19015 must be used to effect proper ground between projector head and motor.

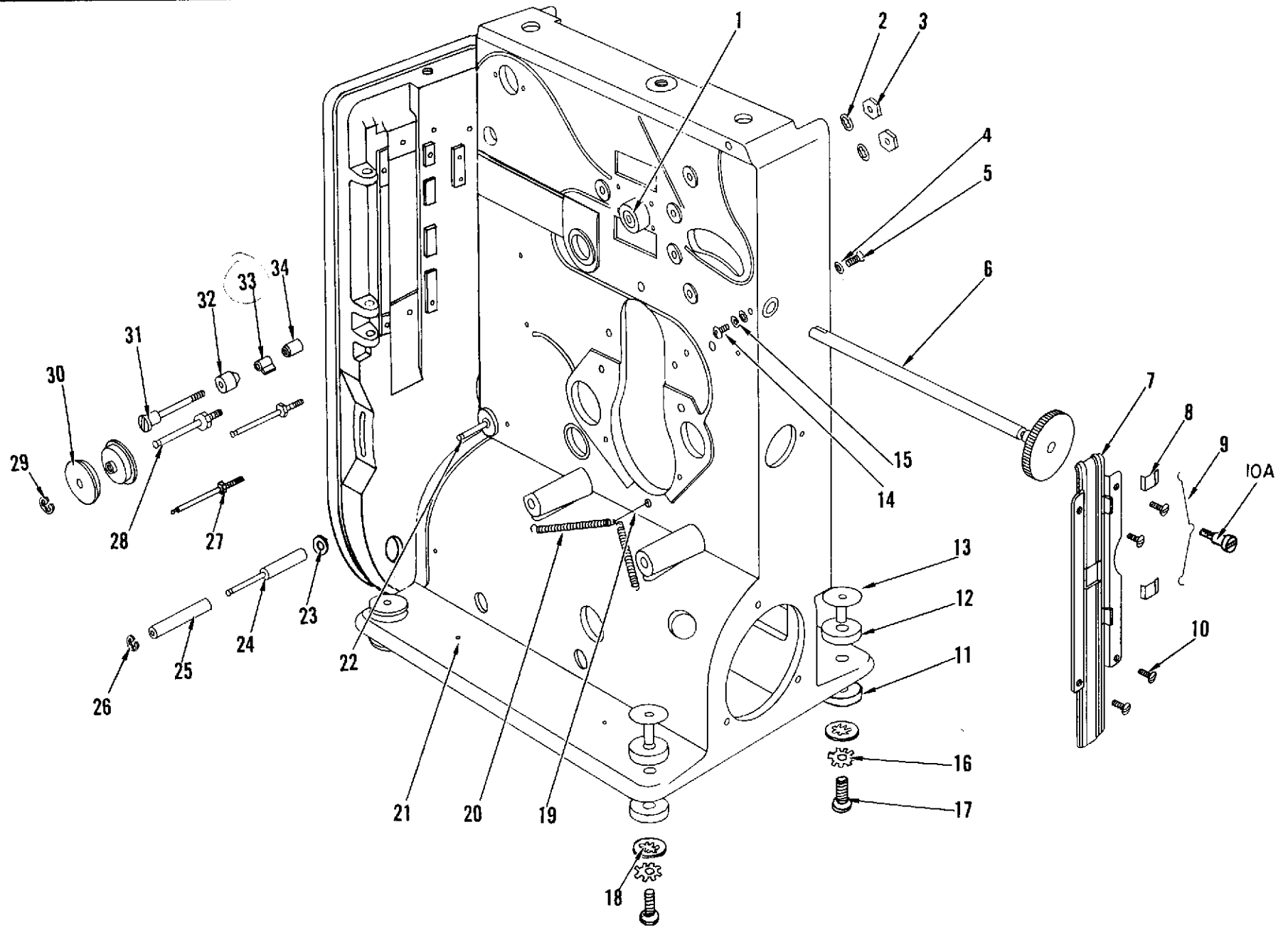


PROJECTOR HEAD — OPERATOR'S VIEW

PROJECTOR HEAD — OPERATOR'S VIEW

(Complete Breakdown)

No.	Part No.	Part Name	Qty.		No.	Part No.	Part Name	Qty.
1	19480	Feed sprocket bearing	2		20	19104	Tension roll spring	1
2	S200-10	#10 Lockwasher	2		21	47505-A	Body casting assembly	1
3	S324-1032	10-32 Hex nut	2		22	46216	Automatic trip pivot	1
4	S202-6	#6 External tooth C'sunk lockwasher	1		23	S199-6	#6 Plain washer	1
5	S252-632-6	6-32 x 3/8 Flat head screw	1		24	26734	Film support roll shaft	1
6	48003-A	Hand operating shaft assembly	1		25	19086	Film support roll	1
7	47519	Film channel	1		26	S235-1	#1 "E" ring	1
8	19316	Film channel tension clip	2		27	36158	Film roller shaft	2
9	47998	Film channel tension clip spring	1		28	26749	Film trap roll shaft	1
10	S254-540-3	5-40 x 3/16" Binder head screw	4		29	S235-3	#3 "E" ring	1
10A	47999	Screw, shoulder	1		30	26208	Take off feed roll	4
11	47860	Bushing rubber	4		31	20047	Film guard screw	1
12	22091	Base support washer	4		32	19875	Film guard screw roller	1
13	47815-A	Base support sleeve assembly	4		33	36302	Film guard	1
14	20044	Hand shaft retaining screw	1		34	19089	Film guard spacer	1
15	S199-5	#5 Plain washer	As req'd					
16	S201-8	#8 Shakeproof external tooth lockwasher	4					
17	S254-832-10	8-32 x 5/8 Binder head screw	4					
18	S355-250	Fastex spring grip	4					
19	19105	Tension roll spring hook	1					



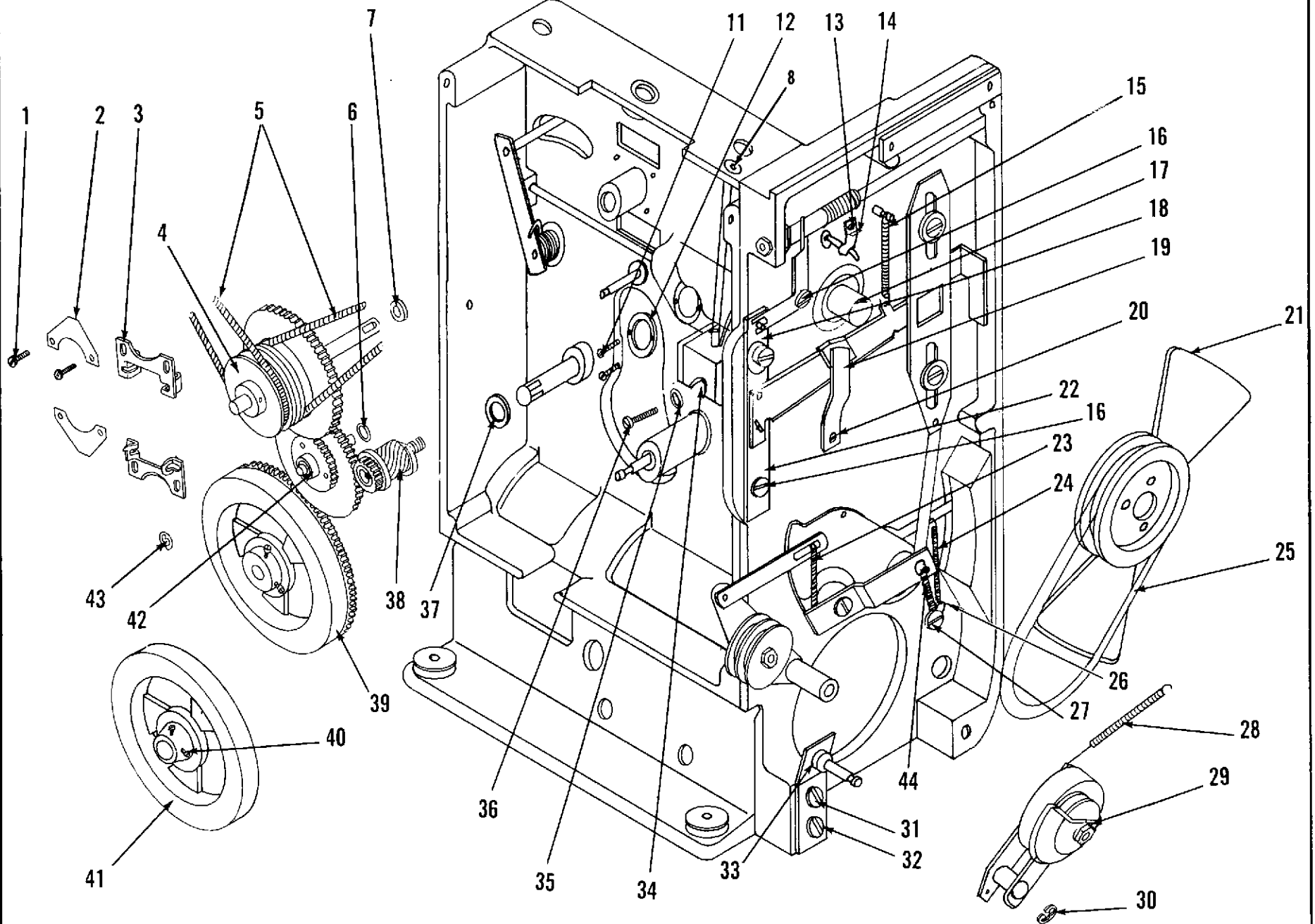
PROJECTOR HEAD — OPERATOR'S VIEW

(Complete Breakdown)

PROJECTOR HEAD — BACK SIDE AND REAR VIEW

No.	Part No.	Part Name	Page	Qty.	No.	Part No.	Part Name	Page	Qty.
1	S254-832-4	8-32 x 1/4 Binder head screw		4	28	47952	Rewind spring		1
2	36155	Film shoe spring	31	2	29	46138A	Rewind disc bar & pulley assembly	35	1
3	36156	Film shoe bracket	31	2	30	S235-3	#3 "E" ring		1
4	26836-A	Takeup clutch assembly	27	1	31	S254-540-5	5-40 x 5/16 Binder head screw		1
5	23217	Takeup belt		2	32	S251-832-28	8-32 x 1 3/4 Round head screw		1
6	19482	Thrust washer		As req'd	33	47697A	Rewind pulley bracket assembly		1
7	19494	Thrust washer		As req'd	34	47603A	Oil reservoir	29	1
8	47895-A	Oiler assembly		1	35	S199-5	#5 Plain washer		1
11	S252-172-3	1-72 x 3/16 Flat head screw		2	36	S251-540-22	5-40 x 1 3/8 Round head screw		1
12	36153	Felt retaining washer		1	37	11120	Fibre shim		1
13	S254-540-2	5-40 x 1/8 Binder head screw		1	38	47535-A	Spiral intermediate gear & shaft assembly	27	1
14	47608	Oil tube support		1	39	47223-A	Filter flywheel assembly	27	1
15	47639	Shuttle spring		1	40	S253-540-5	5-40 x 5/16 Fillister head screw		2
16	47630	Shoulder screw		2	41	47222-A	Loop roll flywheel (includes 40)		1
17	47520A	Osc. sleeve & Cam hub assembly	23	1	42	19180-A	Sound sprocket drive gear assem	27	1
18	47631	Bowed spring		2	43	S235-3	#3 "E" ring		1
19	47638	Shuttle oscillator spring		1	44	19469	Safety shutter trip spring		1
20	S254-540-2	5-40 x 1/8 Binder head screw		1					
21	47527A	Shutter & cam (matched pair)	23	1					
22	48017A	Shuttle and mounting arm assembly	25	1					
23	47637	Spring starting lever plate		1					
24	23381	Spring, start lever		1					
25	47610	Flat drive belt		1					
26	47177	Lug, start lever spring		1					
27	S254-540-2	5-40 x 1/8 Binder head screw		1					

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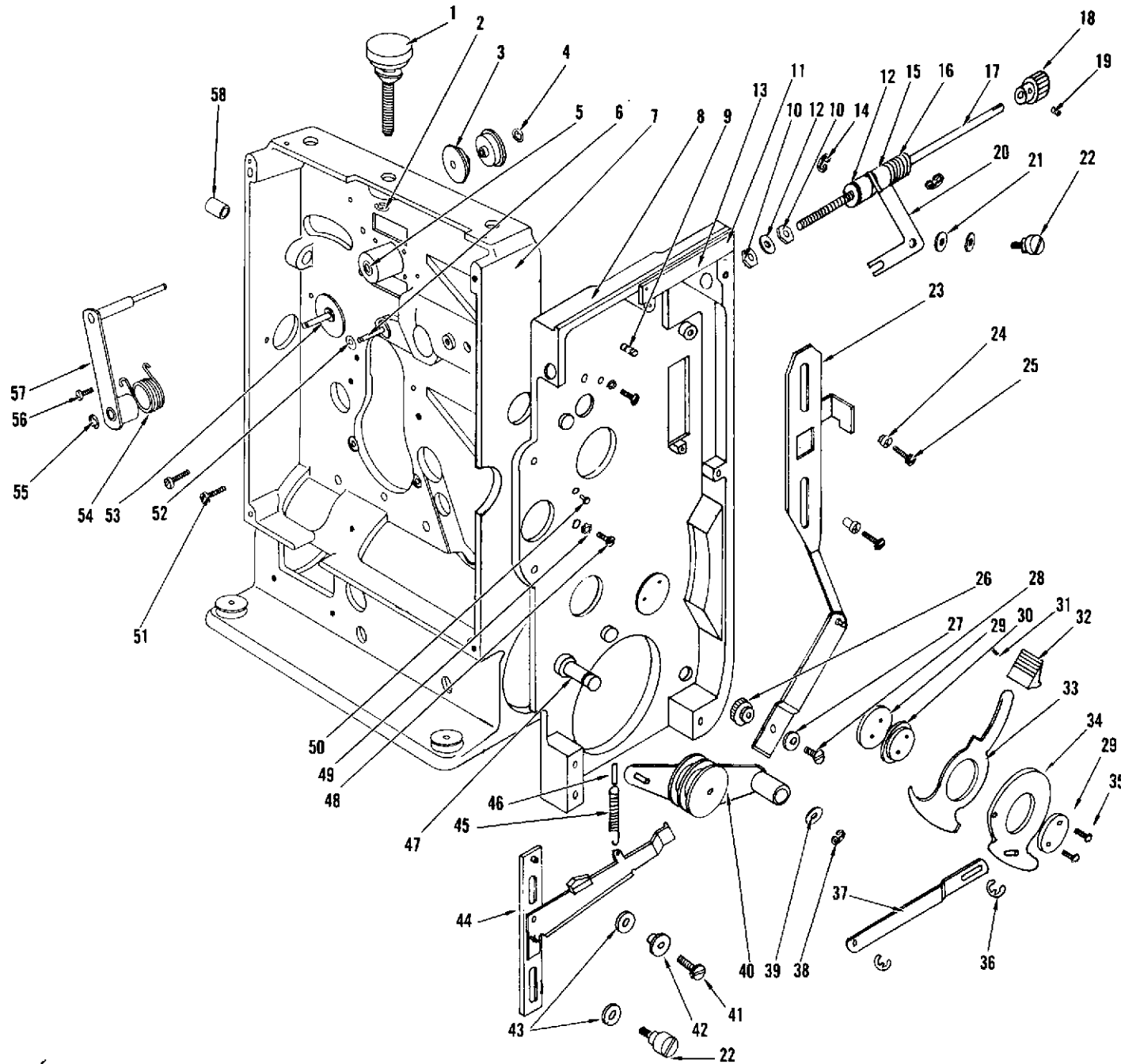


PROJECTOR HEAD — BACK SIDE AND REAR VIEW

PROJECTOR HEAD — BACK SIDE AND REAR VIEW

(Complete Breakdown)

No.	Part No.	Part Name	Qty.	No.	Part No.	Part Name	Qty.
1	30254A	Reel arm locking screw assembly	1	33	47635	Starting lever	1
2	S235-3	#3 "E" ring	1	34	47634-A	Start lever plate sub assembly	1
3	26208	Take off feed roll	2	35	S254-540-4	5-40 x 1/4 Binder head screw	2
4	S235-3	#3 "E" ring	1	36	S235-1	#1 "E" ring	2
5	19480	Feed sprocket bearing	2	37	47619	Drive mech link	1
6	30463-A	Shaft and sleeve assembly	1	38	S235-3	#3 "E" ring	1
7	47532	Body casting	1	39	19369	Plain washer	As req'd
8	47504	Shutter housing casting	1	40	47555-A	Start lever idler assembly	1
9	47640	Shuttle spring pin	1	41	S254-540-6	5-40 x 3/8 Binder head screw	1
10	S318-1032	10-32 Elastic stop nut	2	42	47632	Framing eccentric	1
11	S290-0-2	#0 x 1/8 Drive screw	2	43	47631	Bowed spring	2
12	W-5	.010 Thick x 3/16 I.D. x 5/16 O.D. plain washer	4	44	48017-A	Shuttle and mounting arm assembly	1
13	47643	Shutter housing cover	1	45	47639	Shuttle spring	1
14	S235-2	#2 "E" ring	2	46	S555-5-8	#5 x 1" Vinyl sleeving	1
15	47627	Framing spacer	2	47	47615	Belt idler mounting stud	1
16	47628	Framing spring	1	48	S251-832-6	8-32 x 3/8 Round head screw	2
17	47620	Framing shaft	1	49	S201-8	#8 External tooth lockwasher	2
18	47629	Framing knob	1	50	26716	Shutter housing pivot pin	1
19	S277-540-2	5-40 x 1/8 Socket set screw	1	51	S253-540-7	5-40 x 7/16 Fillister head screw	2
20	47621	Framing bell crank	1	52	19482	Thrust washer	As req'd
21	S195-29	Plain washer 1/32 thick x 3/16 I.D. x 5/16 O.D.	4	53	26728	Operating lever pivot	1
22	47630	Shoulder screw	2	54	19506	Takeup spring	1
23	47695A	Fire shutter assembly	1	55	S235-3	#3 "E" ring	1
24	19471	Safety shutter guide	2	56	S254-540-3	5-40 x 3/16 Binder head screw	1
25	S278-540-5	5-40 x 5/16 "Sems" flat head screw with lockwasher	2	57	26722-A	Takeup lever assembly	1
26	20084	Safety shutter eccentric	1	58	19500	Hand operating shaft bearing	1
27	S195-5	#5 Steel flat washer	1				
28	S254-540-6	5-40 x 3/8 Binder head screw	1				
29	19172	Starting lever pivot washer	2				
30	19171	Starting lever pivot	1				
31	S254-540-3	5-40 x 3/16 Binder head screw	1				
32	47863	Starting lever tab	1				



PROJECTOR HEAD — BACK SIDE AND REAR VIEW
 (Complete Breakdown)

OSCILLATING SLEEVE & CAM HUB ASSEMBLY

No.	Part No.	Part Name	Qty.
	47520A	Oscillating sleeve & cam hub assembly	1
1	47521-A	Oscillating hub and shaft assembly	1
2	S220-1	1/16 x 9/32 Drive lock pin	1
3	S195-12	Shim washer	2
4	19479-2	Oscillating sleeve & bushing assembly	1
5	19481	Shim washer (As req'd)(2 min)	
6	S220-4	1/16 x 3/8 Drive lock pin	1
7	47533	Spiral drive pinion	1

STARTING LEVER ASSEMBLY

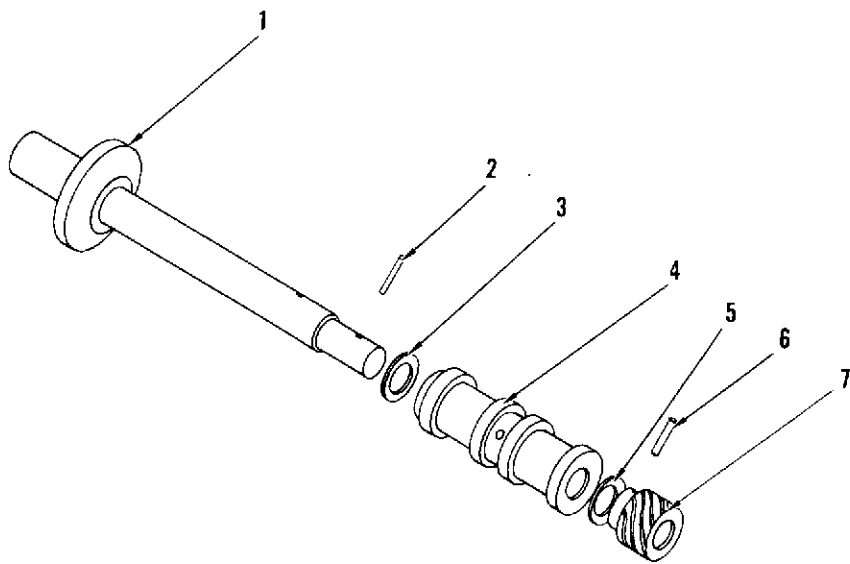
No.	Part No.	Part Name	Qty.
1	19172	Starting lever pivot washer	2
2	19171	Starting lever pivot	1
3	47635	Starting lever	1
4	S277-540-3	5-40 x 3/16 Socket set screw	1
5	47863	Tab, starting lever	1
6	47637	Spring, start lever plate	1
7	47634-A	Start lever plate sub assembly	1
8	S254-540-4	5-40 x 1/4 Binder head screw	2

CAM SHUTTER & OSCILLATOR ASSEMBLIES

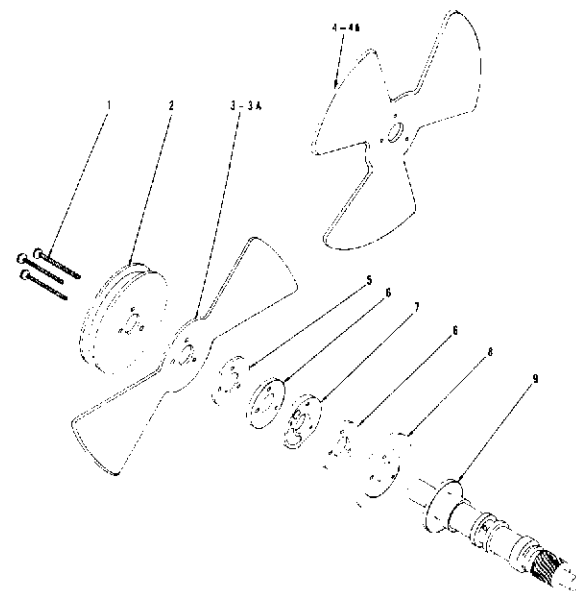
No.	Part No.	Part Name	Qty.
1	S251-356-14	3-56 x 7/8 Round head screw	3
2	47611	Pulley	1
3	47527A	Main cam & shutter 2 interr (matched pair) includes 3A and 7	1
3A	47527	Shutter, two interr	1
4	47526A	Main cam & shutter 3 interr (matched pair) includes 4A and 7	1
4A	47526	Shutter - three interr	1
5	47822	Spacer, washer (thin)	As req'd
6	47525	Spacer, washer (thick)	3
7	47523	Main cam	1
8	47524	Oscillating cam	1
9	47520A	Oscillating sleeve & cam hub assem	1

BODY PLATE ASSEMBLY

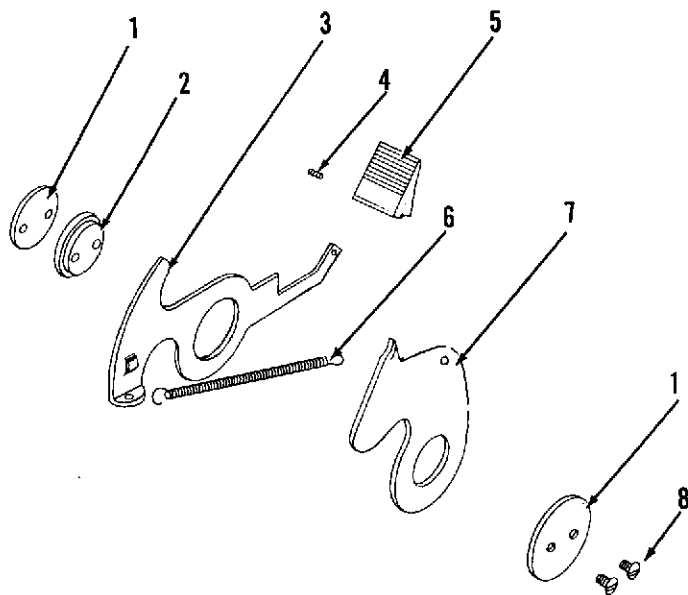
No.	Part No.	Part Name	Qty.
59	47924-A	Body plate assembly	1
60	S254-540-2	5-40 x 1/8 Binder head screw	2
61	48004	Shutter guard	1
62	S276-4-3	#4 Truss head sheet metal screw	1



