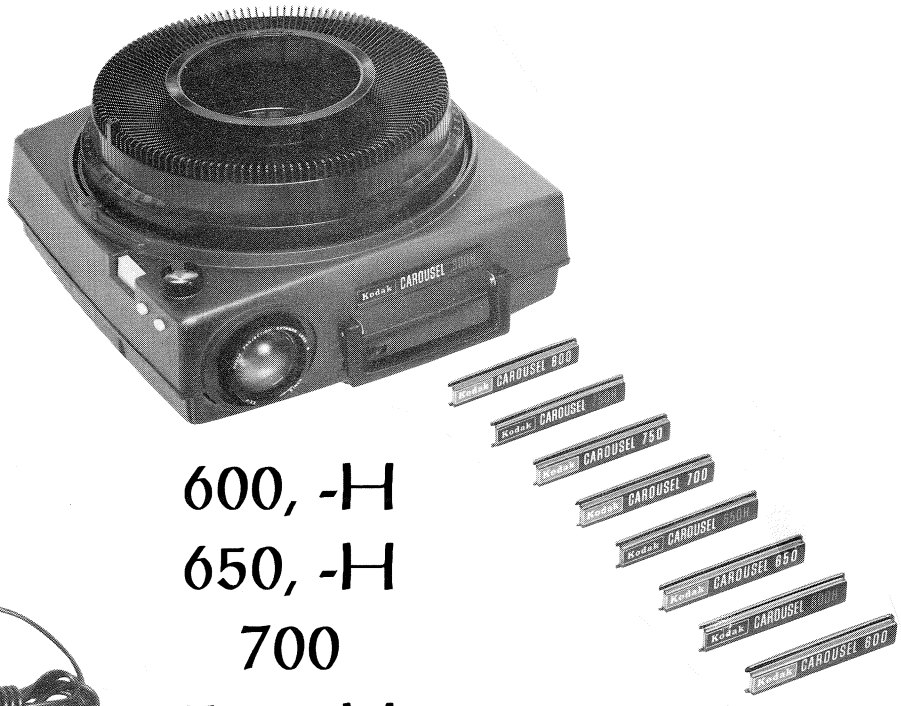
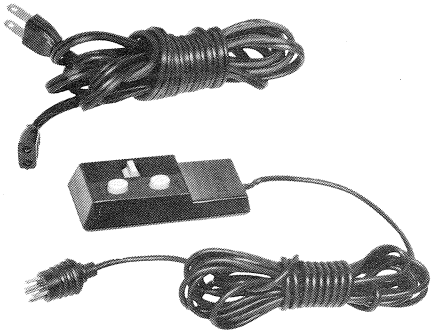
Kodak Carousel Projectors

Service & Parts Manuals

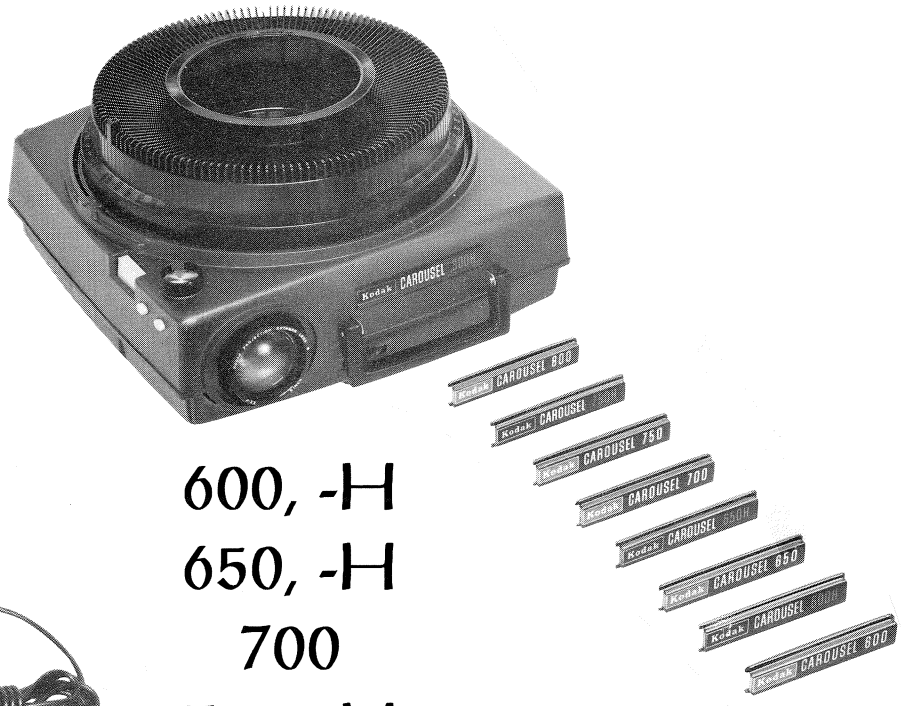


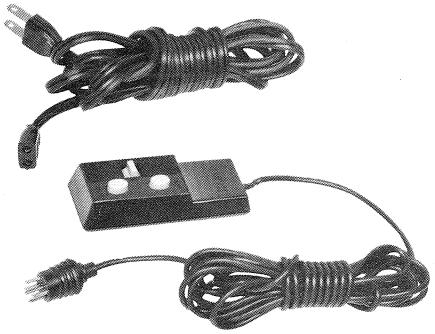


600, -H
650, -H
700
750, -H
760, -H
800, -H
840-H
850, -H
860, -H
+service bulletins