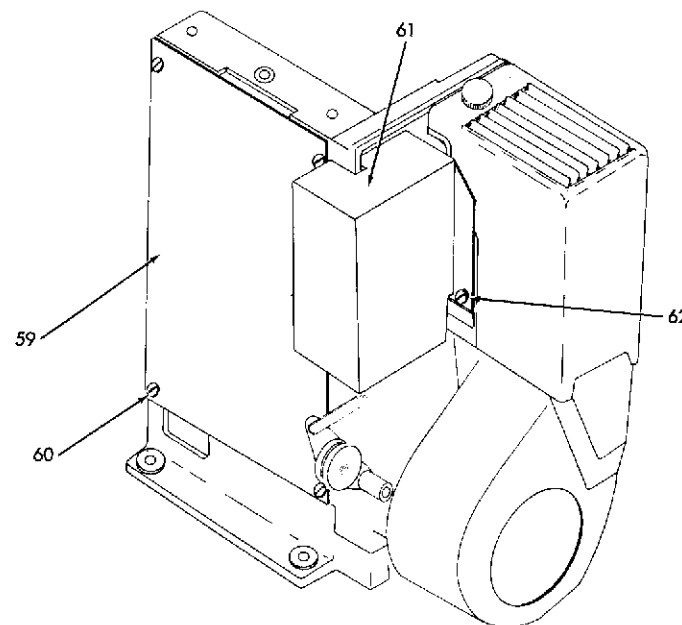
OSCILLATING SLEEVE & CAM HUB ASSEMBLY



CAM SHUTTER & OSCILLATOR ASSEMBLIES



STARTING LEVER ASSEMBLY



BODY PLATE ASSEMBLY

STARTING LEVER IDLING ASSEMBLY

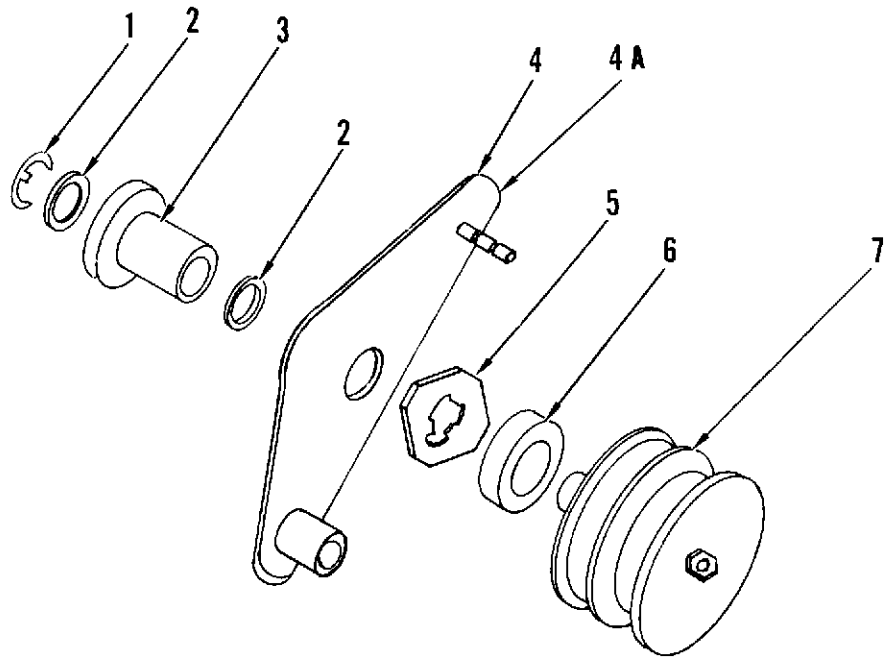
No.	Part No.	Part Name	Qty.
	47555A	Starting lever idler assembly	1
1	S235-3	#3 "E" ring	1
2	19482	Shim washer	2
3	47598	Idler bearing	1
4	47596A	Starting lever idler plate assembly (includes 3, 4A, 5)	1
4A	47596-2	Start lever idler plate sub assembly	1
5	S354-1M	Retainer	1
6	47618	Felt, oiling	1
7	47600A	Idler pulley assembly	1
	47602	Stud	

SHUTTLE AND MOUNTING ARM ASSEMBLY

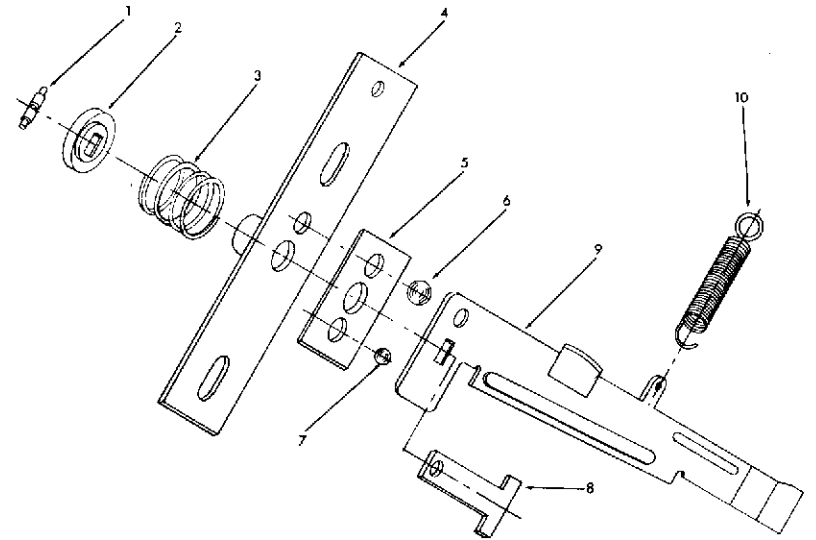
No.	Part No.	Part Name	Qty.
	48017-A	Shuttle and mounting arm assembly	1
1	47591	Spring pin	1
2	48002	Spring retainer	1
3	48000	Spring, shuttle	1
4	47593-A	Mounting arm assembly	1
5	47633	Shuttle ball felt	1
6	47589	3/16 Dia Steel ball	1
7	47590	1/8 Dia Steel ball	1
8	48001	Link, spring	1
9	48016-A	Shuttle assembly	1
10	47639	Shuttle spring	1

STILL PICTURE SHUTTER ASSEMBLY

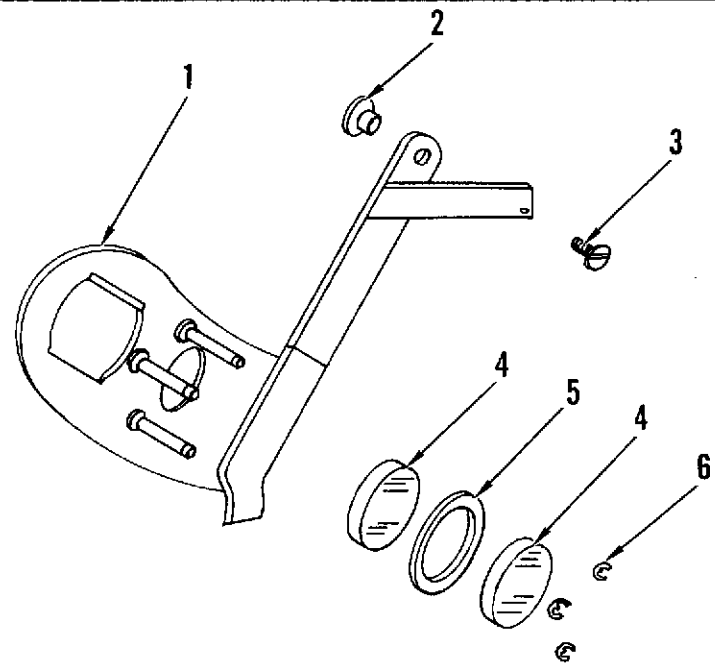
No.	Part No.	Part Name	Qty.
	47549-A	Still picture shutter assembly	1
1	47549-2	Still picture shutter sub assembly	1
2	19345	Still picture shutter pivot	1
3	S254-540-4	5-40 x 1/4 Binder head screw	1
4	47271	Filter glass	2
5	47556	Glass separating spring	1
6	S235-2	#2 "E" ring	3



STARTING LEVER IDLING ASSEMBLY



SHUTTLE AND MOUNTING ARM ASSEMBLY



STILL PICTURE SHUTTER ASSEMBLY

TAKE-UP CLUTCH ASSEMBLY

No.	Part No.	Part Name	Qty.
	26836A	Take up clutch assembly complete	1
1	26836-2	Gear and hub assembly	1
2	26826	Clutch ball	6
3	26825	Clutch ball retainer	2
4	26859-A	Take up pulley assembly	2
5	23063	Thrust washer	1
6	S277-832-2	8-32 x 1/8 Socket set screw	2
7	26860-A	Cam and hub assembly	1
8	46430	Clutch actuating spring	2

See page 8 for Service and Care.

SPIRAL INTERMEDIATE GEAR & SHAFT ASSEMBLY

No.	Part No.	Part Name	Qty.
	47535-A	Spiral intermediate gear and shaft assembly	1
1	S301-5/16 24	5/16-24 Hex cap nut	1 *
2	30190-2	Spiral intermediate gear shaft & hub assembly	1
3	S195-16	3/16 x 3/8 x .004 Flat washer	As req'd
4	47536-A	Spiral intermediate pinion assembly	1
5	S195-9	3/16 x 3/8 x 1/64 Flat washer	1
6	S235-3	#3 "E" ring	1

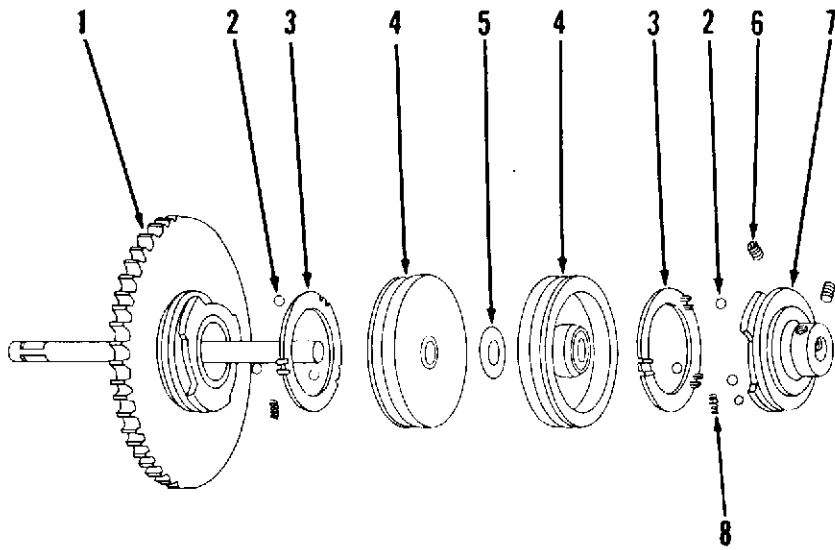
* Not furnished as part of assembly.

FILTER GEAR AND FLYWHEEL ASSEMBLY

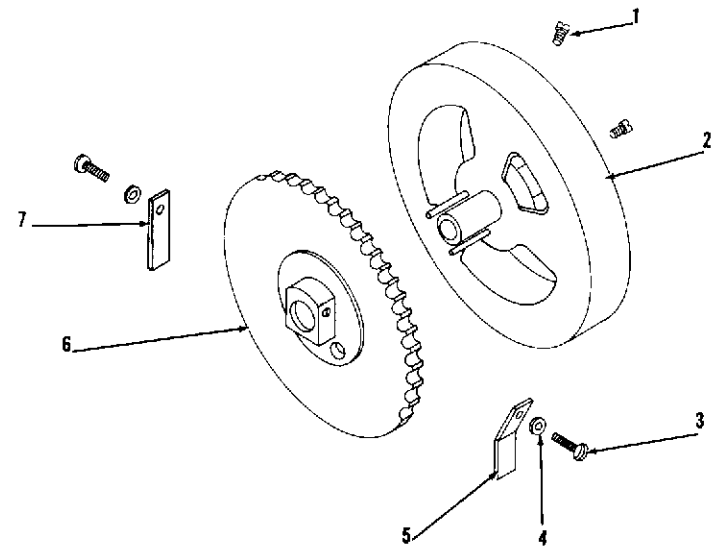
No.	Part No.	Part Name	Qty.
	47223A	Filter flywheel & gear assembly	1
1	S253-540-5	5-40 x 5/16 Fillister head screw	2
2	47223-2	Sound sprocket flywheel & hub assembly	1
3	S251-256-2	2-56 x 1/8 Round head screw	2
4	S199-2	#2 Plain washer	2
5	19248-50	Sound filter spring	1
6	19270-2	Sound sprocket gear assembly	1
7	19248	Sound filter spring	1
	19270-A	Hub assembly sound sprocket gear (assembly of 3, 4, 5, 6, 7)	

FEED SPROCKET DRIVE GEAR ASSEMBLY

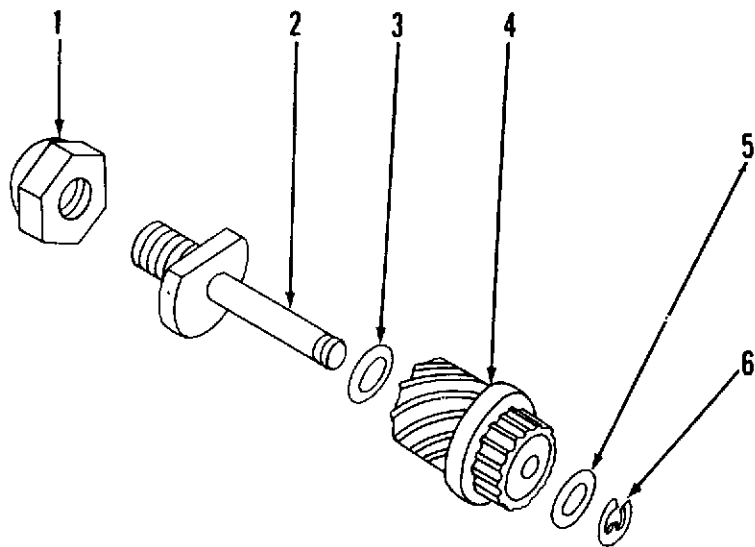
No.	Part No.	Part Name	Qty.
	19180-A	Feed sprocket drive gear assembly	1
1	S254-540-5	5-40 x 5/16 Binder head screw	3
2	19180	Sound sprocket drive gear	1
3	19496-A	Feed sprocket drive pinion assembly	1



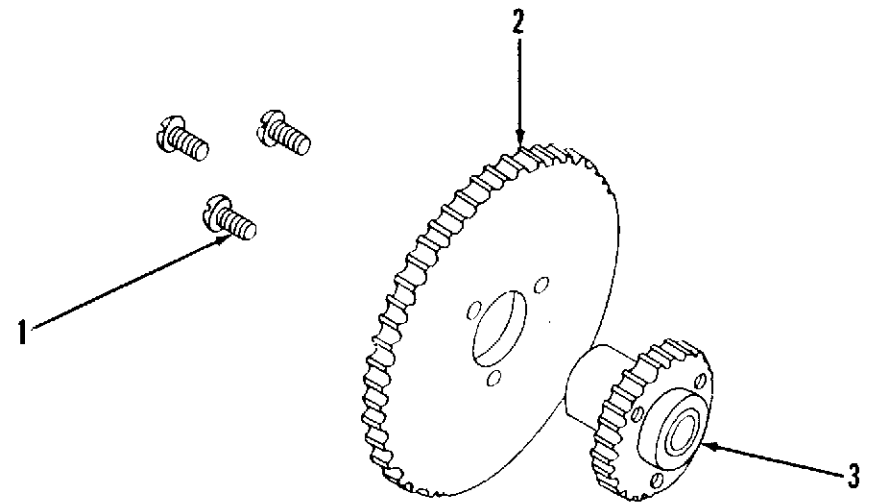
TAKE-UP CLUTCH ASSEMBLY



FILTER GEAR AND FLYWHEEL ASSEMBLY



SPIRAL INTERMEDIATE GEAR & SHAFT ASSEMBLY



FEED SPROCKET DRIVE GEAR ASSEMBLY

AUTOMATIC TRIP LEVER ASSEMBLY

(Safety Film Trips)

No.	Part No.	Part Name	Qty
	46145-AR	Automatic trip lever assembly	1
1	46145-3R	Automatic trip lever sub assembly	1
2	T-149	Inside automatic trip roll	3
3	T-148	Outside automatic trip roll	3
4	26739	Hand trip knob	1
5	S235-1	#1 "E" ring	3
6	47303	Eccentric pivot	1
7	S254-440-5	4-40 x 5/16 Binder head screw	1
8	S235-2	#2 "E" ring	1
9	S199-6	#6 Plain steel washer	1
10	46223	Automatic trip lever tension spring	1
11	19369	Shim washer	As req'd
12	20215	Automatic trip plunger	1

LENS MOUNT ASSEMBLY (New Style)

No.	Part No.	Part Name	Qty.
	48033-A	Lens mount assembly	1
1	48022	Pressure plate	1
2	48023	Guide, pressure plate	2
3	48030	Spring, pressure plate	2
4	48026	Lens spring	1
5	48028	Lens lock screw	1
6	48038	Lens lock spring	1
7	48024	Lens block screw	2
8	30165	Lens mount lock plunger	1
9	19301	Lens mount stop screw	1
10	48025	Lens mount	1
11	30163	Lens mount spring release	1
12	48029	Hinge spring	1
13	S251-436-3	4-36 x 3/16 Round head screw	1
14	S251-436-2	4-36 x 1/8 Round head screw	1
15	48135	Lens retaining tip	1

* See page 14 - 48031

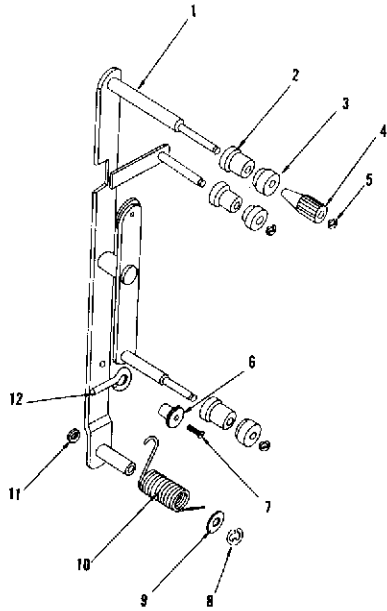
LENS MOUNT ASSEMBLY

No.	Part No.	Part Name	Qty.
	47501-AR	Lens mount assembly	1
1	47502-A	Aperture plate assem (includes 2 & 3)	1
2	19289	Aperture plate rivet	1
3	30153A	Aperture retaining plate assembly	1
4	S254-632-3	6-32 x 3/16 Binder head screw	2
5	19859	Lens mount pivot plate	1
6	19209	Aperture plate guide	1
7	20045	Lens spring tension screw	1
8	13327	Lens lock screw	1
9	30100-A	Lens tension spring	1
10	30165	Lens mount lock plunger	1
11	23240	Lens mount stop retainer	1
12	19301	Lens mount stop screw	1
13	19254-2R	Lens mount sub assembly (includes 4, 5)	1
14	S251-436-3	4-36 x 3/16 Round head screw	1
15	30163	Lens mount spring release	1
16	20046	Lens mount plate screw	1
17	S254-632-2	6-32 x 1/8 Binder head screw	2

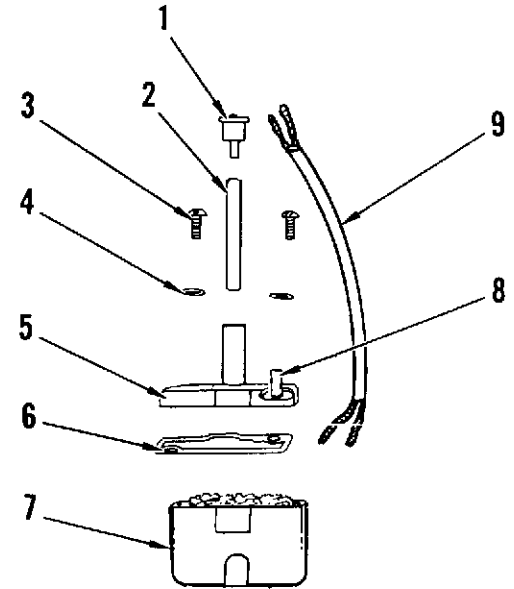
OIL RESERVOIR ASSEMBLY

(Lubromatic)

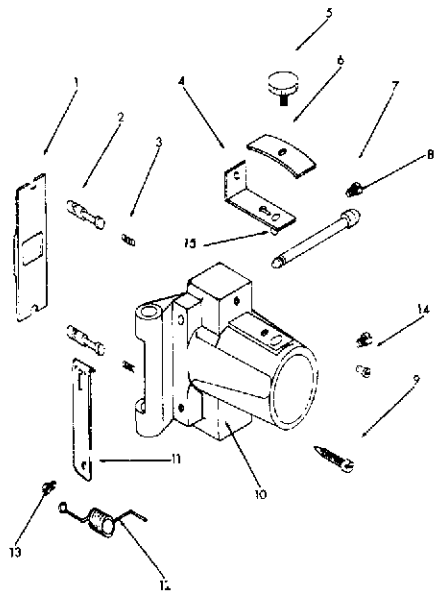
No.	Part No.	Part Name	Qty.
	47603A	Oil reservoir assembly	1
1	47895-A	Oiler assembly	1
2	47896-A	Oil tube	1
3	S251-540-4	5-40 x 1/4 Round head screw	2
4	W-74	#5 Fibre washer	2
5	47605-A	Cover assembly (includes 8 and 9)	1
5A	47605	Cover, oil reservoir	1
6	36270	Gasket	1
7	47604	Oil reservoir body	1
8	46220	Tube, oil	1
9	47890A	Oil reservoir tube & wick assembly	1



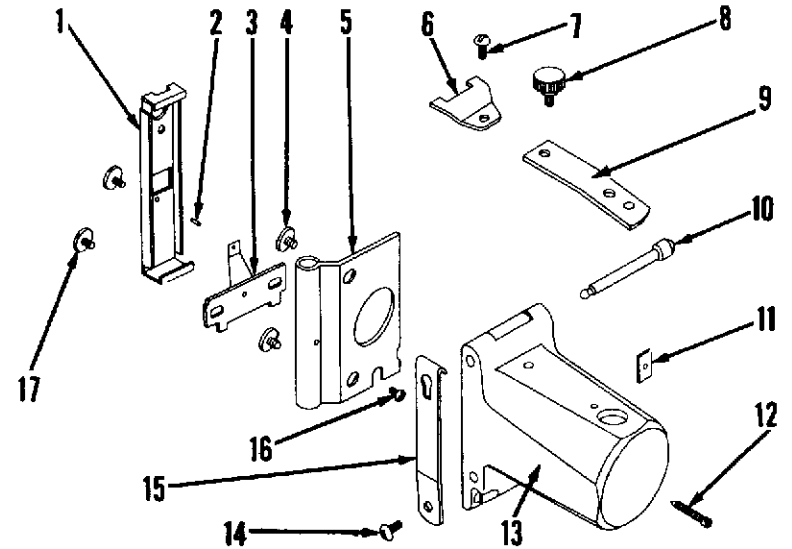
AUTOMATIC TRIP LEVER ASSEMBLY
(Safety Film Trips)



OIL RESERVOIR ASSEMBLY
(Lubrimatic)



LENS MOUNT ASSEMBLY (New Style)



LENS MOUNT ASSEMBLY

SOUND CORE ASSEMBLY

No.	Part No.	Part Name	Qty.
	30428-A	Sound core assembly	1
1	S254-540-3	5-40 x 3/16 Binder head screw	1
2	30428-3	Sound channel assembly	1
2A	26546-2	Sound channel sub assembly	1
3	20593	Sound lens holder	1
4	20761	Sound lens holder screw	2
5	30428-2	Sound lens assembly	1
6	26545-2	Sound core sub assembly	1
7	36161	Escutcheon cap nameplate	1
8	S257-348-4	3-48 x 1/4 Oval head machine screw	2
9	S277-540-2	5-40 x 1/8 Socket set screw	1
10	19221	Plug	1
11	S253-540-3	5-40 x 3/16 Fillister head screw	1

SOUND UNIT CASTING ASSEMBLY

No.	Part No.	Part Name	Qty.
1	46153-AR	Sound unit casting assembly	1
2	787	Sound core lock screw	1 *
3	46154	Insulating pad	1
4	S253-832-6	8-32 x 3/8 Fillister head screw	2 *
5	19179	Bushing 1/4" I.D.	2
6	19063	Bushing 3/16" I.D.	2

* Order separately. Not included in 46153AR assembly.

LOOP TENSION ARM ASSEMBLY

No.	Part No.	Part Name	Qty.
	26725-AR	Loop tension arm assembly	1
1	26725-2R	Loop tension arm sub-assembly	1
2	18058-A	Loop tension roll	1
3	26727	Tension roll grip	1
4	S235-2	#2 "E" ring	1

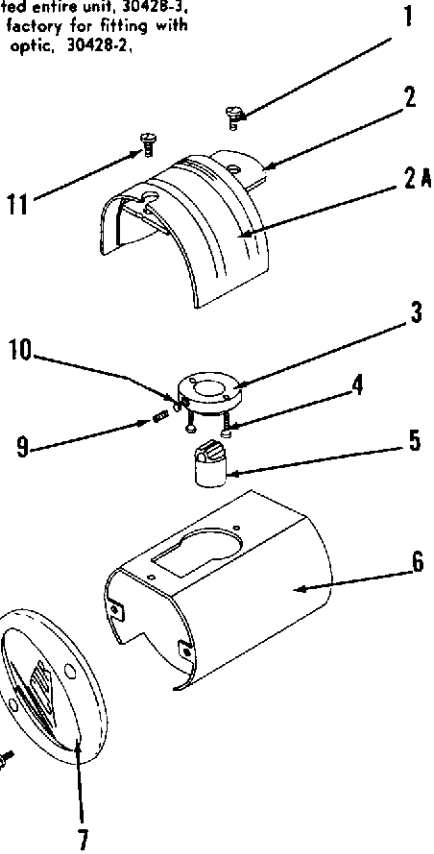
SOUND SPROCKET TENSION ARM ASSEMBLY

No.	Part No.	Part Name	Qty.
	26726-AR	Sound sprocket tension arm assembly	1
1	26726-2R	Sound sprocket tension arm sub-assem.	1
2	19233-A	Sound sprocket tension roll	1
3	26727	Tension roll grip	1
4	S235-2	#2 "E" ring	1
5	S235-3	#3 "E" ring	1
6	19579	Reverse sprocket tension roll	1

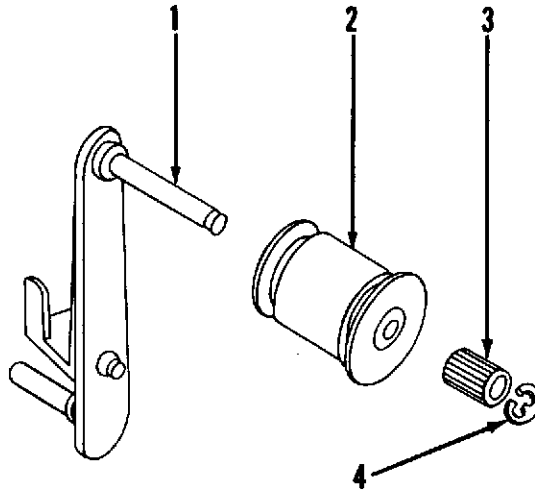
FILM SHOES

No.	Part No.	Part Name	Qty.
1	47515A	Film shoe assembly	2
1A	48034A	Film shoe assembly (stainless steel)	2
2	36156	Film shoe bracket	2
3	36155	Film shoe spring	2
4	S254-832-4	8-32 x 1/4 Binder head screw	4

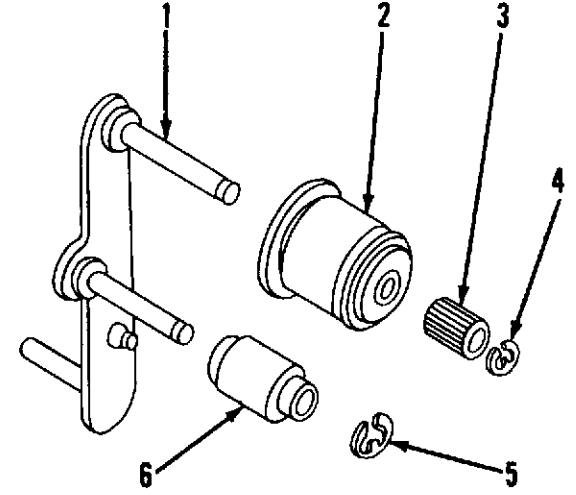
WARNING: Do not tamper with lock screw No. 9. Resetting this screw requires use of sound lens adjusting fixture, Part No. TB793. It is suggested entire unit, 30428-3, be sent to factory for fitting with new sound optic, 30428-2.



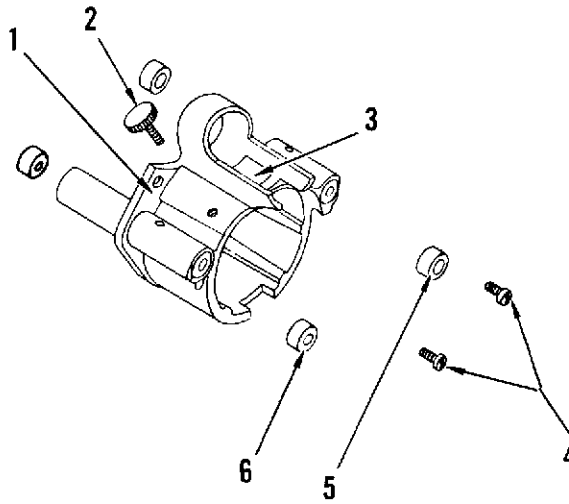
SOUND CORE ASSEMBLY



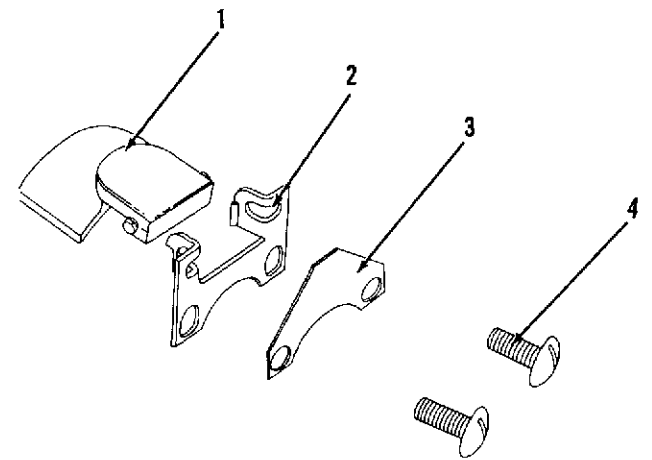
LOOP TENSION ARM ASSEMBLY



**SOUND SPROCKET
TENSION ARM ASSEMBLY**



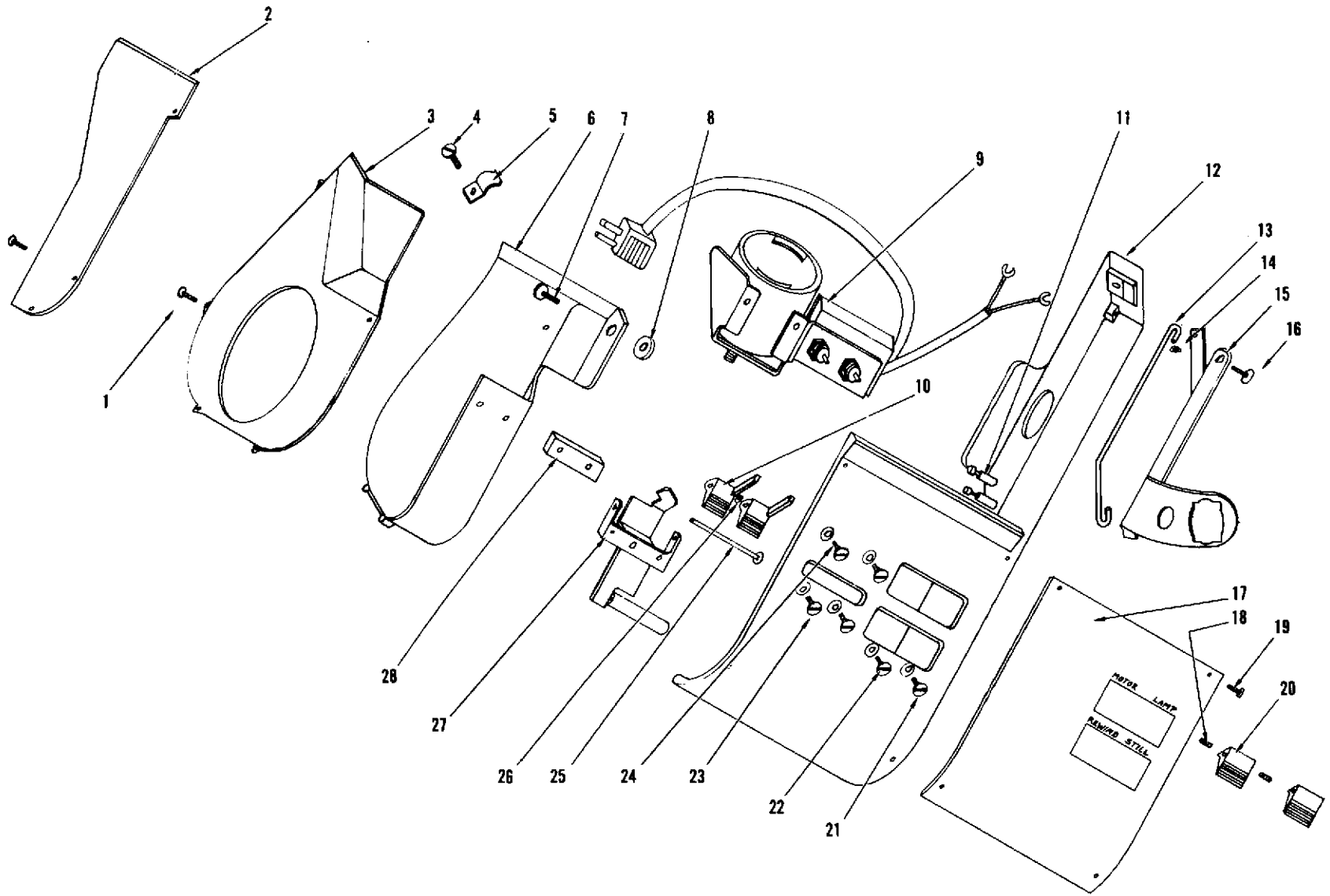
SOUND UNIT CASTING ASSEMBLY



FILM SHOES

LAMPHOUSE ASSEMBLY

No.	Part No.	Part Name	Page	Qty.	No.	Part No.	Part Name	Page	Qty.
	47544A	Lamp house assembly		1	19	S254-440-2	4-40 x 1/8 Binder head screw		4
1	S279-256-2	2-56 x 1/8 Round head thread cutting screw		8	20	46128	Switch lever		2
2	47578	Cover plate		1	21	S252-540-6	5-40 x 3/8 Flat head screw		1
3	47691	Scroll cover		1	22	S252-540-8	5-40 x 1/2 Flat head screw		1
					23	S252-540-5	5-40 x 5/16 Flat head screw		2
4	S254-540-2	5-40 x 1/8 Binder head screw		1	24	S252-832-6	8-32 x 3/8 Flat head screw		2
5	S360-1	Wire clamp		1	25	46135	Lever pivot		1
6	47690	Diecast scroll		1	26	S199-5	#5 Plain washer		1
7	S254-540-4	5-40 x 1/4 Binder head screw		1	27	47568A	Rewind lock bracket assembly		1
8	S195-4	Fibre washer		1	28	47563	Scroll cushion		1
9	47553-A	Power lead wire assembly	35	1		47545A	Lamp baffle assembly	35	1
10	46127A	Still and rewind lever tab		2		47817A	Lamp house cover assembly	35	1
11	47559	Stud, lamp baffle		2					
12	47551A	Lamp house sub assembly		1					
13	47558	Still shutter connecting wire		1					
14	19345	Still picture shutter pivot		1					
15	47549-A	Still picture shutter assembly		1					
16	S254-540-7	5-40 x 7/16 Binder head screw		1					
17	47824	Nameplate		1					
18	S277-540-3	5-40 x 3/16 Socket set screw		2					



LAMPHOUSE ASSEMBLY

LAMPHOUSE COVER ASSEMBLY

No.	Part No.	Part Name	Qty.
	47817A	Lamphouse cover assembly	1
1	47819-R	Lamphouse cover	1
2	47818-A	Grill assembly	1
3	46103	Retaining screw	1
4	S301-121-12	1/8 x 3/16 Rivets	4
5	S235-3	#3 "E" ring	1
6	47840	Emblem	1

LAMP BAFFLE ASSEMBLY

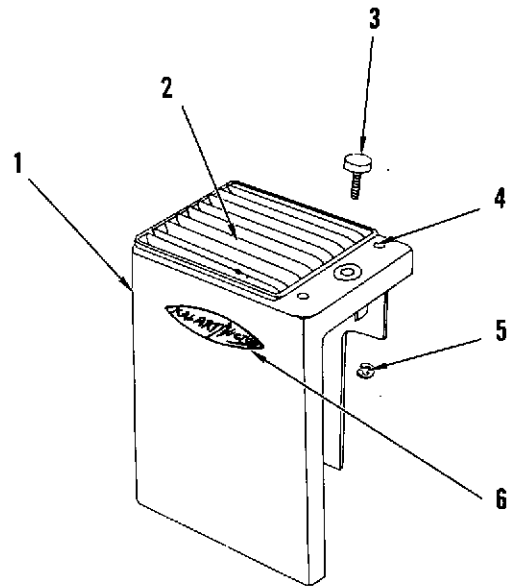
No.	Part No.	Part Name	Qty.
	47545-A	Lamp baffle assembly	1
1	46111	Spring, reflector	1
2	46110	Reflector	1
3	47545-2	Lamp baffle sub assembly	1
4	20510	Condenser lens	1
5	46109	Lens spring	1

POWER LEAD WIRE ASSEMBLY

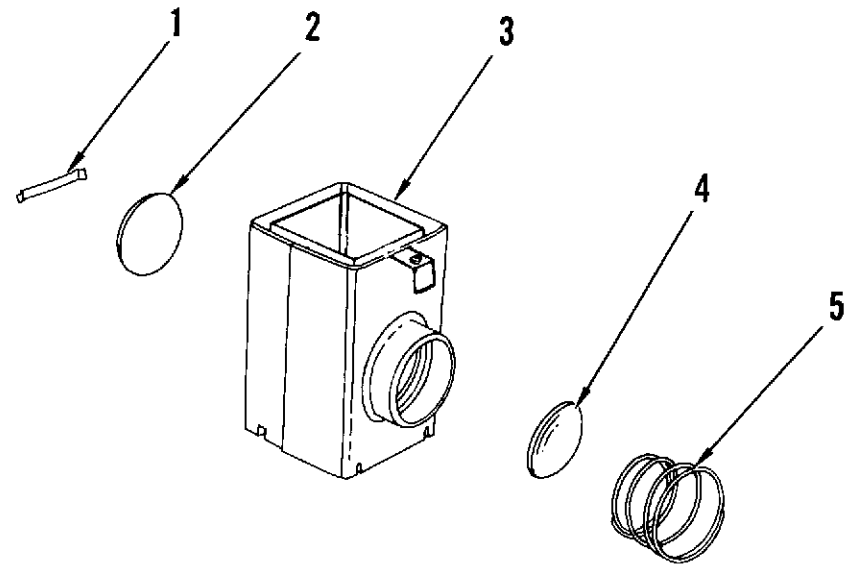
No.	Part No.	Part Name	Qty.
	47553A	Power lead wire assembly	1
1	20490	Lamp socket	1
2	S555-3-32	#3 x 4" Vinyl tubing	1
3	47566-A	Lamp adjusting plate assembly	1
4	47151	Motor and lamp switch	2
5		Switch nut	4
6	47573	Lamphouse terminal insulator	1
7		Switch washer	2
8	S324-1024	10-24 Hex nut	1
9	S199-10	#10 Plain washer	2
10	47625	Bowed washer	1
11	47565A	Lamp and switch bracket assembly	1
12	47576	Lamp adjusting spacer	As req'd
13	S252-436-7	4-36 x 7/16 Flat head screw	2
14	47652	Mechanism power cord	1

REWIND DISC BAR AND PULLEY ASSEMBLY

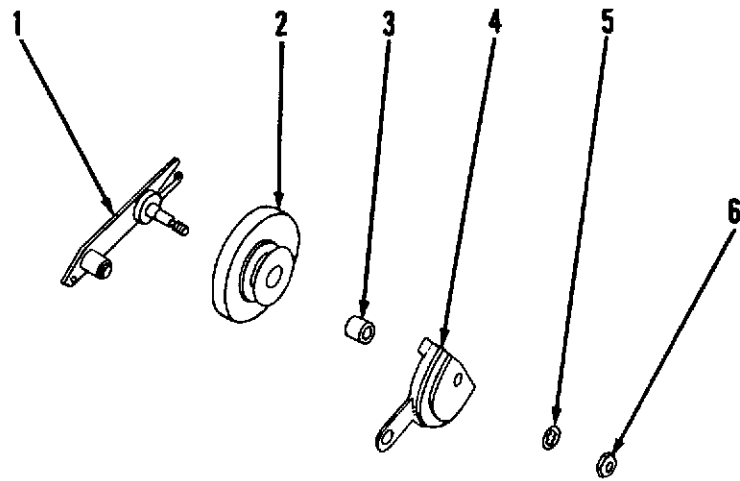
No.	Part No.	Part Name	Qty.
	46138-A	Rewind disc bar and pulley assembly	1
1	46138-2	Rewind pivot assembly	1
2	26883-2	Rewind pulley assembly	1
3	26909	Rewind pulley spacer	1
4	26916	Rewind belt guard	1
5	S200-10	#10 Internal tooth lockwasher	1
6	S324-1032	10-32 Hex nut	1



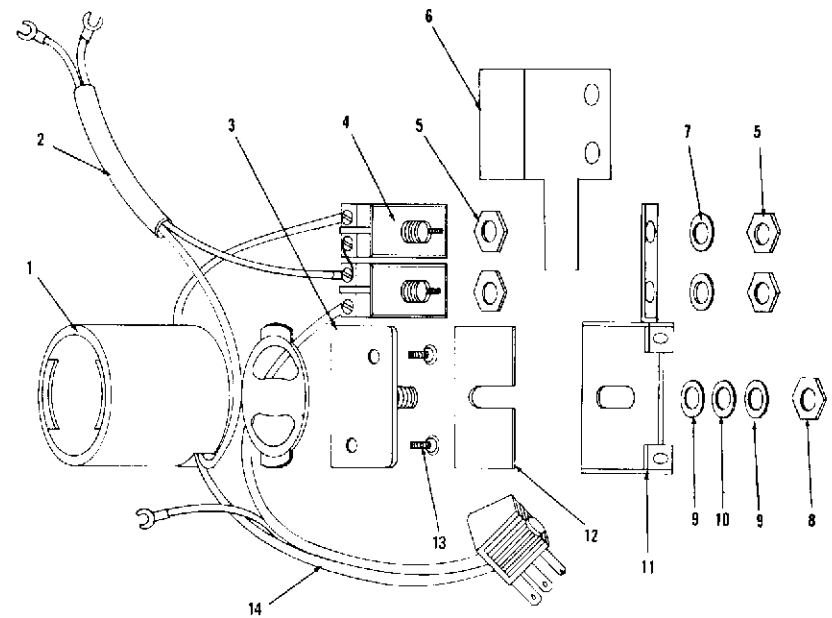
LAMPHOUSE COVER ASSEMBLY



LAMP BAFFLE ASSEMBLY



REWIND DISC BAR AND PULLEY ASSEMBLY

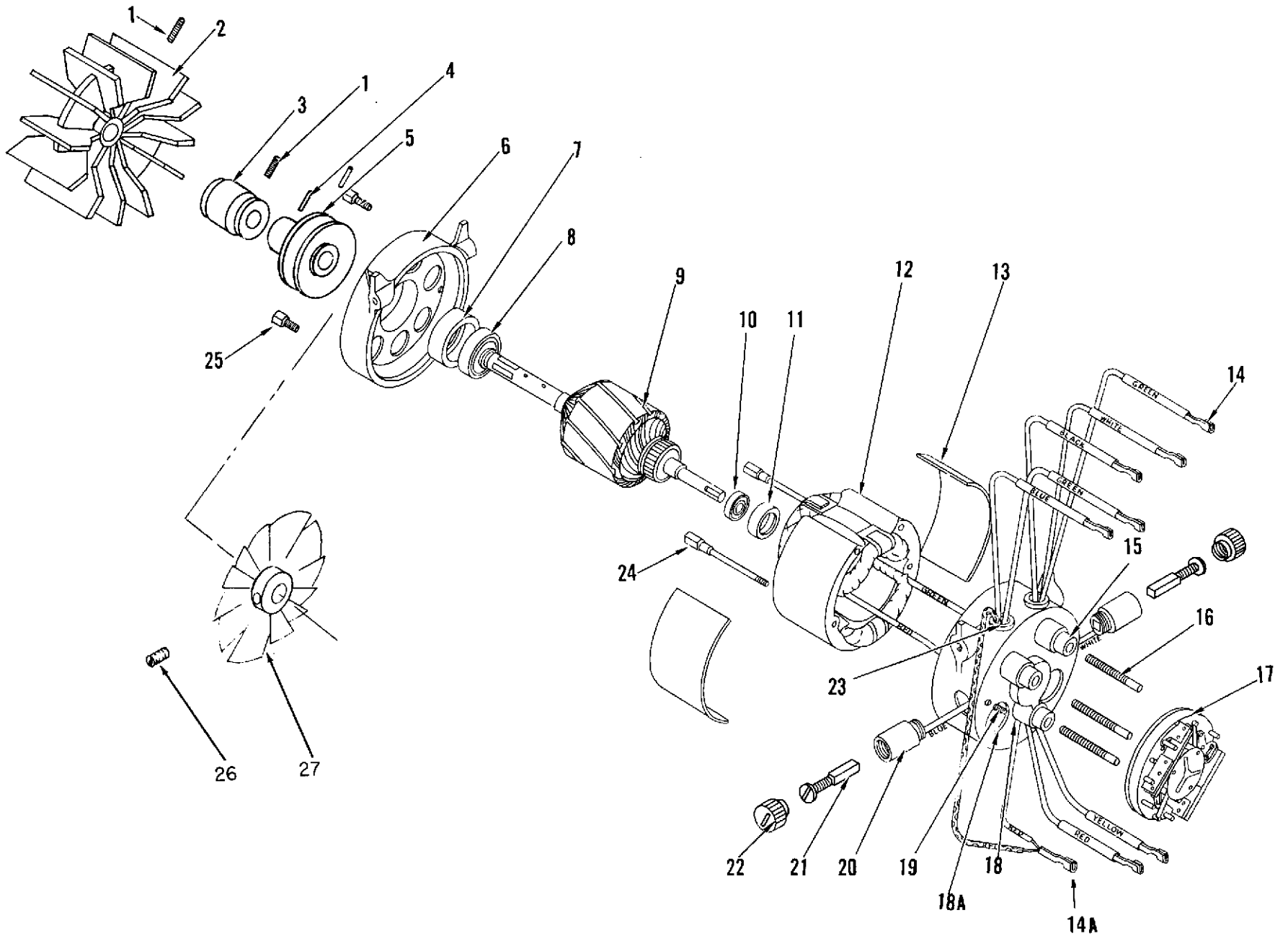


POWER LEAD WIRE ASSEMBLY

MOTOR ASSEMBLY

No.	Part No.	Part Name	Qty.	No.	Part No.	Part Name	Qty.
	47660-A	Motor assembly	1	14A	S622-2	Knife connector	1
1	S277-832-3	8-32 x 3/16 Socket set screw	2*	15	26839	Governor brush insulator	3
2	47530	Fan, paddle	1*	16	19534	Governor brush	3*
3	47658	Rewind sheave molded assembly	1*	17	47745	Governor, two speed	1*
4	S223-062-500	1/16 x 1/2 Roll pin	2	18	47660	Brush end motor cap casting	1
5	47539	Pulley, motor	1	18A	47660-2	Motor brush end cap assembly	1
6	26840	Cap, pulley end, motor	1	19	20774	Brush holder set screw	2
7	47291	5/16 Ball bearing rubber mounting	1	20	47542	Motor brush holder	2
8	26864	5/16 Ball bearing	1	21	47624	Motor brush	2
9	47661	Armature, motor	1	22	47623	Motor brush cap	2
10	26862	1/4 Ball bearing	1	23	19788	Insulator, motor cap	3
11	47292	1/4 Ball bearing rubber mounting	1	24	19080	Motor field clamp stud	2
12	30519	Field, motor	1	25	26872	Motor cap screw	2
13	19010	Motor field sleeve	2	26	S277-832-2	8-32 x 1/8 Socket set screw	1
14	S622-1	Knife connector	7	27	47923	Fan auxiliary, motor	1

* Order separately, not furnished as part of 47660-A.