Kodak Carousel Projectors

Service & Parts Manuals





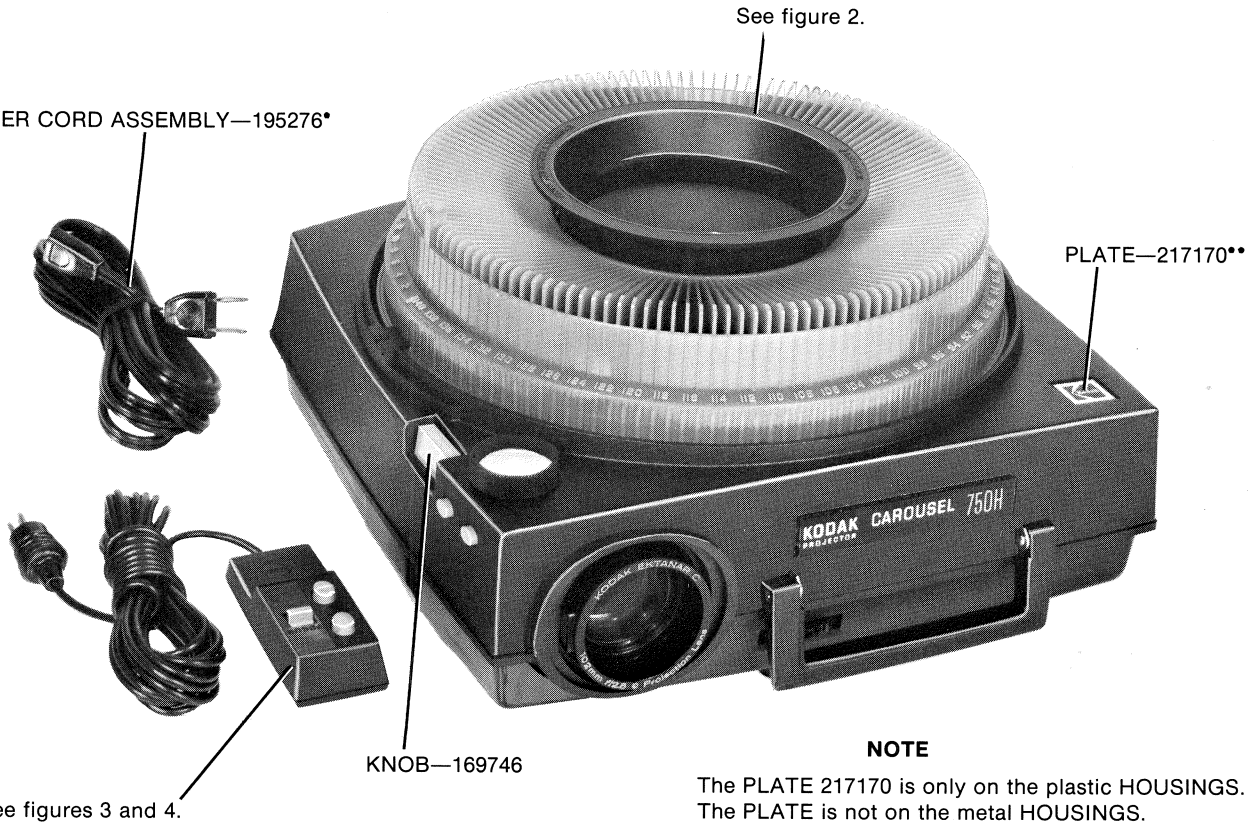
600, -H
650, -H
700
750, -H
760, -H
800, -H
840-H
850, -H
860, -H
+service bulletins

Publication No. 789372
11/77

PARTS LIST

KODAK CAROUSEL 600, 600H, 650, 650H, 650H-K, 700, 750, 750H, 800, and 800H Projectors

This Parts List Supersedes Parts List No. 775032



NOTE

The PLATE 217170 is only on the plastic HOUSINGS. The PLATE is not on the metal HOUSINGS.

See figure 47 for the metal HOUSINGS.
See figure 48 for the plastic HOUSINGS.

•For 600, 600H, 650, 700, 750, 750H, 800, and 800H PROJECTORS with metal HOUSINGS.
••For 600H, 650H, 650H-K, and 750H PROJECTORS with plastic HOUSINGS.