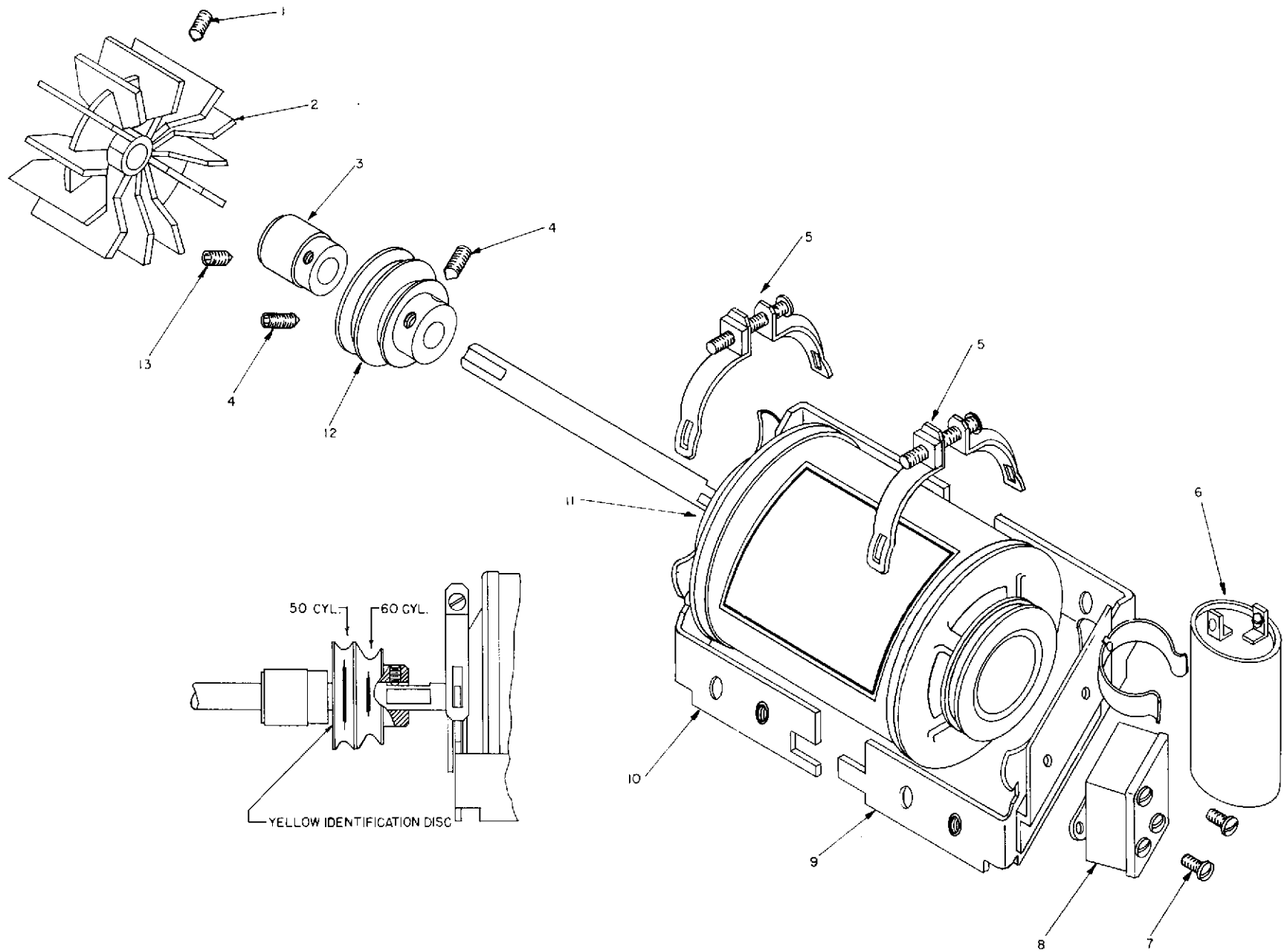


MOTOR ASSEMBLY

INDUCTION MOTOR ASSEMBLY

No.	Part No.	Part Name	Qty
	48195-SP	Induction motor assembly	1
1	S277-832-3	8-32 x 3/16 Socket set screw	2*
2	47530	Fan, paddle	1*
3	47658	Rewind sheave molded assembly	1
4	S277-832-3	8-32 x 3/16 Socket set screw	2
5	48192-1	Clamp	2
6	48198	Condenser, motor starting	1
7	S254-540-3	5-40 x 3/16 Binding head screw	2
8	48199	Relay, motor starting	1
9	48193-A	Bracket assembly	1
10	48193-1	Bracket	1
11	48192-SP	Induction motor	1
12	48196	Pulley, 50/60 cycle	1
13	S277-832-3	8-32 x 3/16 Socket set screw	1

* Order separately, not furnished as part of 48195-SP.

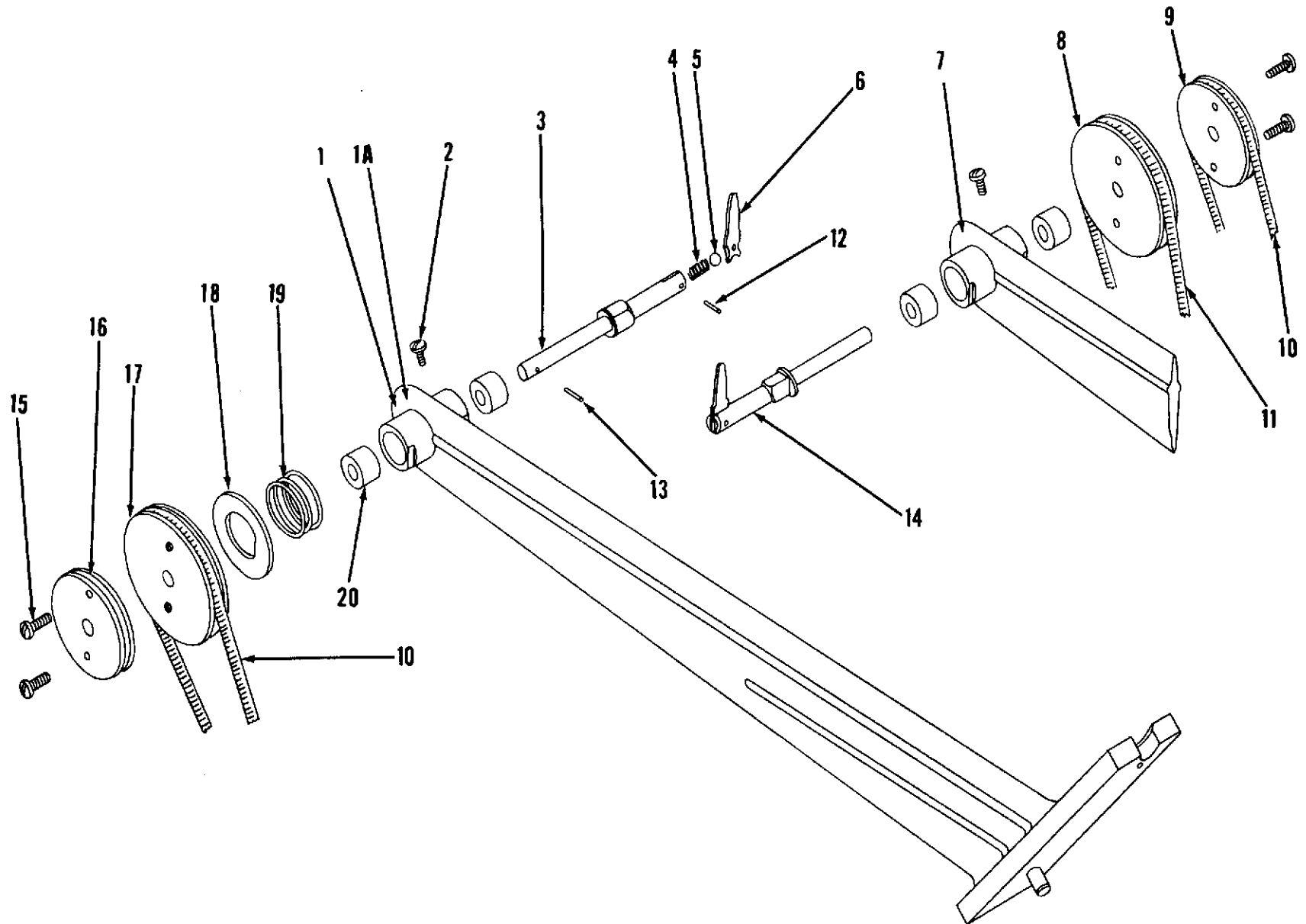


INDUCTION MOTOR ASSEMBLY

FRONT AND REAR REEL ARMS

No.	Part No.	Part Name	Qty.	No.	Part No.	Part Name	Qty.
1	30380-A	Front reel arm assembly, complete	1	10	23217	Take-up belt	1*
1A	30379-2	Reel arm sub-assembly (front or rear)	1	11	23216	Rewind belt	1*
2	S253-632-2	6-32 x 1/8 Fillister head screw	1	12	S223-062-0305	Reel lock pin	1
3	22143	Reel shaft	1	13	S223-062-500	1/16 x 1/2 Roll pin	1
4	20358	Reel lock spring	1	14	22143-A	Reel shaft assembly	1
5	20359	Reel lock ball	1	15	S254-632-6	6-32 x 3/8 Binder head screw	2
6	2307	Reel lock	1	16	22042-50-R	Reel arm auxiliary pulley	1
7	30379-AR	Rear reel arm assembly, complete	1	17	30382-R	Take-up reel pulley	1
8	30383-R	Rewind reel pulley	1	18	27307	Reel arm friction washer	1
9	22042-50-R	Reel arm auxiliary pulley	1	19	19595	Reel arm friction spring	1
				20	26937	Reel arm bushing	2

*Order separately. Not furnished as part of reel arm assembly.



FRONT AND REAR REEL ARMS

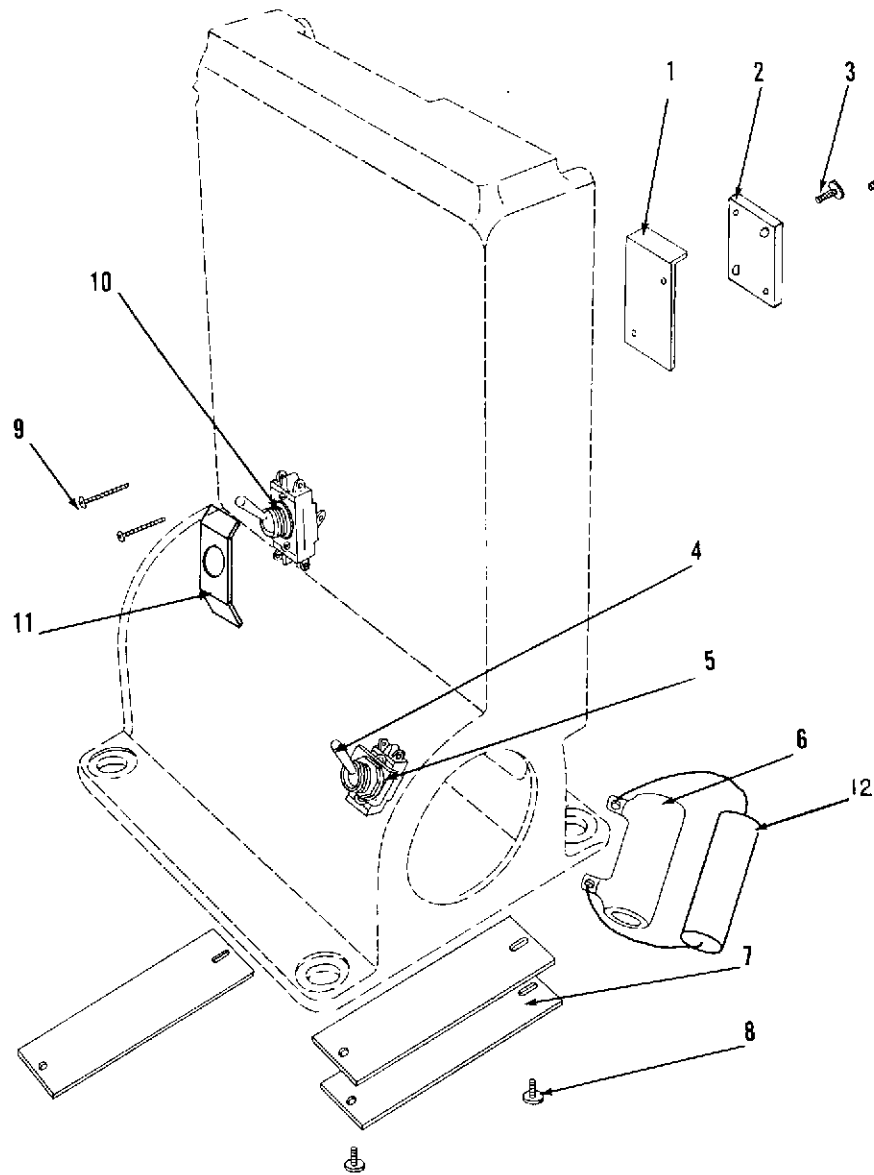
ELECTRICAL COMPONENTS

No.	Part No.	Part Name	Qty.
	47554-A	Motor wiring harness	1
1	26950	Insulator	1
2	47642	Block, connector	1
3	S254-540-4	5-40 x 1/4 Binder head screw	2
4	23340	Switch S. P. S. T.	1
5	30531	Lock, switch	1
6	19685	Resistor 70-ohm 30 watt	1
7	19862	Motor terminal insulator	3
8	S254-540-5	5-40 x 5/16 Binder head screw	2
9	M. S. 253	2-56 x 3/8 Self tapping type F screw	2
10	11026	Switch D. P. D. T.	1
11	19223	Insulator	2
12	36228	Motor, condenser .22 MFD, 400 V.	1

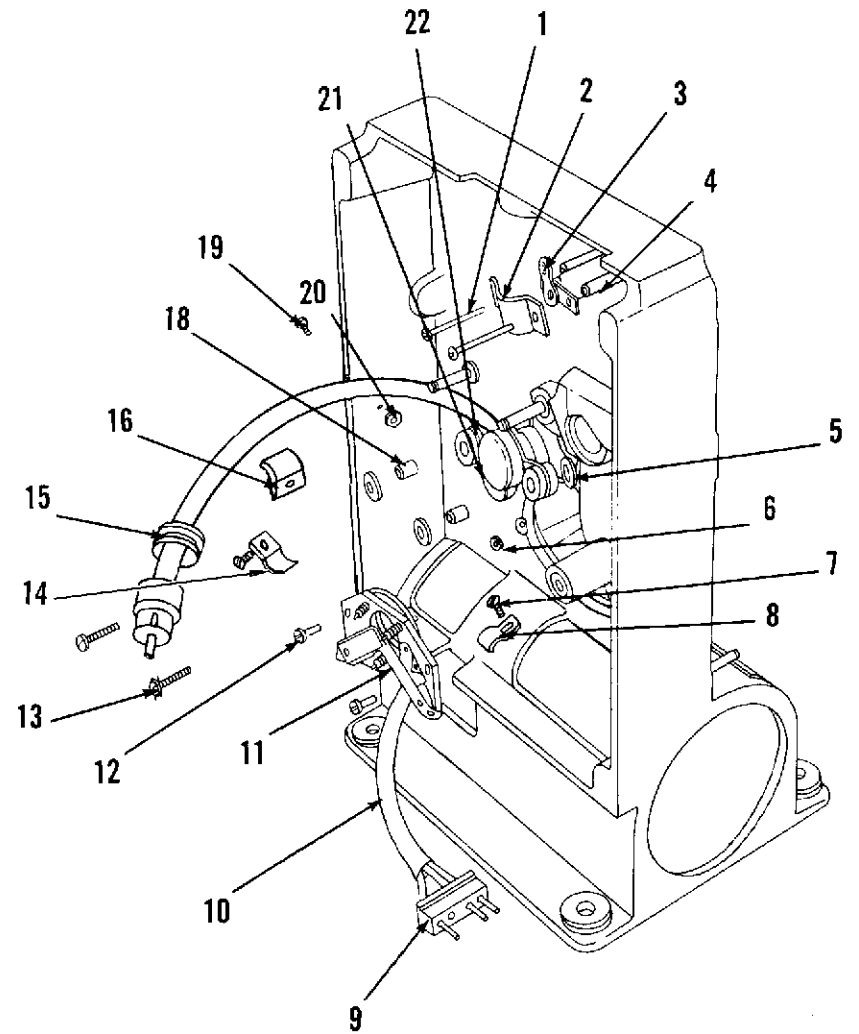
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P.E.C. LEAD & EXCITER LAMP COMPONENTS

No.	Part No.	Part Name	Qty.
1	S251-540-18	5-40 x 1 1/8 Round head screw	2
2	19389	Pilot lamp socket insulator	1
3	19296	Pilot lamp socket	1
4	47101	Pilot lamp sleeve	2
5	23144	Washer	2
6	S198-6	#6 Small brass flat washer	As req'd
7	S254-540-3	5-40 x 3/16 Binder head screw	1
8	20063	Cable clamp	1
9	20628	Exciter lamp socket plug, male	1
10	26904-A	Exciter lamp base plate assembly	1
11	19547-51-2	Exciter lamp socket assembly	1
12	S253-540-5	5-40 x 5/16 Fillister head screw	2
13	S254-540-8	5-40 x 1/2 Binder head screw	2
14	S360-1	Cable clamp	1
15	20078	Rubber grommet	1
16	38001	Clamp	1
18	23076	P.E.C. screw sleeve	2
19	S254-540-5	5-40 x 5/16 Binder head screw	1
20	S324-540	5-40 Hex nut	1
21	47766-A	P.E.C. lead & socket assembly	1
22	19143	Rubber grommet	2



ELECTRICAL COMPONENTS



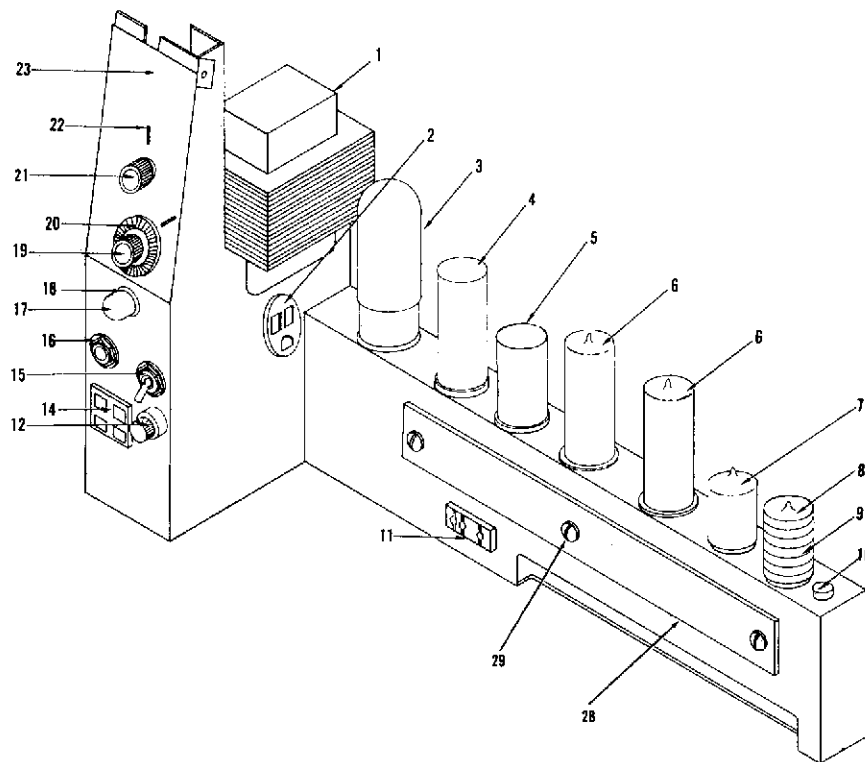
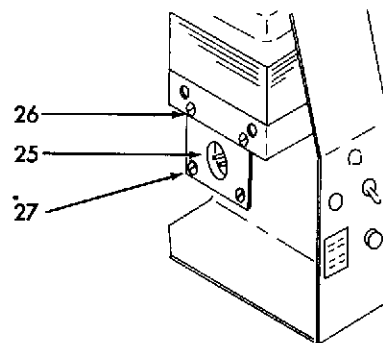
P.E.C. LEAD & EXCITER LAMP COMPONENTS

70-15 AMPLIFIER

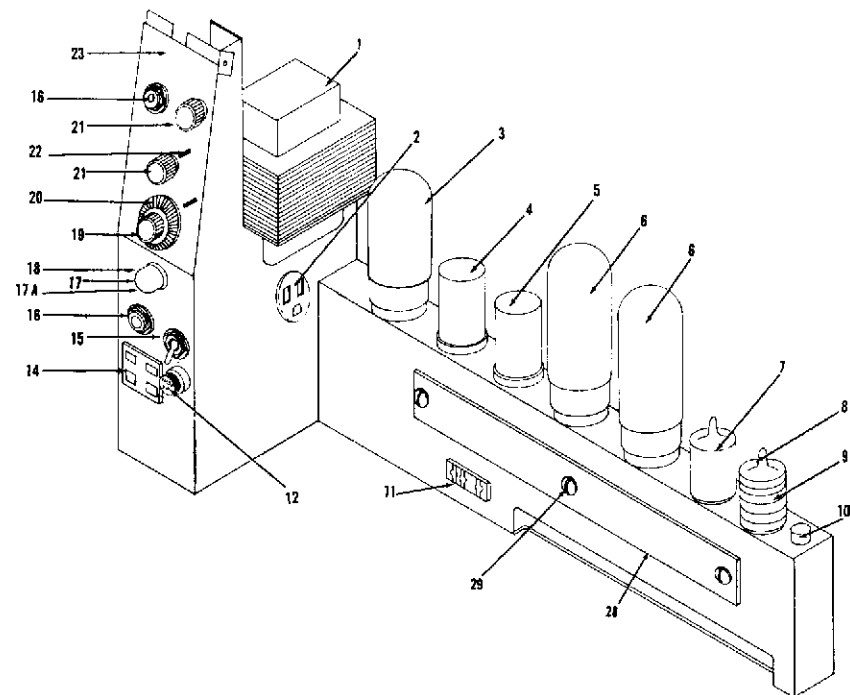
70-25 AMPLIFIER

No.	Part No.	Part Name	Qty.
	47770-A	Amplifier complete	1
1	47767	Power transformer	1
2	47700	Female power plug	1
3	5Y3GT	Tube	1
4	36261	Condenser 30/350V, 20/350V, 20/25V, Can	1
5	36294	Condenser electrolytic 30/450V, Can	1
6	6973	Tube	2
7	12AX7	Tube	1
8	7025	Tube	1
9	30562-9A	Tube shield assembly with lead	1
10	47753	Photocell input	1
11	20629	Exciter lamp socket (female)	1
12	23128	Fuse holder	1
14	26787-1	Speaker socket	1
15	18641	Switch, S. P. S. T.	1
16	18643	Phono jack	1
17	47760	Pilot light lens	1
17A	S701-1-1	Pilot light GE #47	1
18	47759	Pilot light socket	1
19	47780	Center tone control knob	1
20	47781	Outer tone control knob	1
21	47825	Knob, volume control	1
22	S277-832-2	8-32 x 1/8 Socket set screw	2
23	47801	Nameplate	1
	47855A	Tone control assembly (includes 47776 & 47779)	1
	S254-832-6	8-32 x 3/8 Binder head screw for mounting to case	6
	47304A	Cable assembly coax.	1
	47853	Cable tone control 3 conductor	1
	47854	Cable volume control 2 conductor	1
28	48094	Cover	1
29	S254-540-4	5-40 x 1/4 Binding head screw	3
	S199-5	Washer	3

No.	Part No.	Part Name	Qty.
	47901-A	Amplifier complete	1
1	26925	Power transformer	1
2	47700	Female power plug	1
3	5U4	Tube	1
4	36210	Condenser electrolytic 10/450V, 16/450V, Can	1
5	36294	Condenser electrolytic 30/450V, Can	1
6	6L6	Tube	2
7	12AX7	Tube	1
8	7025	Tube	1
9	30562-9A	Tube shield assembly w/lead	1
10	47753	Photocell input	1
11	20629	Exciter lamp socket (female)	1
12	23128	Fuse holder	1
14	26787-1	Speaker socket	1
15	18641	Switch S. P. S. T.	1
16	18643	Phono jack	2
17	47760	Pilot light lens	1
17A	S701-1-1	Pilot light GE #47	1
18	47759	Pilot light socket	1
19	47780	Center tone control knob	1
20	47781	Outer tone control knob	1
21	47825	Knob, volume control	2
22	S277-832-2	8-32 x 1/8 Headless set screw	3
23	47762	Nameplate	1
	S254-832-6	8-32 x 3/8 Binder head screw for mounting to case	6
	47855-A	Tone control assembly (includes 47776 & 47779)	1
25	47908-A	Flush mount receptacle - 2 wire	1
25A	47927A	Flush mount receptacle - 3 wire	1
26	S252-632-6	6-32 x 3/8 Flat head screw	2
27	S254-632-6	6-32 x 3/8 Binder head screw	2
28	48094	Cover	1
29	S254-540-4	5-40 x 1/4 Binder head screw	3
	S199-5	Washer	3



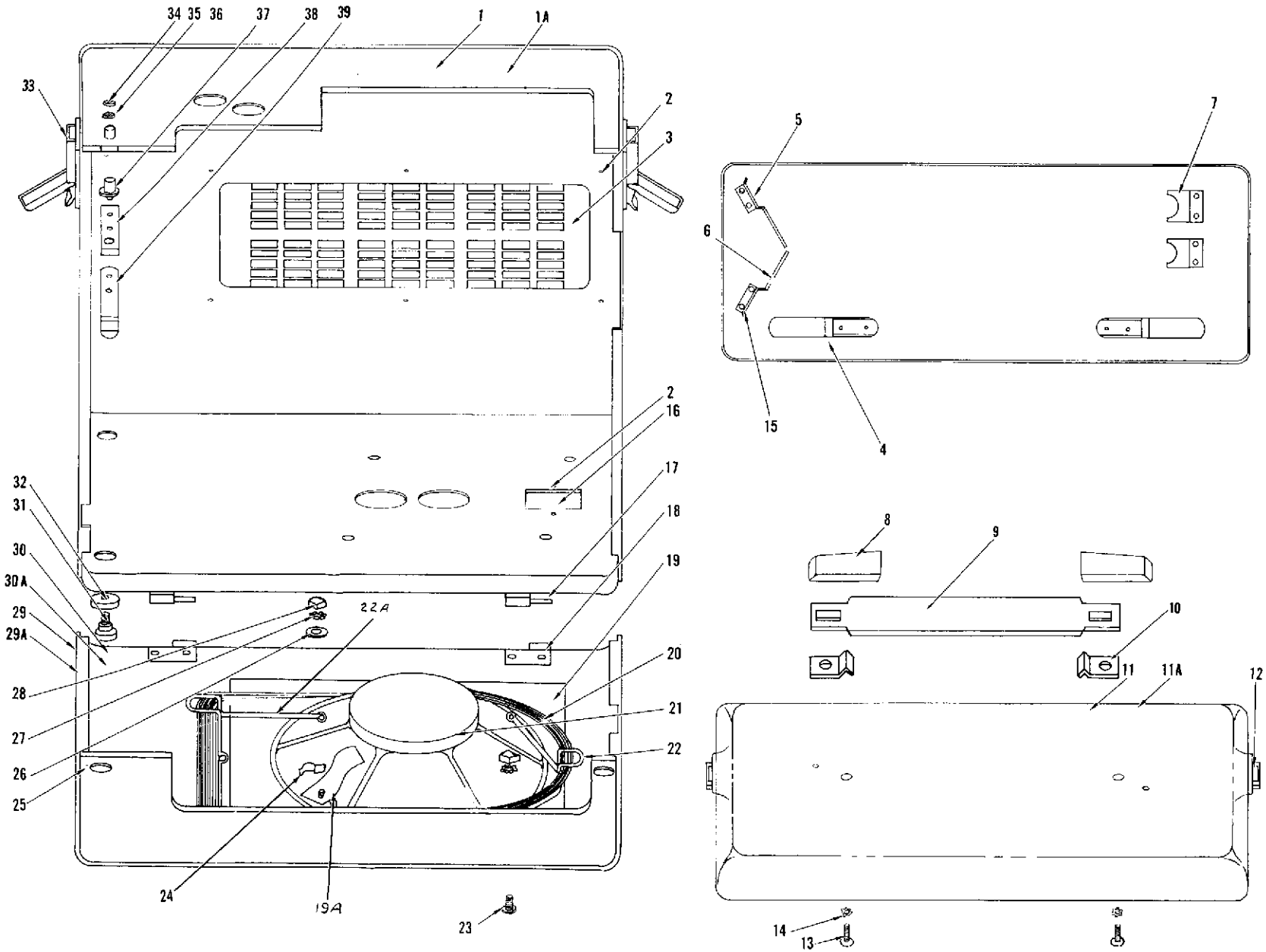
70-15 AMPLIFIER



70-25 AMPLIFIER

70-15 PROJECTOR CASE

No.	Part No.	Part Name	Qty.		No.	Part No.	Part Name	Qty.
	47886-A	Proj case complete w/5 x 7 in door spkr. w/lifftop w/components as noted	1		22	47836	Cord rack	2
	47887-A	Proj case complete w/lifftop w/o spkr.	1		22A	47906	Cord rack	1
1	47500A	Projector case body assembly includes 16, 17, 31 thru 39	1		23	S250-832-12	8-32 x 3/4 Truss head screw	4
					24	38001	Cord clamp	1
					25	47864	Rubber bumper	3
2	S276-4-3	#4 x 3/16 Sheet metal screw	6		26	S199-8	#8 Plain washer	3
3	47758	Case grille	1		27	S200-8	#8 Internal tooth lockwasher	4
4	23371	Cord rack	2		28	S321-832	8-32 Cap nut	4
5	30419-A	Reel arm bracket & clip assembly	1		29	48048A	Case door assembly w/spkr. includes items 18 thru 30A, 34 thru 39	1
					29A		Door riveted assembly, plain. Refer 30	
6	30357-A	Reel arm bracket & clip assembly	1		29B		Door riveted assembly (w/speaker openings) refer 30A	1
7	30256	Reel arm holder	2		30	47865-A	Case door assembly w/o speaker includes 18, 25, 29A, 34 thru 39	1
8	47798	Retainer, handle	2					
9	48125-A	Handle insert & filler assembly	1		30A	47809-3	Case door sub assembly (for speaker) includes 18, 25, 29B, 34 thru 39	1
10	48123	Handle lift	2		31	23111	Rubber foot screw	2
					32	22259	Rubber foot	2
11	47803-A	Lift top assembly includes 4, 5, 6, 7, 8, 9, 10, 11A, 12, 13, 14, 15	1		33	23197	Catch case, body	2
12	23198	Case catch, hook	2					
					34	S254-540-4	5-40 x 1/4 Binder head screw	4
13	S254-832-5	8-32 x 5/16 Binder head screw	2		35	S199-5	#5 Lockwasher	4
14	S200-8	#8 Internal tooth lockwasher	2		36	S324-540	5-40 Hex nut	4
15	S301-141-14	9/64 dia x 7/32 long Tubular rivet	12		37	23196	Door catch release button	2
16	30513	Governor opening cover	1		38	23118	Door catch spring	2
17	48019	Pin end hinge	2					
18	48018	Hinge catch	2		39	23200	Case door catch	2
19	48046	Speaker baffle	1			47839	Kalart Victor escutcheon (not shown)	1
19A	48049	Cover speaker terminals	1			23120	Victor escutcheon (not shown)	1
20	47988	Speaker cable assembly	1			47842	Nameplate 70-fifteen (not shown)	1
21	48044	Speaker, 5 x 7 P.M.	1			47872	Nameplate 70-twenty five (not shown)	1



70-15 PROJECTOR CASE

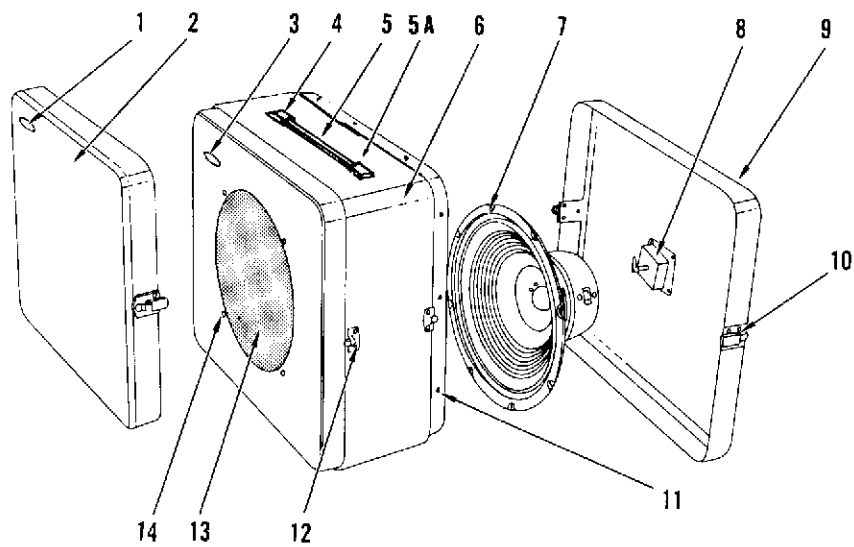
J3B METAL SPEAKER

TILT MECHANISM

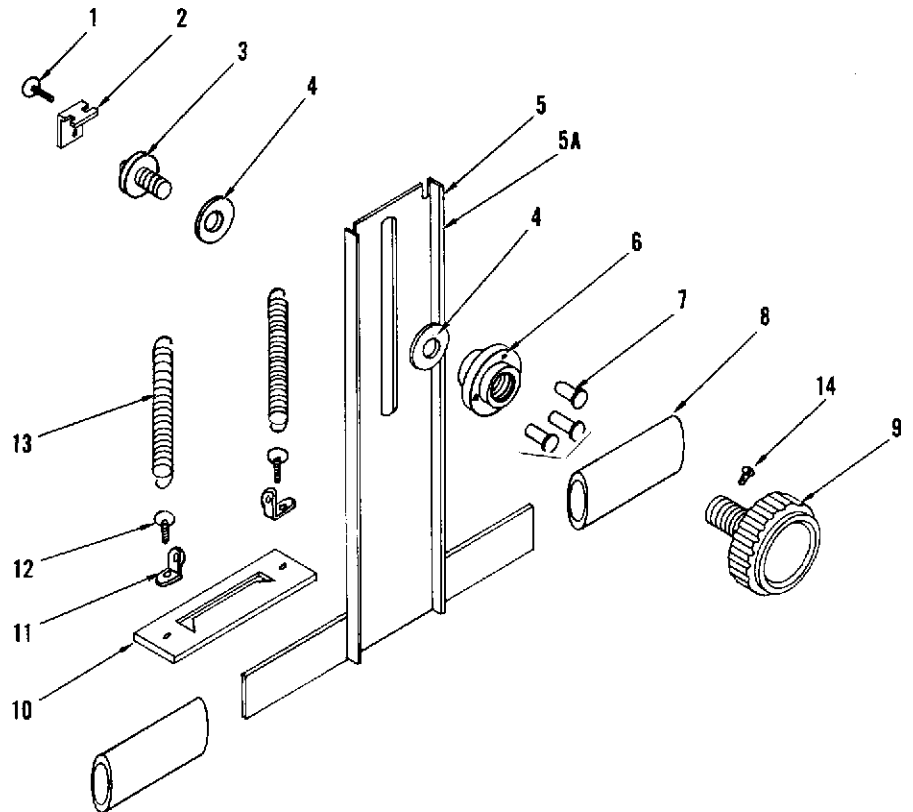
No.	Part No.	Part Name	Qty.
	47846-A	Speaker assembly complete J3B	1
1	47839	Case emblem (Kalart Victor)	1
1A	23120	Case emblem (Victor)	1
2	47847A	Speaker case front assembly	1
3	47840	Escutcheon	1
4	47798	Handle retainer	2
5	48125-A	Handle insert & filler assembly	1
5A	48123	Handle lift	2
6	47848-3	Speaker body case	1
7	46450	12" P.M. speaker	1
8	23179A	Reel holder assembly	1
9	23172A	Rear speaker case cover assembly	1
10	23175	Case catch body	4
11	47864	Rubber bumper	11
12	23174	Case catch, hook	4
13	26649-R	Speaker grille	1
14	S250-832-12	8-32 x 3/4 Truss head screw	4
14A	S206-1	Lockwasher internal & external #8 I.D. *	4
14B	S324-832	8-32 Hex nut *	4
	47251	Speaker cord 75' (2 plug) (not shown)	1
	46353	Speaker cord rack (not shown)	2

No.	Part No.	Part Name	Qty.
1	S254-540-2	5-40 x 1/8 Binder head screw	1
2	47744	Safe lock	1
3	47743	Screw slide lock	1
4	11120	Fibre shim	2
5	47733-A	Tilt foot assembly (includes 5A, 8)	1
5A	47734A	Tilt foot sub assembly	1
6	47742	Screw guide	1
7	S301-121-14	Rivet	3
8	47737	Rubber foot	2
9	47740-A	Tilt knob	1
10	47739	Slide guide plate	1
11	18823	Soldering lug	2
12	S254-540-4	5-40 x 1/4 Binder head screw	2
13	47738	Tilt spring	2
14	M.S.19	1-72 N. F. x 3/32 Round head screw	1

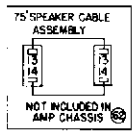
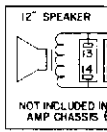
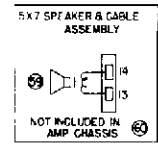
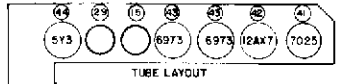
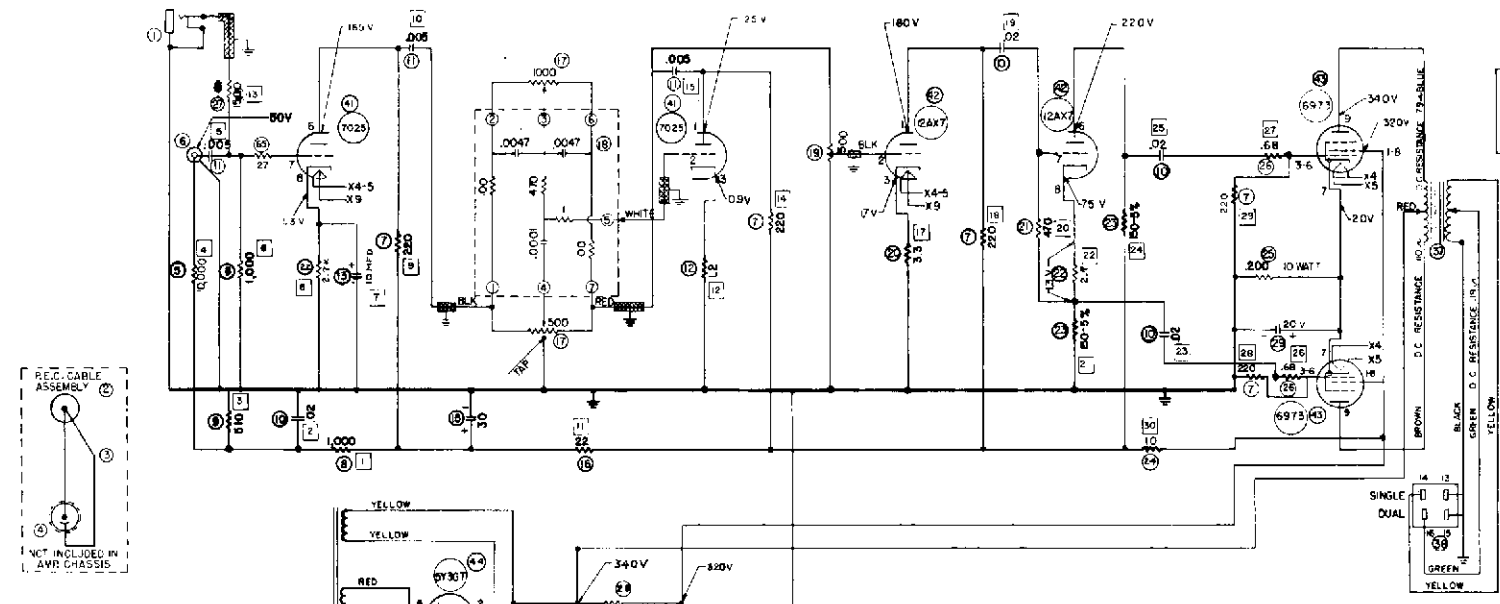
* Not shown on drawing.



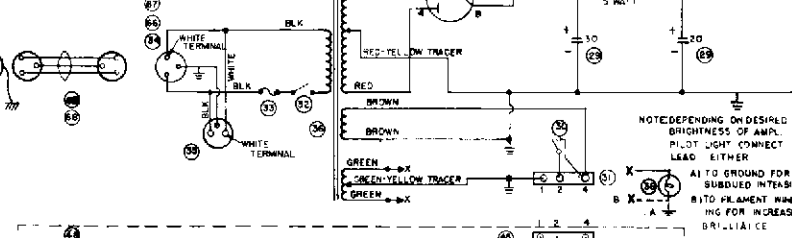
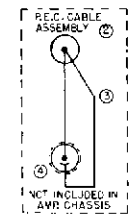
J3B METAL SPEAKER



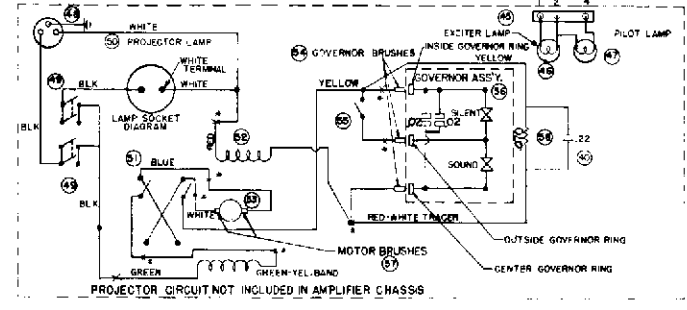
TILT MECHANISM



ALL RESISTOR VALUES GIVEN IN 1,000 OHM UNITS
10% UNLESS SPECIFIED
ALL CAPACITOR VALUES GIVEN IN MICROFARADS
ALL VOLTAGES MEASURED WITH ZERO SIGNAL.
17 V.A.C. LINE TO CHASSIS USING VT.V.M.
K INDICATES KNIFE DISCONNECT IN PROJECTOR CIRCUIT
□ INDICATES PART ON PRINTED BOARD



NOTE DEPENDING ON DESIRED BRIGHTNESS OF AMP. PILOT LIGHT CONNECT LEAD EITHER
A TO GROUND FOR SUBDUED INTENSITY
B TO FILAMENT WINDING FOR INCREASED BRIGHTNESS

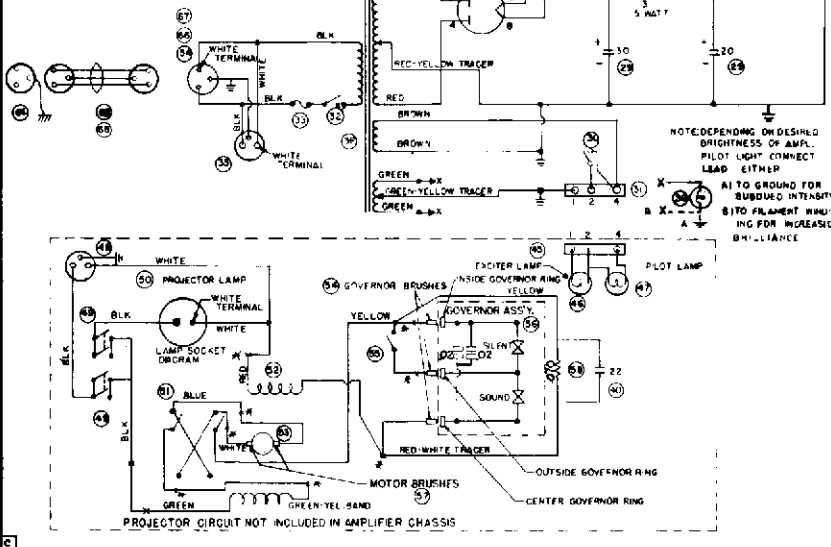
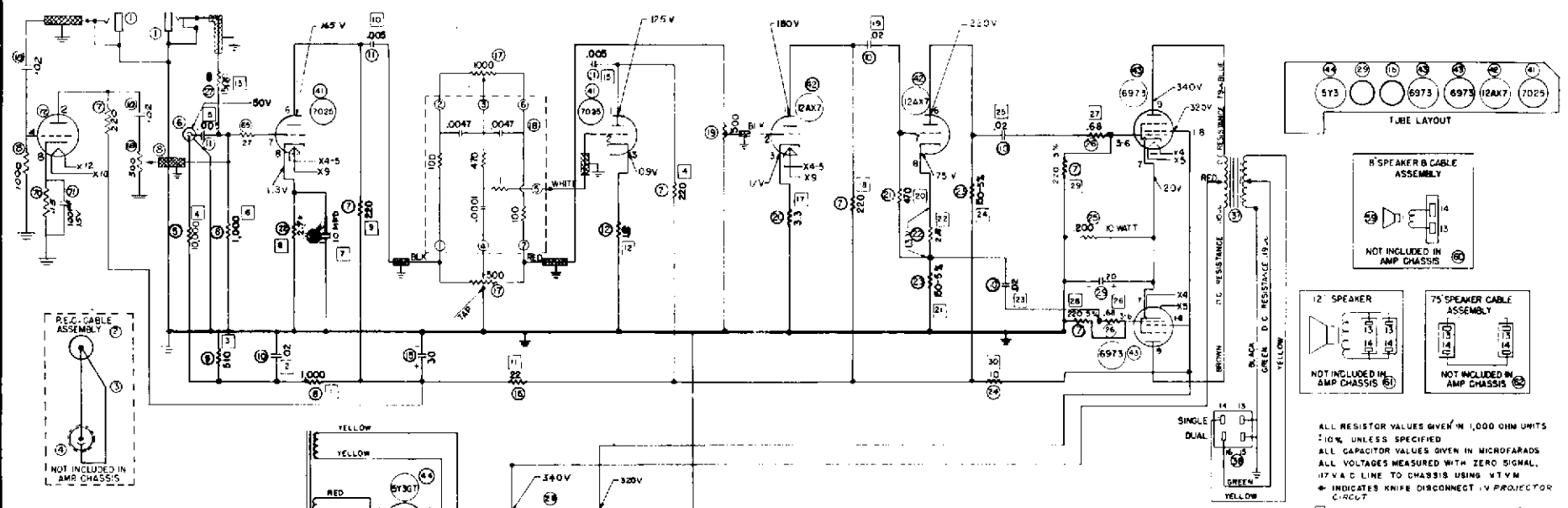


ITEM	PART NO.	DESCRIPTION	ITEM	PART NO.	DESCRIPTION
1	10645	MIKE-PHONO JACK	35	47700	PLUG, FEMALE
2	47766-A	P.E.C. CABLE (NOT PART OF AMPLIFIER ASSEMBLY)	36	47767	POWER TRANSFORMER
3	47766	CORRIG. CABLE WITH PHONO TIP	37	47768	OUTPUT TRANSFORMER
4	19210	90 V.D.C. PHOTOCELL (NGA 927 OR EQUIV.)	38	28787	SPEAKER SOCKET
5	36201	RESISTOR 10 MEG. 1/2 WATT 10%	39	36246	PILOT LIGHT (SEE 47)
6	47753	PHOTOCELL INPUT RECEPTACLE	40	20821	CONDENSER MO. 300 (105-1AR 22MFD) 400 V.D.C.
7	3709-19	RESISTOR 220,000 OHM 1 WATT 5%	41	7025	VACUUM TUBE
8	36267	RESISTOR 1 MEG. 1 WATT 10%	42	12AX7	VACUUM TUBE
9	19068	RESISTOR 510,000 OHM 1/2 WATT 10%	43	6973	VACUUM TUBE
10	36248	CONDENSER, CERAMIC DISC. OR MFD. 450 V.D.C.	44	3Y3GT	VACUUM TUBE
11	36227	CONDENSER, CERAMIC DISC. .005 MFD. 450 V.D.C.	45	20828	CONNECTOR, 3 CIRCUIT, MALE
12	36232	RESISTOR 1500 OHM 1/2 WATT 10%	46	19299	EXCITER LAMP, 6.5A, 5V
13	36235	CONDENSER, ELECTROLYTIC, 10 MFD. 5 V.D.C.	47	28130	PILOT LAMP MAZDA 1808
14	36234	CONDENSER, ELECTROLYTIC 30MFD 450VDC	48	47852	MECHANISM POWER CORD WITH MOLDED PLUG
15	36188	RESISTOR, 22,000 OHM 1/2 WATT 10%	49	4751	SWITCH, 12 AMPERES 125 V LAMP & MOTOR
16	47776	TONE CONTROL	50	PROJ LAMP	750-1000 WATT, 110-120 VOLT TIEP
17	47779	PACKAGED ELECTRONIC CIRCUIT	51	11026	SWITCH, REVERSING 3 AMP 120V
18	56813	VOLUME CONTROL 1/2 MEG	52	305 5	MOTOR FIELD
19	36255	RESISTOR, 3,300 OHM 1/2 WATT 10%	53	47661	MOTOR ARMATURE
20	36293	RESISTOR, 470,000 OHM 1/2 WATT 10%	54	19534	GOVERNOR BRUSHES
21	36236	RESISTOR, 2,700 OHM 1/2 WATT 10%	55	23340	SWITCH, 3 P.S.T. 6 AMP 125V
22	5705-190	RESISTOR, 150,000 OHM 1/2 WATT 5%	56	47745	GOVERNOR
23	3705-11	RESISTOR, 10,000 OHM 1/2 WATT 10%	57	47824	MOTOR BRUSHES
24	18792	RESISTOR, 200 OHM 10 WATT 10%	58	19585	RESISTOR, 70 OHM 30 WATT
25	36254	RESISTOR, 800 OHM 1/2 WATT 10%	59	45044	SPEAKER, 5 X 7" 8 OHM V.C.
26	36222	RESISTOR 15 MEG. 1/2 WATT 10%	60	47386	CABLE, SPEAKER, WITH MOLDED PLUG
27	36185	RESISTOR, 3000 OHM 5 WATT 10%	61	46450	SPEAKER, 12" 8 OHM V.C.
28	36261	CONDENSER, ELECTROLYTIC, 30/400V, 20/400V, 20/20V	62	47251	SPEAKER, CABLE, 75" WITH 2 MOLDED PLUGS
29	18641	SWITCH, S.P.S.T. 6A 125V	63	47750	CORD, POWER, 3-WIRE
30	20628	CONNECTOR, 3 CIRCUIT, FEMALE	64	47857	ADAPTER, GROUNDING
31	18639	RESISTOR, 27,000 OHM 1/2 WATT 10%	65	18670	RESISTOR, 27,000 OHM 1/2 WATT 10%
32	18639	RESISTOR, 27,000 OHM 1/2 WATT 10%	66	47889	MALE, FLUSH MOUNT 2 COND.
33	18639	RESISTOR, 27,000 OHM 1/2 WATT 10%	67	47806-A	MALE, FLUSH MOUNT 2 COND.
34	47751	PLUG, MALE	68	20632	CORD, POWER 2 COND. 16 GA.

REV.	DATE	BY	CHKD.
1	11/28/50	IT	2/2/51
2	1/6/51	T	2/2/51
3	1/6/51	-	2/2/51
4	1/6/51	T	2/2/51
5	1/7/51	W	2/2/51
6	1/16/51	W	2/2/51
7	1/16/51	W	2/2/51
8	1/16/51	W	2/2/51
9	1/16/51	W	2/2/51

70-15 AMPLIFIER SCHEMATIC

DATE: 1-14-51
BY: R. L. S. JR.
47821



ITEM	PART NO.	DESCRIPTION	ITEM	PART NO.	DESCRIPTION	ITEM	PART NO.	DESCRIPTION
1	18643	WIRE PHONO JACK	35	47700	PLUG, FEMALE	70	36287	500K 1/2 WATT
2	47765-A	REC'S CABLE (NOT PART OF AMPLIFIER ASSEMBLY)	36	47767	POWER TRANSFORMER	70	5705-4-19	150- 1/2 WATT
3	47765	CONCAT CABLE WITH PHONO TIP	37	47768	OUTPUT TRANSFORMER	71	5704-4-12	100MΩ 15 V
4	19210	90V D.C. PHOTOCELL (6A 927 OR EQUIV.)	38	26787	SPEAKER SOCKET	72	4804	NIUVISTOR 250
5	36201	RESISTOR 10 MEG. 1/2 WATT 10%	39	36246	PILOT LIGHT (6E 47)			
6	47753	PHOTOCELL INPUT RECEPTACLE	40	2502	CONDENSER, MOLDED TUBULAR 22MFD 400V D.C.			
7	5705-1-B	RESISTOR 22,000 OHM 1/2 WATT 5%	41	7025	VACUUM TUBE			
8	36267	RESISTOR 1 MEG. 1/2 WATT 10%	42	2AX7	VACUUM TUBE			
9	15068	RESISTOR 500,000 OHM 1/2 WATT 10%	43	6973	VACUUM TUBE			
10	36246	CONDENSER, CERAMIC DISC .02 MFD 450V D.C.	44	3Y5GT	VACUUM TUBE			
11	36227	CONDENSER, CERAMIC DISC .005 MFD 450V D.C.	45	20628	CONNECTOR, 3 CIRCUIT, MALE			
12	36252	RESISTOR 100 OHM 1/2 WATT 10%	46	5239	EXCITER LAMP, 6.5A, 3V			
13	3629	CONDENSER, ELECTROLYTIC, 10 MFD 5 V.D.C.	47	28130	PILOT LAMP, M60A 1808			
14			48	4782	MECHANISM POWER CONDUIT WITH MOLDED PLUG			
15	36294	CONDENSER, ELECTROLYTIC 30MFD 450V D.C.	49	4751	SWITCH, 12 AMPERES 125 V LAMP & MOTOR			
16	36168	RESISTOR 22,000 OHM 1/2 WATT 10%	50	PROJ. LAMP	750-1000 WATT 110-120 VOLT T12P			
17	47778	PACKAGED ELECTRONIC CIRCUIT	51	11026	SWITCH, REVERSING 5 AMP 120V			
18	47779	PACKAGED ELECTRONIC CIRCUIT	52	38081	MOTOR FIELD			
19	26813	VOLUME CONTROL, 1/2 MEG	53	47661	MOTOR ARMATURE			
20	36228	RESISTOR 3,300 OHM 1/2 WATT 10%	54	19514	GOVERNOR BRUSHES			
21	36235	RESISTOR 470,000 OHM 1/2 WATT 10%	55	23540	SWITCH, 5 P B T 5 AMP 125V			
22	36238	RESISTOR 2,700 OHM 1/2 WATT 10%	56	47745	GOVERNOR			
23	5705-1-B	RESISTOR 150,000 OHM 1/2 WATT 5%	57	47624	MOTOR BRUSHES			
24	4705-1-B	RESISTOR 5,000 OHM 1/2 WATT 5%	58	19565	RESISTOR 70 OHM 30 WATT			
25	19782	RESISTOR 200 OHM 10 WATT 10%	59	47811	SPEAKER 8" 8 OHM V.C.			
26	36254	RESISTOR 680 OHM 1/2 WATT 10%	60	47812	CABLE, SPEAKER, WITH MOLDED PLUG			
27	36222	RESISTOR 15 MEG 1/2 WATT 10%	61	46450	SPEAKER, 12" 8 OHM V.C.			
28	36185	RESISTOR 3,000 OHM 5 WATT 10%	62	47291	SPEAKER, CABLE, 75" WITH 2 MOLDED PLUGS			
29	36261	CONDENSER, ELECTROLYTIC 30,000V, 2V, 400V, 20/20V	63	47750	CORU, POWER 3-WIRE			
30	8641	SWITCH 5 P B T 5A 125V	64	47687	ADAPTER, GROUNDING			
31	20628	CONNECTOR, 3 CIRCUIT, FEMALE	65	16670	RESISTOR 27,000 OHM 1/2 WATT 10%			
32		SW TCH 5 P B T PART OF 26813 VOL CONTROL	66	47689	WALL FLUSH MOUNT 3 COND			
33	18439	FUSE, 3 AMP	67	47808-8	CABLE, FLUSH MOUNT 2 COND			
34	47751	PLUG, MALE	68	20532	CORU, POWER 2 COND 16 GA.			

ALL RESISTOR VALUES GIVEN IN 1,000 OHM UNITS
10% UNLESS SPECIFIED
ALL CAPACITOR VALUES GIVEN IN MICROFARADS
ALL VOLTAGES MEASURED WITH ZERO SIGNAL
117 V A.C. LINE TO CHASSIS USING 117 V M
* INDICATES KNIFE DISCONNECT 1/4 PROJECTOR
CIRCUIT
□ INDICATES PART ON PRINTED BOARD

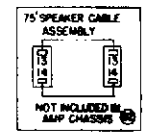
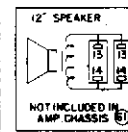
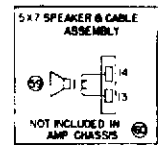
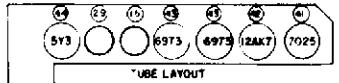
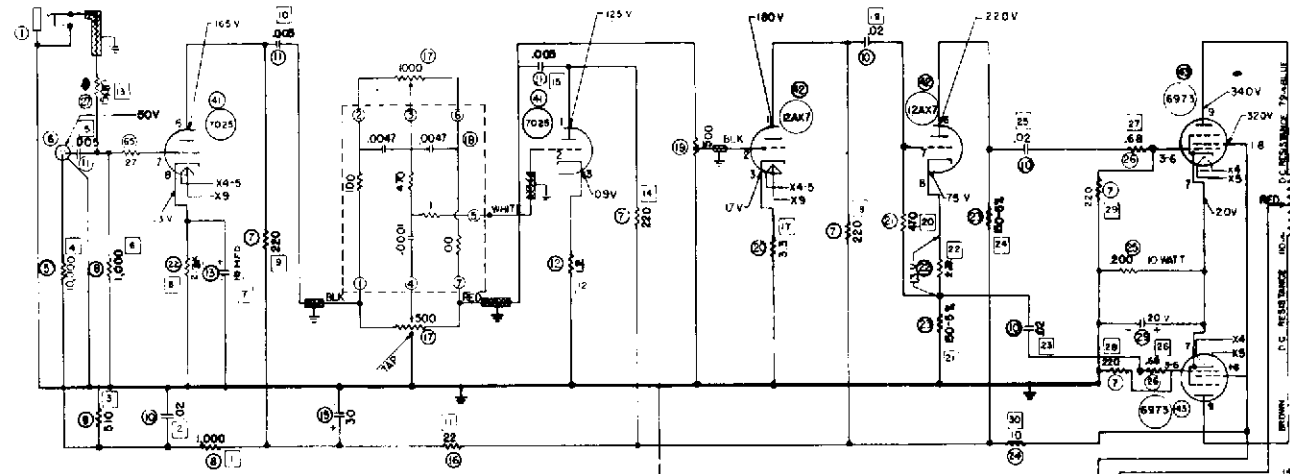
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1	47779	PACKAGED ELECTRONIC CIRCUIT
2	47780	PACKAGED ELECTRONIC CIRCUIT
3	27684	PACKAGED ELECTRONIC CIRCUIT
4	37685	PACKAGED ELECTRONIC CIRCUIT
5	47686	PACKAGED ELECTRONIC CIRCUIT
6	37106	PACKAGED ELECTRONIC CIRCUIT



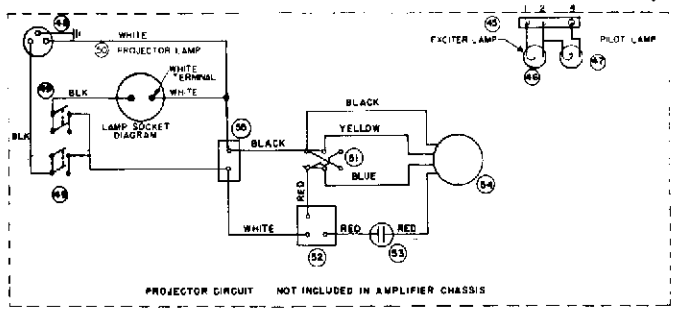
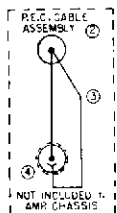
48A

47821
TND

THE GALATY COMPANY INC.
PLANTVILLE, CONN.



ALL RESISTOR VALUES GIVEN IN 1,000 OHM UNITS
10% UNLESS SPECIFIED
ALL CAPACITOR VALUES GIVEN IN MICROFARADS
ALL VOLTAGE VALUES GIVEN IN MICROFARADS
HT & C LINE TO CHASSIS USING VTVM
N INDICATES KNIFE DISCONNECT IN PROJECTOR CIRCUIT
[] INDICATES PART ON PRINTED BOARD

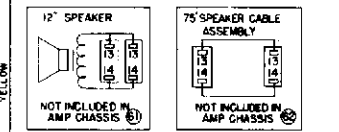
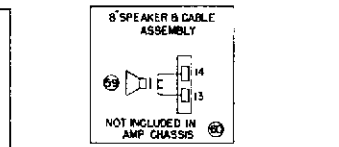
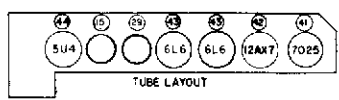
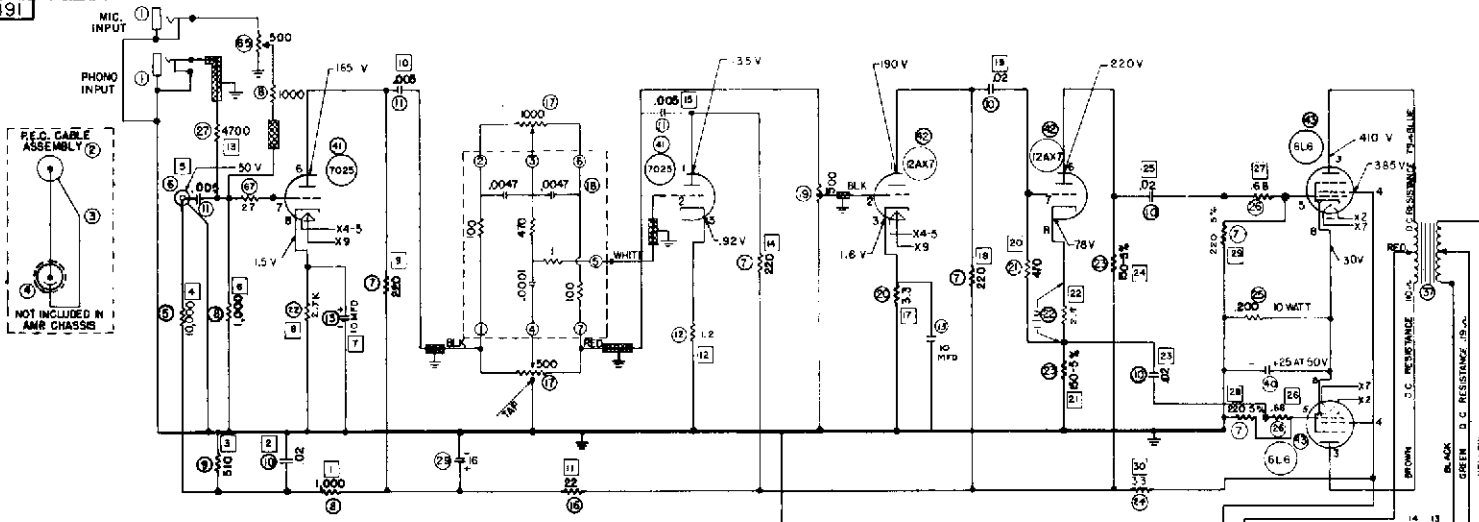


ITEM	PART NO.	DESCRIPTION	ITEM	PART NO.	DESCRIPTION
1	18043	WIRE PHONO JACK	35	47720	PLUG, FEMALE
2	47755-A	P.E.C. CABLING PART OF AMP. FILTER ASSEMBLY	36	47762	POWER TRANSFORMER
3	47764	CORAL CABLE WITH PHONO TIP	37	47768	OUTPUT TRANSFORMER
4	3210	SOVD. C. PHOTOCELL (RCA 927 OR EQUIV.)	38	26787-1	SPEAKER SOCKET
5	36201	RESISTOR 10 MEG. 1/2 WATT 10%	39	36846	PILOT LIGHT (6E 4T)
6	47783	PHOTOCELL INPUT RECEPTACLE	40	25021	CONDENSER MOLDED TUBULAR 22MFC 400VDC
7	37051-9	RESISTOR 220,000 OHM 1 WATT 5%	41	7025	VACUUM TUBE
8	36267	RESISTOR 1 MEG. 1 WATT 0%	42	24X7	VACUUM TUBE
9	15180	RESISTOR 50,000 OHM 1/2 WATT 5%	43	6X4	VACUUM TUBE
10	16248	CONDENSER, CERAMIC DISC .02 MFC 450V.D.C.	44	5Y3GT	VACUUM TUBE
11	36227	CONDENSER, CERAMIC DISC .005 MFC 450V.D.C.	45	6628	CONVEXTOR, 3 CIRCUIT, MALE
12	36252	RESISTOR 1200 OHM 1/2 WATT 10%	46	9228	EXCITER LAMP, 6.3A, 5V
13	36225	CONDENSOR, ELECTROLYTIC, 0.1 MFD. 6 V.D.C.	47	34130	PILOT LAMP, MAZDA, 60E
14			48	47652	MECHANISM POWER CORD WITH MOLDED PLUG
15	36794	CONDENSOR, ELE. ELECTROLYTIC 30MFC 450VDC	49	47151	CONVEXTOR, 2 AMPERES 125 V LAMP 8 MOTOR
16	36180	RESISTOR 23,000 OHM 1/2 WATT 10%	50	PROJ. LAMP	TSD-1000 WATT 110-120 VOLT T18P
17	47778	TRIMMER CONTROL	51	11028	SWITCH REVERSING 3 AMP 120 V
18	47778	PACKAGED ELECTRONIC CIRCUIT	52	48189	RELAY MOTOR STARTING
19	26813	VOLUME CONTROL, 1/2 MEG	53	48198	CONDENSOR 88-108 MFD. 110 VAC 60 CPS
20	36258	RESISTOR 3,300 OHM 1/2 WATT 10%	54	48182-SP	INDUCTION MOTOR
21	36293	RESISTOR 470,000 OHM 1/2 WATT 10%	55	47642	TERMINAL BLOCK
22	36076	RESISTOR 2700 OHM 1/2 WATT 10%	56		
23	57051-10	RESISTOR 10,000 OHM 1 WATT 5%	57		
24	57051-11	RESISTOR 10,000 OHM 1 WATT 10%	58		
25	19722	RESISTOR 200 OHM 10 WATT 10%	59	48044	SPEAKER 5 X 7 8 OHM V.C.
26	36254	RESISTOR 680 OHM 1/2 WATT 10%	60	47988	CABLE, SPEAKER, WITH MOLDED PLUG
27	36222	RESISTOR 15 MEG 1/2 WATT 10%	61	64450	SPEAKER, 12" 8 OHM V.C.
28	36185	RESISTOR 3000 OHM 5 WATT 10%	62	47281	SPEAKER, CABLE 15" WITH 2 MOLDED PLUGS
29	36261	CONDENSOR, ELECTROLYTIC, 30/400V, 20/400V, 20/250V	63	47750	CORD, POWER, 3-WIRE
30	18841	SWITCH S.P.S.T. 8A 125V	64	47887	ADAPTER GROUNDING
31	20029	CONNECTOR, 3 CIRCUIT, FEMALE	65	18670	RESISTOR 27,000 OHM 1/2 WATT 10%
32			66	47689	MALE, 1.05A MOUNT 3.500D
33	18438	FUSE, 3 AMP	67	47908-A	MALE, FLUSH MOUNT 2 COND.
34	47781	PLUG, MALE	68	20432	COR. POWER 2 COND 16 GA.

70-15 AMPLIFIER SCHEMATIC
REDUCTION MOTOR CIRCUIT
IND 47821

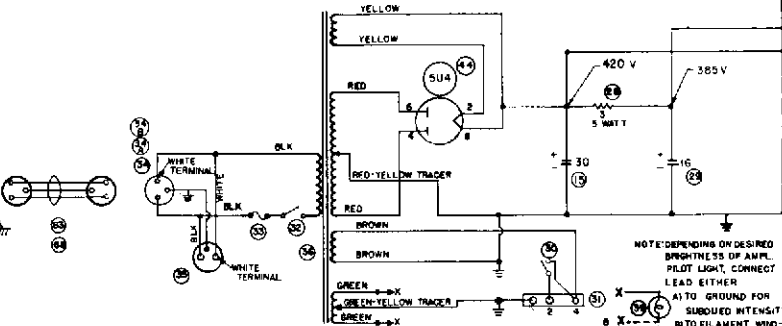
48B

DO NOT SCALE - USE DIMENSIONS

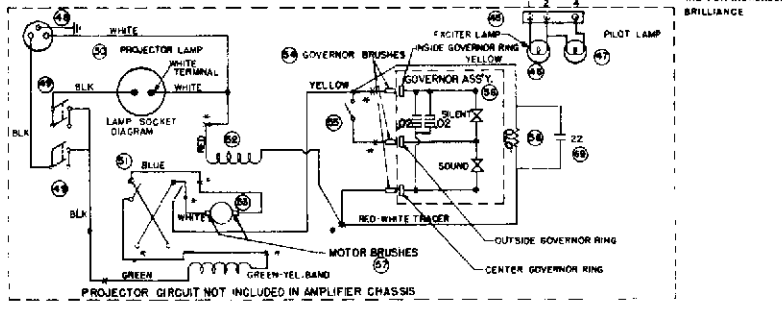


LINE VOLTAGE 117 V.A.C. 60 CYCLES
ALL RESISTOR VALUES GIVEN IN 1,000 OHM UNITS
10% UNLESS SPECIFIED
ALL CAPACITOR VALUES GIVEN IN MICROFARADS
ALL VOLTAGES MEASURED WITH ZERO SIGNAL,
TO CHASSIS USING V.T.V.M.
* INDICATES KNIFE DISCONNECT IN PROJECTOR
CIRCUIT
□ INDICATES HAT ON PRINTED BOARD

49



NOTE: DEPENDING ON DESIRED BRIGHTNESS OF AMPN. PILOT LIGHT, CONNECT LEAD EITHER
A) TO GROUND FOR DIMMED INTENSITY
B) TO FILAMENT WINDING FOR INCREASED BRIGHTNESS

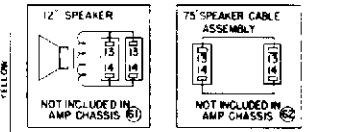
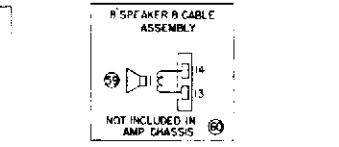
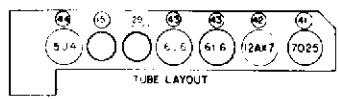
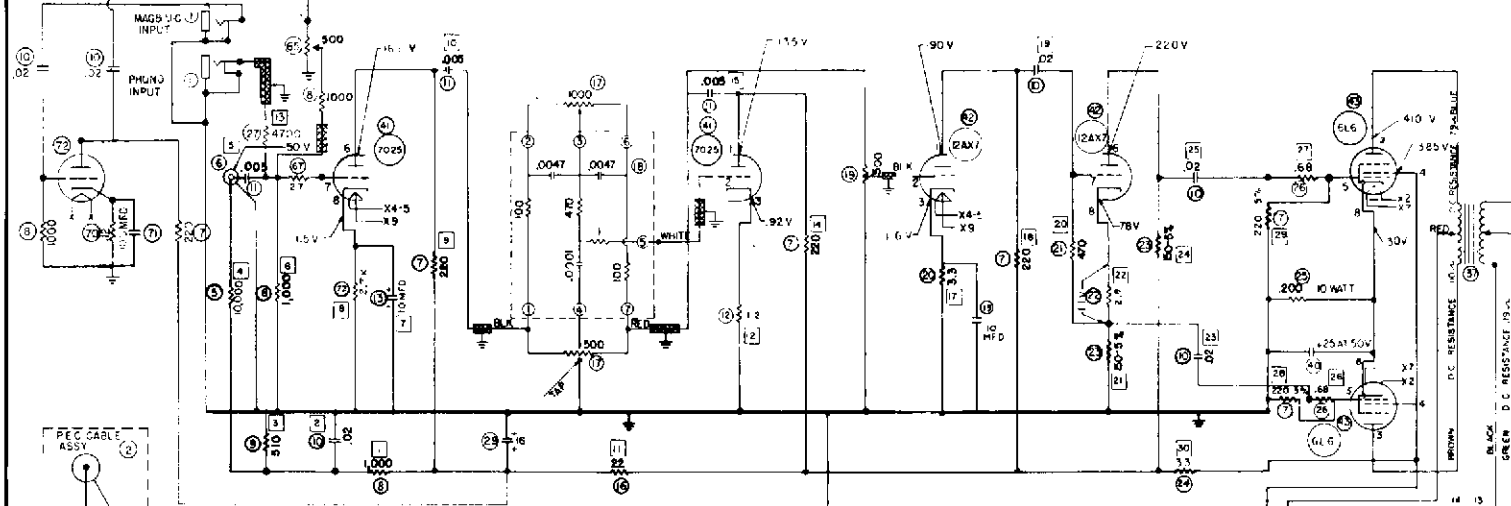


ITEM	PART NO.	DESCRIPTION	ITEM	PART NO.	DESCRIPTION
1	18643	MIKE-PHONO JACK	33	47700	PLUG, FEMALE
2	47766-A	M.E.C. CABLE (NOT PART OF AMPLIFIER ASSEMBLY)	36	26925	POWER TRANSFORMER
3	47765	COAXIAL CABLE WITH PHONO TIP	37	47768	OUTPUT TRANSFORMER
4	19210	SO.V.D.C. PHOTOCELL (RCA 927 OR EQUIV.)	38	26787	SPEAKER SOCKET
5	36201	RESISTOR 10 MEG. 1/2 WATT 10%	39	38246	PILOT LIGHT (6E 4T)
6	47763	PHOTOCELL INPUT RECEPTACLE	40	56184	CONDENSOR ELECTROLYTIC 25MFD 50 V.D.C.
7	5705-1-N	RESISTOR 220,000 OHM 1 WATT 5%	41	7025	VACUUM TUBE
8	36267	RESISTOR 1 MEG. 1 WATT 10%	42	12AX7	VACUUM TUBE
9	19088	RESISTOR 50,000 OHM 1/2 WATT 10%	43	6L6	VACUUM TUBE
10	26249	CONDENSER, CERAMIC DISC. OR MFR. 450 V.D.C.	44	314	VACUUM TUBE
11	36227	CONDENSER, CERAMIC DISC. 0.003 MFD 450 V.D.C.	45	20628	CONNECTOR, 3 CIRCUIT, MALE
12	38252	RESISTOR 1,200 OHM 1/2 WATT 10%	46	19258	EXCITER LAMP, 6.5A, 5V
13	38295	CONDENSOR, ELECTROLYTIC .01 MFD 6V.D.C.	47	28130	PILOT LAMP MAZDA 1806
14			48	47652	MECHANISM POWER CORD WITH MOLDED PLUG
15	36296	CONDENSOR, ELECTROLYTIC 30MFD 500VDC	49	47191	SWITCH, 12 AMPERES 125 V LAMP & MOTOR
16	36189	RESISTOR 22,000 OHM 1 WATT 10%	50	PROJ. LAMP	TSD-1000 WATT 110-120 VOLT TIEP
17	47778	PHONE CONTROL	51	11028	SWITCH REVERBING 3AMP 120V
18	47779	PACKAGED ELECTRONIC CIRCUIT	52	3058	MOTOR FIELD
19	26815	VOLUME CONTROL, 1/2 MEG	53	47661	MOTOR ARMATURE
20	38258	RESISTOR 3,300 OHM 1/2 WATT 10%	54	19234	GOVERNOR BRUSHES
21	38293	RESISTOR 470,000 OHM 1/2 WATT 10%	55	23340	SWITCH, S.P.S.T. 8AMP 125V
22	36228	RESISTOR 2,700 OHM 1/2 WATT 10%	56	47745	GOVERNOR
23	5705-1-90	RESISTOR 150,000 OHM 1 WATT 5%	57	47624	MOTOR BRUSHES
24	5705-1-89	RESISTOR 33,000 OHM 1 WATT 10%	58	19685	RESISTOR, 70 OHM 30 WATT
25	19722	RESISTOR 1,000 OHM 10 WATT 10%	59	47811	SPEAKER 8" 8 OHM V.C.
26	36254	RESISTOR 680 OHM 1/2 WATT 10%	60	47812	CABLE, SPEAKER, WITH MOLDED PLUG
27	36247	RESISTOR 4.7 MEG 1/2 WATT 10%	61	46450	SPEAKER, 12" 8 OHM V.C.
28	36185	RESISTOR 3,000 OHM 5 WATT 10%	62	47261	SPEAKER, CABLE, 75" WITH 8 MOLDED PLUGS
29	36210	CONDENSOR, ELECTROLYTIC 16,450V, 16,450V	63	47250	CORD, POWER, 3-WIRE
30	18641	5 WITON 5 P.S.T. 6A 125V	64	47887	ADAPTER, GROUNDING
31	20629	CONNECTOR, 3 CIRCUIT, FEMALE	65	38287	VOLUME CONTROL MIC
32					
33	18639	FUSE, 5 AMP	67	18670	RESISTOR 27,000 OHM 1/2 WATT 10%
34	47751	PLUG, MALE	68	20632	CORD, POWER 2 COND. 16 GA.
34-A	47989	MALE, FLUSH MOUNT 3 COND.	69	25021	CONDENSER, MOLDED TUBULAR 22 MFD 400 VDC
34-B	47988-A	MALE, FLUSH MOUNT 2 COND.			

70-25 AMPLIFIER SCHEMATIC

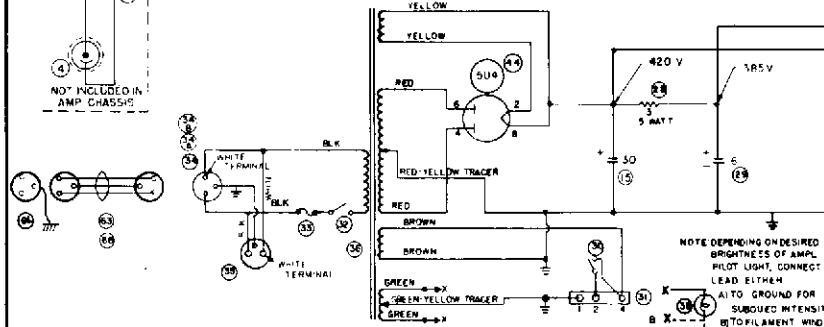
Sheet	Part No.	Rev.
1	47891	1

4789H



LINE VOLTAGE 117 V.A.C. 60 CYCLES
ALL RESISTOR VALUES GIVEN IN 1,000 OHM UNITS
10% UNLESS SPECIFIED
ALL CAPACITOR VALUES GIVEN IN MICROFARADS
ALL VOLTAGES MEASURED WITH ZERO SIGNAL,
TO CHASSIS USING XTVM.
N INDICATES KNIFE DISCONNECT IN PROJECTOR
CIRCUIT
□ INDICATES PART ON PRINTED BOARD

49A

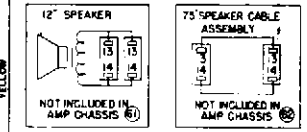
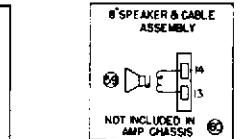
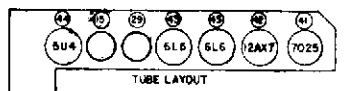
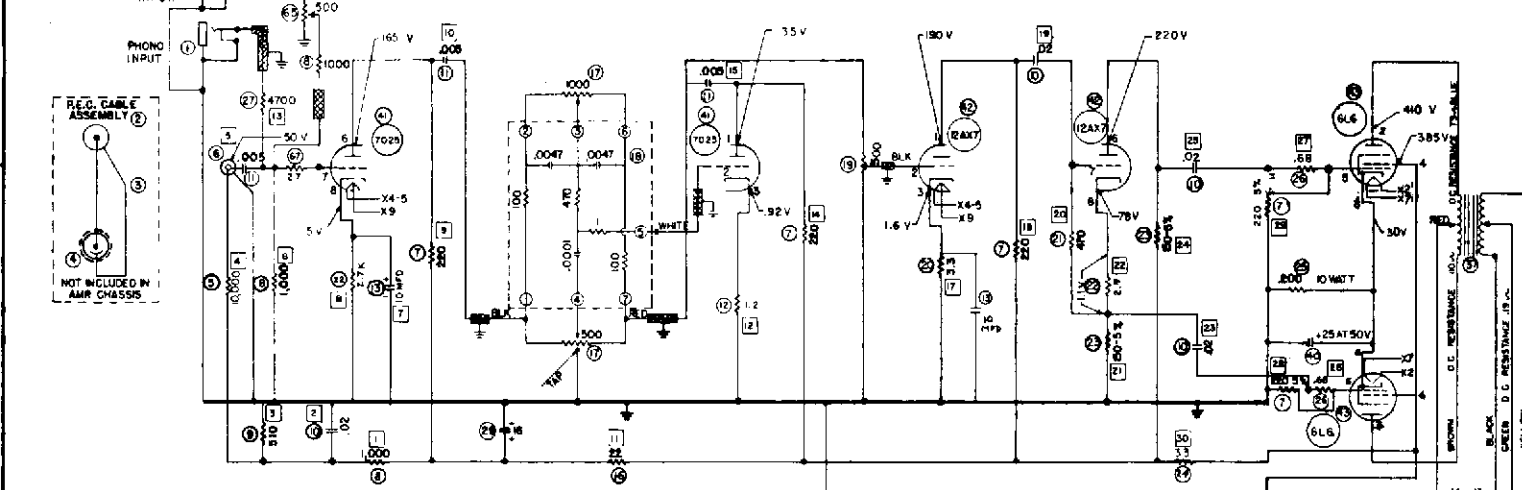


ITEM	PART NO.	DESCRIPTION	ITEM	PART NO.	DESCRIPTION
1	8643	WIRE-PHONO JACK	35	47700	PLUG, FEMALE
2	47756-A	P.E.C. CARBONET PART OF AMPLIFIER ASSEMBLY	36	26825	POWER TRANSFORMER
3	47785	COAXIAL CABLE WITH PHONO TIP	37	47748	OUTPUT TRANSFORMER
4	9210	30V.D.C. PHOTOCELL (RCA 927 OR EQUIV.)	38	26787	SPEAKER SOCKET
5	36201	RESISTOR 10 MEG. 1/2 WATT 10%	39	36248	PILOT LIGHT (GE #7)
6	47753	PHOTOCELL INPUT RECEPTACLE	40	36184	CONDENSOR ELECTROLYTIC 25 MFD. 50 V.D.C.
7	5705-V/9	RESISTOR 220,000 OHM 1/2 WATT 5%	41	7025	VACUUM TUBE
8	36267	RESISTOR 1 MEG. 1 WATT 10%	42	12AX7	VACUUM TUBE
9	3058	RESISTOR 510,000 OHM 1/2 WATT 10%	43	6L6	VACUUM TUBE
10	36248	CONDENSOR, CERAMIC DISC .02 MFD. 450 V.D.C.	44	6L6	VACUUM TUBE
11	36227	CONDENSOR, CERAMIC DISC .005 MFD. 450 V.D.C.	45	20628	CONNECTOR, 3 CIRCUIT, MALE
12	36257	RESISTOR 1200 OHM 1/2 WATT 10%	46	19239	EXCITER LAMP, E 3A, 5V
13	35295	CONDENSOR, ELECTROLYTIC 10 MFD. 9 V.D.C.	47	28130	PILOT LAMP, MAZDA 1806
14	36296	CONDENSOR, ELECTROLYTIC 30 MFD. 20 V.D.C.	48	47652	MECHANISM POWER CORD WITH MOLDED PLUG
15	36296	CONDENSOR, ELECTROLYTIC 30 MFD. 20 V.D.C.	49	47151	SWITCH, 12 AMPERES, 125 V. LAMP & MOTOR
16	26786	RESISTOR, 22,000 OHM 1/2 WATT 10%	50	PROJ LAMP	150-1000 WATT 1.0-120 VOLT 112 P.
17	47778	PHONE JACK	51	10276	SWITCH, REVERSING 3 AMP 120V
18	47779	PACKAGED ELECTRONIC CIRCUIT	52	30516	MOTOR FIELD
19	26813	VOLUME CONTROL 1/2 MEG.	53	47661	MOTOR ARMATURE
20	36298	RESISTOR, 3,300 OHM 1/2 WATT 10%	54	19534	GOVERNOR BRUSHES
21	36293	RESISTOR, 470,000 OHM 1/2 WATT 10%	55	23340	SWITCH, S.P.S.T. 6AMP 25V
22	36236	RESISTOR, 2,700 OHM 1/2 WATT 10%	56	47745	GOVERNOR
23	7025-V/20	RESISTOR, 150,000 OHM 1/2 WATT 5%	57	47624	MOTOR BRUSHES
24	5705-V/69	RESISTOR, 33,000 OHM 1/2 WATT 5%	58	19685	RESISTOR, 70 OHM 50 V.C.
25	19722	RESISTOR, 200 OHM 1/2 WATT 10%	59	47811	SPEAKER, 8" 8 OHM V.C.
26	36254	RESISTOR, 580 OHM 1/2 WATT 10%	60	47412	CABLE, SPEAKER, WITH MOLDED PLUG
27	36247	RESISTOR 4.7 MEG. 1/2 WATT 10%	61	46450	SPEAKER, 12" 8 OHM V.C.
28	31685	RESISTOR, 3000 OHM 5 WATT 10%	62	47251	SPEAKER, CABLE, 15" WITH 2 MOLDED PLUGS
29	36200	CONDENSOR, ELECTROLYTIC, 16/450V, 16/450V	63	47750	CORD, POWER, 3-WIRE
30	18641	SWITCH S.P.S.T. 6A 125V	64	47687	ADAPTER, GROUNDING
31	20628	CONNECTOR, 3 CIRCUIT, FEMALE	65	36287	VOLUME CONTROL NIG-MAGNADJUNG
32		SWITCH S.P.S.T. PART OF 28913 VOL CONTROL	67	6670	RESISTOR 21,000 OHM 1/2 WATT 10%
33	18639	FUSE, 3 AMP	68	20932	CORD, POWER 2 CON. 16 GA.
34	47751	PLUG, MALE	69	2932	CONDENSOR MOLEDED HUSKAR 22 MFD 410 V.D.C.
34-A	47889	MALE, FLUSH MOUNT 2 COND.			
34-B	47908-A	MALE, FLUSH MOUNT 2 COND.			

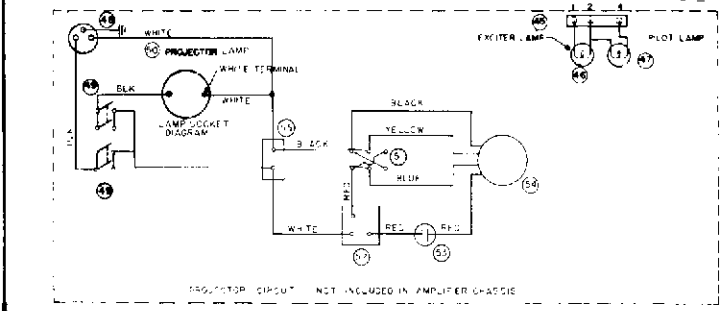
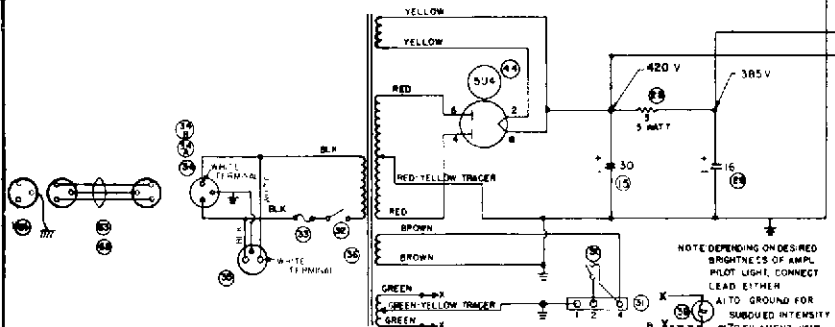
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3	18713	T
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8	16848	T
9	16873	T
10	17009	T
11	17268	T
12	17106	T

70-25 AMPLIFIER SCHEMATIC
MAGNETIC PLAYBACK MODEL
REV. J B
REV. 9-14-59
4789H

47891
IND



LINE VOLTAGE 170 VAC 60 CYCLES
ALL RESISTOR VALUES GIVEN IN Ω , K , M , OHM UNITS
10% UNLESS SPECIFIED
ALL CAPACITOR VALUES GIVEN IN MICROFARADS
ALL VOLTAGES MEASURED WITH ZERO SIGNAL
TO CHASSIS USING VTVM
* INDICATES KNIFE DISCONNECT IN PROJECTOR
CIRCUIT
□ INDICATES PART ON PRINTED BOARD



ITEM	PART NO.	DESCRIPTION	ITEM	PART NO.	DESCRIPTION
1	18643	MIC- PHONO JACK	35	47700	PLUG, FEMALE
2	47766-A	P.E.C. CABLE (NOT PART OF AMPLIFIER ASSEMBLY)	36	28929	POWER TRANSFORMER
3	47785	COAXIAL CABLE WITH PHONO TIP	37	47788	OUTPUT TRANSFORMER
4	18210	50 V.D.C. PHOTOCELL (IRCA 927 OR EQUIV.)	38	28767	SPEAKER SOCKET
5	36201	RESISTOR 10 MEG. 1/2 WATT 10%	39	36248	PILOT LIGHT (SEE 47)
6	47753	PHOTOCELL INPUT RECEPTACLE	40	36184	CONDENSER ELECTROLYTIC 25MFD 50 V.D.C.
7	37051-W	RESISTOR 220,000 OHM 1 WATT 5%	41	7025	VACUUM TUBE
8	36287	RESISTOR 1 MEG. 1 WATT 10%	42	12AX7	VACUUM TUBE
9	15048	RESISTOR 310,000 OHM 1/2 WATT 10%	43	6L6	VACUUM TUBE
10	36248	CONDENSER, CERAMIC DISC OR MFD. 450 V.D.C.	44	5U4	VACUUM TUBE
11	36227	CONDENSER, CERAMIC DISC .005 MFD 450 V.D.C.	45	20628	CONNECTOR, 3 CIRCUIT, MALE
12	36227	RESISTOR 1,200 OHM 1/2 WATT 10%	46	18689	EXCITER LAMP, 85A, 5V
13	36295	CONDENSER, ELECTROLYTIC 10MFD 6 V.D.C.	47	8130	PILOT LAMP MAZDA 1808
14			48	47852	MECHANISM POWER COND. WITH MOLDED PLUG
15	36296	CONDENSER, ELECTROLYTIC 30MFD 500VDC	49	47191	SWITCH, 12 AMPERES 125 V LAMP & MOTOR
16	36189	RESISTOR 25,000 OHM 1 WATT 10%	50	PROJ. LAMP	750-1000 WATT 110-120 VOLT TYP
17	47776	TONE CONTROL	51	1206	SWITCH 12 AMP 125 V
18	47779	PACKAGED ELECTRONIC CIRCUIT	52	4300	RELAY, MOTOR STARTING
19	28813	VOLUME CONTROL, 1/2 MEG	53	48126	CONDENSER 80100 MFD 110-120 GC CPS
20	36228	RESISTOR 3,300 OHM 1/2 WATT 10%	54	43132-5P	INDUCTION MOTOR
21	36285	RESISTOR 470,000 OHM 1/2 WATT 10%	55	47692	TERMINAL BLOCK
22	36236	RESISTOR 2,700 OHM 1/2 WATT 10%	56		
23	37051-90	RESISTOR 150,000 OHM 1 WATT 5%	57		
24	37051-85	RESISTOR 33,000 OHM 1 WATT 10%	58		
25	15722	RESISTOR 200 OHM 10 WATT 10%	59	47811	SPEAKER 8" 8 OHM V.C.
26	36254	RESISTOR 680 OHM 1/2 WATT 10%	60	47812	CABLE, SPEAKER, WITH MOLDED PLUG
27	36247	RESISTOR 47 MEG 1/2 WATT 10%	61	16450	SPEAKER, 12" 8 OHM V.C.
28	36185	RESISTOR 3000 OHM 5 WATT 10%	62	47131	SPEAKER, CABLE 18" WITH 2 MOLDED PLUGS
29	36210	CONDENSER, ELECTROLYTIC 16,450V, 16,600V	63	47750	COND. BONES, 3-WIRE
30	18681	SWITCH 3 P.S.T. 6A, 125V	64	47887	ADAPTER, GROUNDING
31	20628	CONNECTOR, 3 CIRCUIT, FEMALE	65	36287	VOLUME CONTROL MIC
32					
33	18639	FUSE, 3 AMP	67	18670	RESISTOR 5000 OHM 1/2 WATT 10%
34	47751	PLUG, MALE	68	20832	CORD, POWER 3 COND. 16 GA.
34-A	47889	MALE, FLUSH MOUNT 3 COND.			
34-B	47908-A	MALE, FLUSH MOUNT 2 COND.			

7D-25 AMPLIFIER SCHEMATIC
INDUCTION MOTOR CIRCUIT

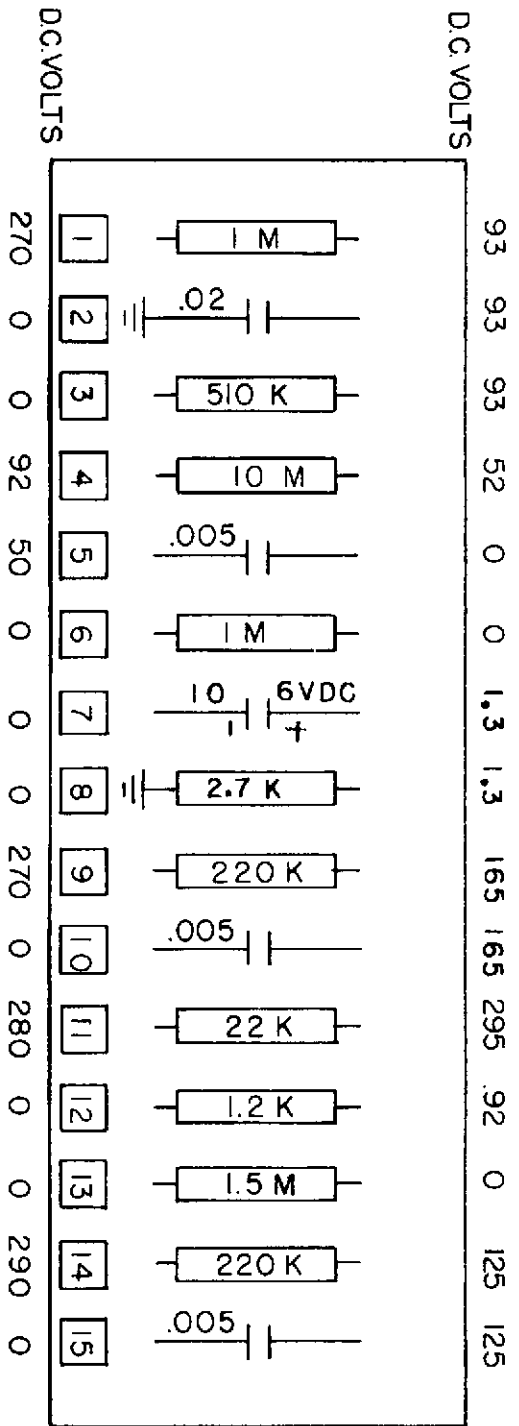
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47891
1-1959

SERVICING DATA ETCHED CIRCUIT MOUNTING BOARDS

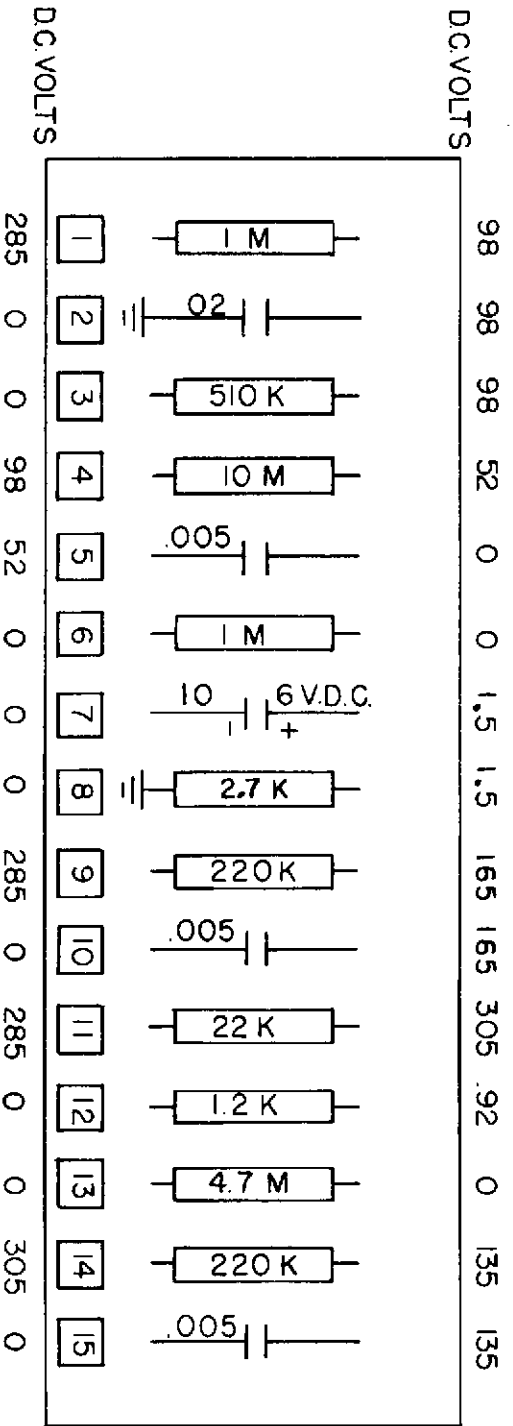
DETAILS DESIGNATED IN REFER TO SIMILARLY MARKED COMPONENTS
IN SCHEMATIC DRAWINGS

70 - 15



47876-A PRE AMPLIFIER

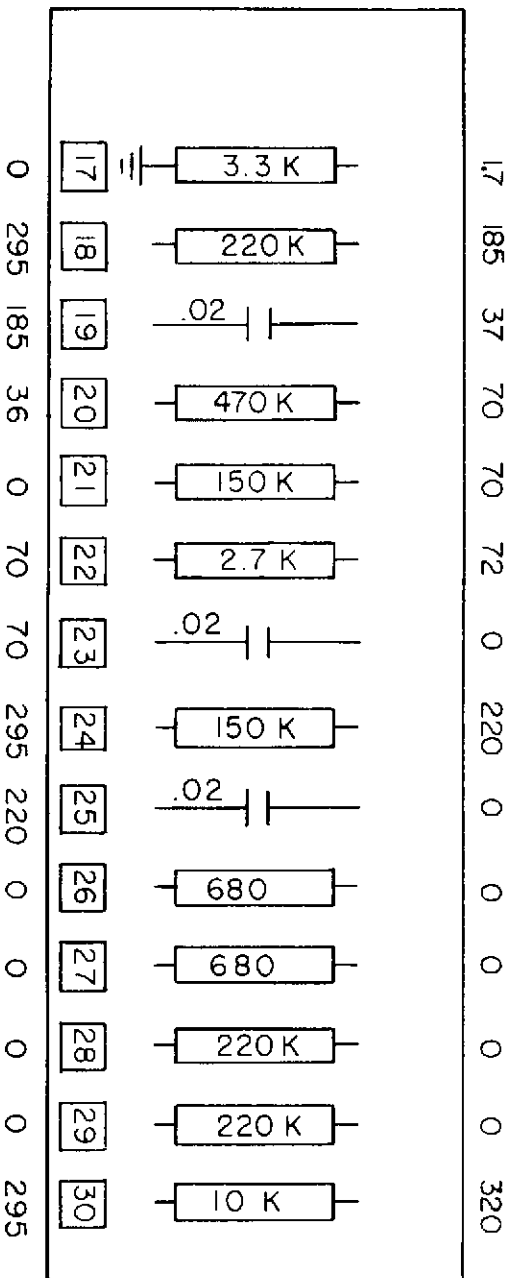
70 - 25



47904-A PRE AMPLIFIER

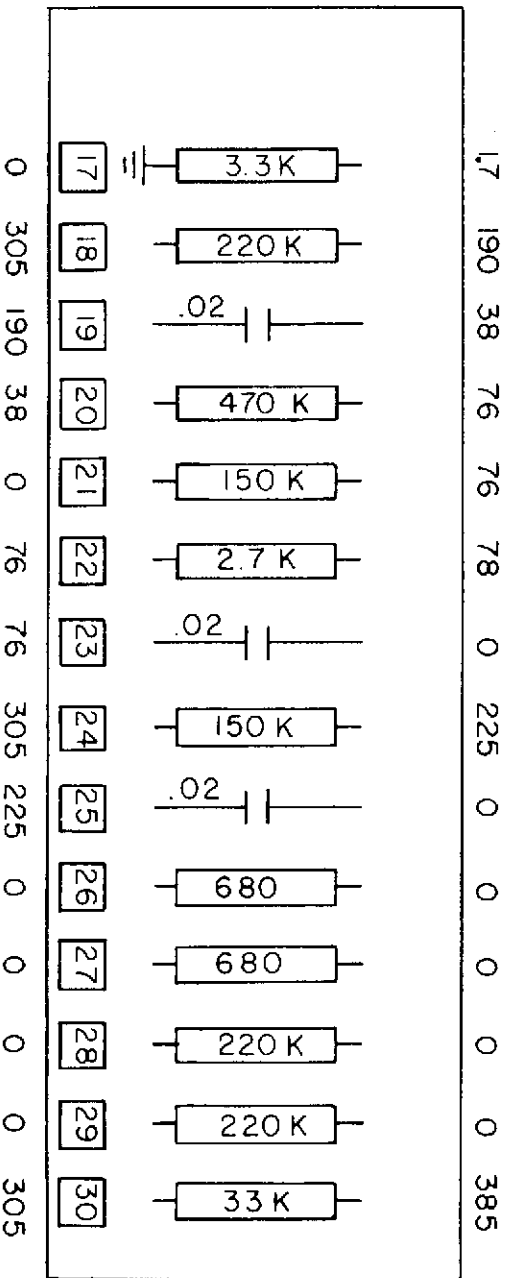
ALL RESISTOR VALUES GIVEN IN OHMS
 ALL CAPACITOR VALUES GIVEN IN MICROFARADS
 ALL VOLTAGES D.C. NO SIGNAL INPUT — MEASURED WITH V.T.V.M. TO GROUND
 K = 1,000 ; M = 1,000,000

70-15



47874-A PHASE INVERTER

70-25



NOTES

TECHNICAL DATA

PROJECTOR

105/130 Volts 50/60 Cycles A.C.

Power Cord: 2 Conductor 12 ft., 16 ga.
3 Conductor 12 ft., 16 ga.
Grounding Adapter

VAC #20632
VAC #47750
VAC #47687

FILM SPEED

24 frames per second Sound
16.7 frames per second Silent

FILM CAPACITY

2000 ft. reels maximum

PHOTO CELL

RCA 927 or equiv.

VAC #19210

PROJECTION LAMP

750 Watt Standard DDB (25 hour)
1000 Watt (Optional) DFD (10 hour)
1200 Watt (Optional) DHT (10 hour)

VAC #47125
VAC #47130
VAC #47316

EXCITER LAMP

6.5A/T8/ISCP (BVK)

VAC #19299

AMPLIFIER

Power required

105 to 130 Volts 50/60 cycles

TUBE COMPLEMENT

70-15

70-25

Voltage Amplifier
Amplifier Phase Inverter
Output (2 tubes)
Rectifier

7025
12AX7
6973
5Y3

7025
12AX7
6L6
5U4

Fuse: 3 Ampere Buss 3AG or equiv.

Amplifier Load Impedance: 4 and 8 Ohms.

TECHNICAL DATA

<u>Projection Lens:</u>	70-15	70-25
Standard	2" F:1.6 petzval	
Optional	2" F:1.6 field flattener 5/8", 1", 1 1/2", 2 1/2", 3", 3 1/2", 4", Zoom Lens (35 mm - 60mm)	

Speaker:

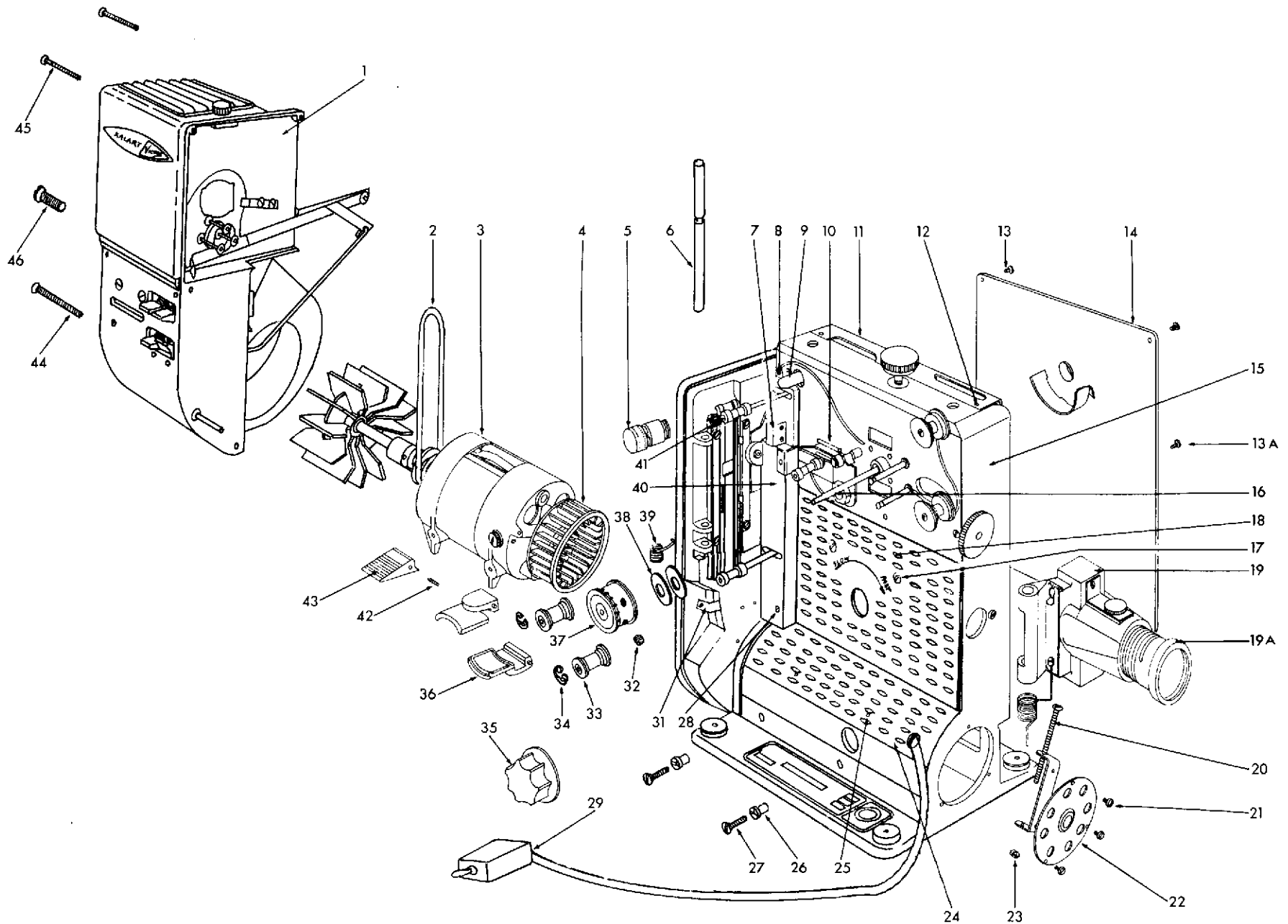
Permanent Magnet 8 Ohm Impedance

WEIGHTS AND DIMENSIONS

	70-15 w/5x7 speaker	70-15 w/o Spkr.	70-25	J3B	U6
Length Overall	15 1/2"	15 1/2"	15 1/2"	19"	18 1/8"
Height Overall	14 1/2"	14 1/2"	14 1/2"	18"	18"
Width Overall	9 1/2"	9 1/2"	9 1/2"	10 1/4"	10"
Equipment Weight	40 lbs.	36 1/2 lbs.	39 lbs.	21 1/2 lbs.	22 lbs.
Shipping Weight	47 lbs.	43 1/2 lbs.	46 lbs.	28 1/2 lbs.	28 lbs.

**PROJECTOR HEAD — OPERATOR'S VIEW
MODEL 70-0**

No.	Part No.	Part Name	Qty.	No.	Part No.	Part Name	Qty.
1	37319-A	Lamp house casting assembly	1	24	37327	Silent nameplate	1
2	47609	O Ring drive belt	1	25	S290-0-2	#0 x 3/16 Drive screw	2
3	37317-A	Motor assembly	1	26	30520	Motor support sleeve	4
4	36310	Blower wheel	1	27	S250-832-8	8-32 x 1/2 Truss head screw	4
5	46212	Pilot lamp cap	1	28	S251-540-16	5-40 x 1 Round head screw	1
6	48031	Lens mount pivot	1	29	47114-A	Remote control assembly	1
7	46160-R	Lens mount lock plate	1	31	47635	Starting lever	1
8	S254-540-2	5-40 x 1/8 Binder head screw	1	32	S277-832-2	8-32 x 1/8 Socket set screw	2
9	28130	Pilot lamp	1	33	36159-A	Film roll assembly	2
10	S253-540-12	5-40 x 3/4 Fillister head screw	2	34	S235-3	#3 "E" ring	2
11	46376	Belt separator	1	35	36331	Rheostat knob	1
12	S251-440-3	4-40 x 3/16 Round head screw	2	36	47515-A	Film shoe	2
13	S254-832-5	8-32 x 5/16 Binder head screw	2	37	36154	Feed sprocket	1
13A	S254-540-2	5-40 x 1/8 Binder head screw	2	38	19494	Thrust washer	2
14	47924-A	Back cover plate	1	39	48029	Lens mount spring	1
15	36316-A	Body casting assembly	1	40	46150-AR	Trip cover assembly	1
16	S321-5/16-24	5/16-24 Hex cap nut	1	41	46145-AR	Automatic trip lever assembly	1
17	S254-832-4	8-32 x 1/4 Binder head screw	2	42	S277-540-3	5-40 x 3/16 Socket set screw	1
18	37328	Nameplate slow-fast	1	43	47863	Starting lever tab	1
19	48033-A	Lens mount assembly	1	44	S251-832-20	8-32 x 1 1/4 Round head screw	1
19A	46230	Lens projection field flattener 2" F1.6	1	45	S253-540-14	5-40 x 7/8 Fillister head screw	2
20	S2511-632-36	6-32 x 2 1/4 Brass round head screw	1	46	S254-540-5	5-40 x 5/16 Binder head screw	1
21	S254-540-3	5-40 x 3/16 Binder head screw	3		19303-R	Lens mount lock plate spacer (not shown)	2
22	19019-2R	Body plate assembly	1		48043	Motor pulley (not shown)	1
23	S324-632	6-32 Hex nut	1				

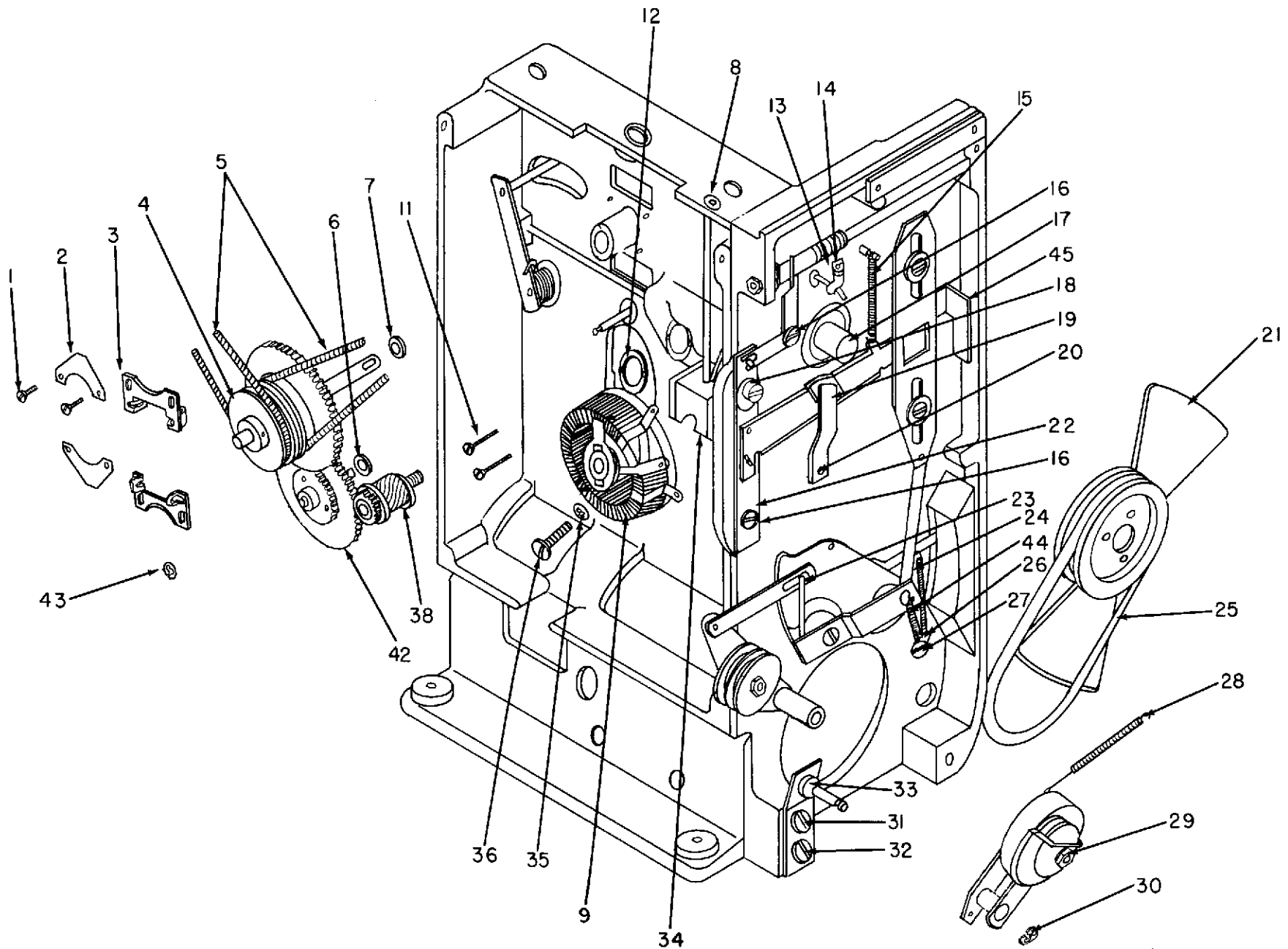


**PROJECTOR HEAD — OPERATOR'S VIEW
MODEL 70-0**

**PROJECTOR HEAD — BACK SIDE AND REAR VIEW
MODEL 70-0**

No.	Part No.	Part Name	Page	Qty.	No.	Part No.	Part Name	Page	Qty.
1	S254-832-4	8-32 x 1/4 Binder head screw		4	27	S254-540-2	5-40 x 1/8 Binder head screw		1
2	36155	Film shoe spring	31	2	28	47952	Rewind spring		1
3	36156	Film shoe bracket	31	2	29	46138-A	Rewind disc bar & pulley assembly	35	1
4	26836-A	Takeup clutch assembly	27	1	30	S235-3	#3 "E" ring		1
5	23217	Takeup belt		2	31	S254-540-5	5-40 x 5/16 Binder head screw		1
6	19482	Thrust washer		As req'd	32	S251-832-28	8-32 x 1 3/4 Round head screw		1
7	19494	Thrust washer		As req'd	33	47697-A	Rewind pulley bracket assembly		1
8	47895-A	Oiler assembly		1	34	47603-A	Oil reservoir	29	1
9	36309	Variable speed rheostat		1	35	S199-5	#5 Plain washer		1
11	S252-172-3	1-72 x 3/16 Flat head screw		2	36	S251-540-22	5-40 x 1 3/8 Round head screw		1
12	36153	Felt retaining washer		1	38	47535-A	Spiral intermediate gear & shaft assembly	27	1
13	S254-540-2	5-40 x 1/8 Binder head screw		1	42	19180-A	Sound sprocket drive gear assembly	27	1
14	47608	Oil tube support		1	43	S235-3	#3 "E" ring		1
15	47639	Shuttle spring		1	44	19469	Safety shutter trip spring		1
16	47630	Shoulder screw		2	45	47993-A	Fire shutter assembly with heat filter		1
17	47520-A	Osc. sleeve & cam hub assembly	23	1					
18	47631	Bowed spring		2					
19	47638	Shuttle oscillator spring		1					
20	S254-540-2	5-40 x 1/8 Binder head screw		1					
*21	47527-A	Main cam & shutter 2 interruption (matched pair)	23	1					
22	48017-A	Shuttle & mounting arm assembly	25	1					
23	47637	Spring starting lever plate		1					
24	23381	Spring, start lever		1					
25	47610	Flat drive belt		1					
26	47177	Lug, start lever spring		1					

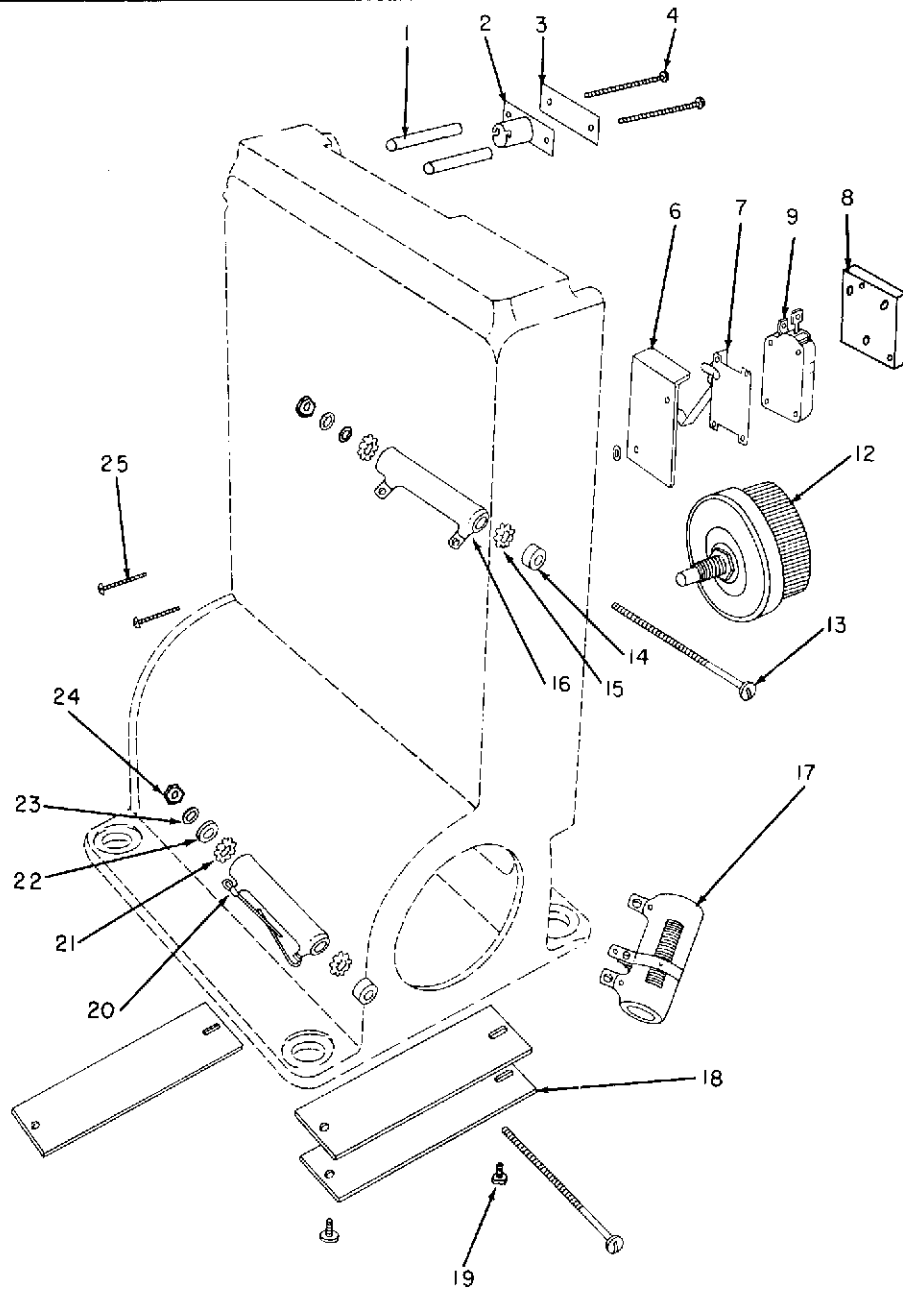
* 47526-A is 3 interruption shutter (matched pair)



**PROJECTOR HEAD — BACK SIDE AND REAR VIEW
MODEL 70-0**

**ELECTRICAL COMPONENTS
MODEL 70-0**

No.	Part No.	Part Name	Qty.	No.	Part No.	Part Name	Qty.
1	47101	Pilot lamp sleeve	2	16	36306	Resistor, 750 ohm, 20 watt	1
2	19296	Pilot lamp socket	1	17	36308	Resistor, 150 ohm, 30 watt w/tap	1
3	19389	Pilot lamp socket insulator	1	18	19862	Motor terminal insulator	3
4	S251-540-18	5-40 x 1 1/8 Round head screw	2	19	S254-540-5	5-40 x 5/16 Binder head screw	2
6	26950	Snap switch insulator	1	20	36307	Resistor, 25 ohm, 20 watt	1
7	26944	Switch leaf bracket	1	21	S206-1	1/2 O.D. x 1/8 I.D. Inter. & exter. lockwasher	2
8	37335	Connector block	1	22	26954	Resistor washer	2
9	26949	Acro snap switch	1	23	S200-6	#6 Internal tooth lockwasher	2
12	36309	Variable resistor, 50 watt 150 ohm w/stop	1	24	S324-632	6-32 Hex nut	2
13	S251-632-44	6-32 x 2 3/4 Round head screw	2	25	S251-256-10	2-56 x 5/8 Round head screw	2
14	26953	Resistor spacer	2		26587	Remote control switch (not shown)	1
15	S206-1	1/2 O.D. x 1/8 I.D. Inter. & exter. lockwasher	2				



**ELECTRICAL COMPONENTS
MODEL 70-0**

U6 SPEAKER

No.	Part No.	Part Name	Qty.		No.	Part No.	Part Name	Qty.
	48101-A	Speaker assembly complete U6	1		13	S250-632-16	6-32 x 1" Truss head screw	8
1	48112-A	Speaker case assembly includes 2, 5, 5A, 5B, 5C, 6, 7, 7A, 7B, 17, 18	1		14	47840	Escutcheon	1
2	48104-A	Speaker door assembly includes 14, 15, 16	1		15	48115-A	Reel holder assembly	1
3	48100	Speaker	1		16	48110	Speaker position instruction plate	1
4	47251	Speaker cord	1		17	48114	Pilot pin	2
5	47798	Handle retainer	2		18	48105A	Grill Assembly	1
5A	48123	Handle lift*	2		19		1/4-20 Wing nut	2
5B	S254-832-5	8-32 x 5/16 Binding head screw*	2		20	S199-1/4L	1/4" Washer	4
5C	S200-8	#8 Internal tooth lock washer*	2		21	47576	Spacer	4
6	48125-A	Handle assembly	1		22	48107	Speaker support	2
7	S582-1-2	Rubber foot	8		23	48111-1	Speaker cushion	4
7A	S251-632-9	6-32 x 9/16 Round head screw*	8		24	48111	Speaker cushion	1
7B	S320-632	6-32 Hex nut*	8		25	S254-540-3	5-40 x 3/16 Binding head screw	4
8	48108	Speaker bracket	2		26	48139	1" Rubber moulding	2
9	48109-A	Speaker plug assembly	1		27	W-143	Neoprene washer	2
9A	S254-540-4	5-40 x 1/4 Binding head screw	2					
10	S320-632	6-32 Hex nut	8					
11	48116	Shockmount backup	16					
12	47860	Rubber bushing	16					

*Not shown