FIGURE 1

Order parts from

Eastman Kodak Company, Parts Services
800 Lee Road, Rochester, New York 14650

Order by PART NUMBER

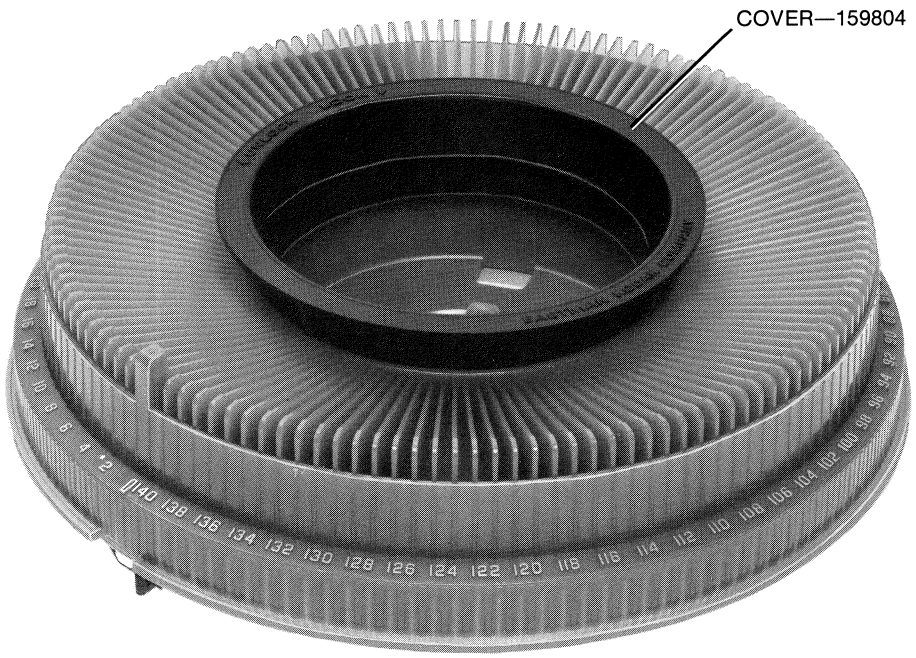


FIGURE 2 ***KODAK CAROUSEL TRANSVUE*** **140 SLIDE TRAY**
See the Kodak Price Catalog.

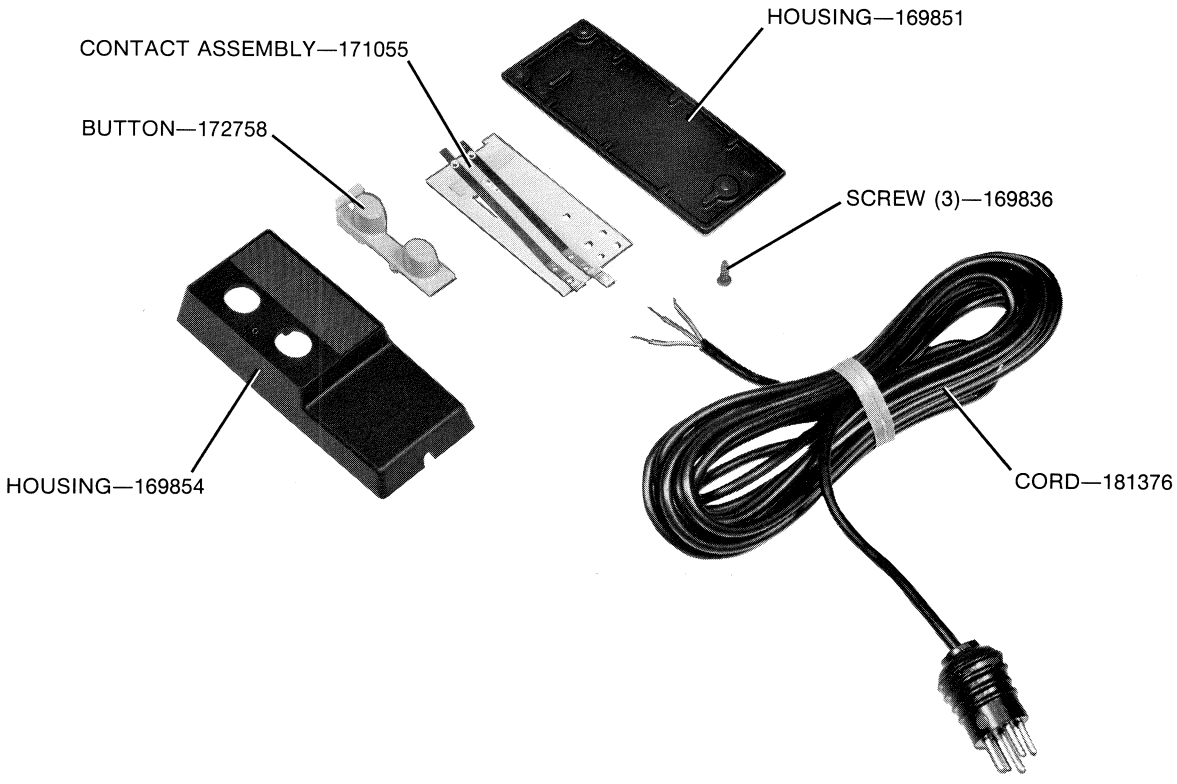
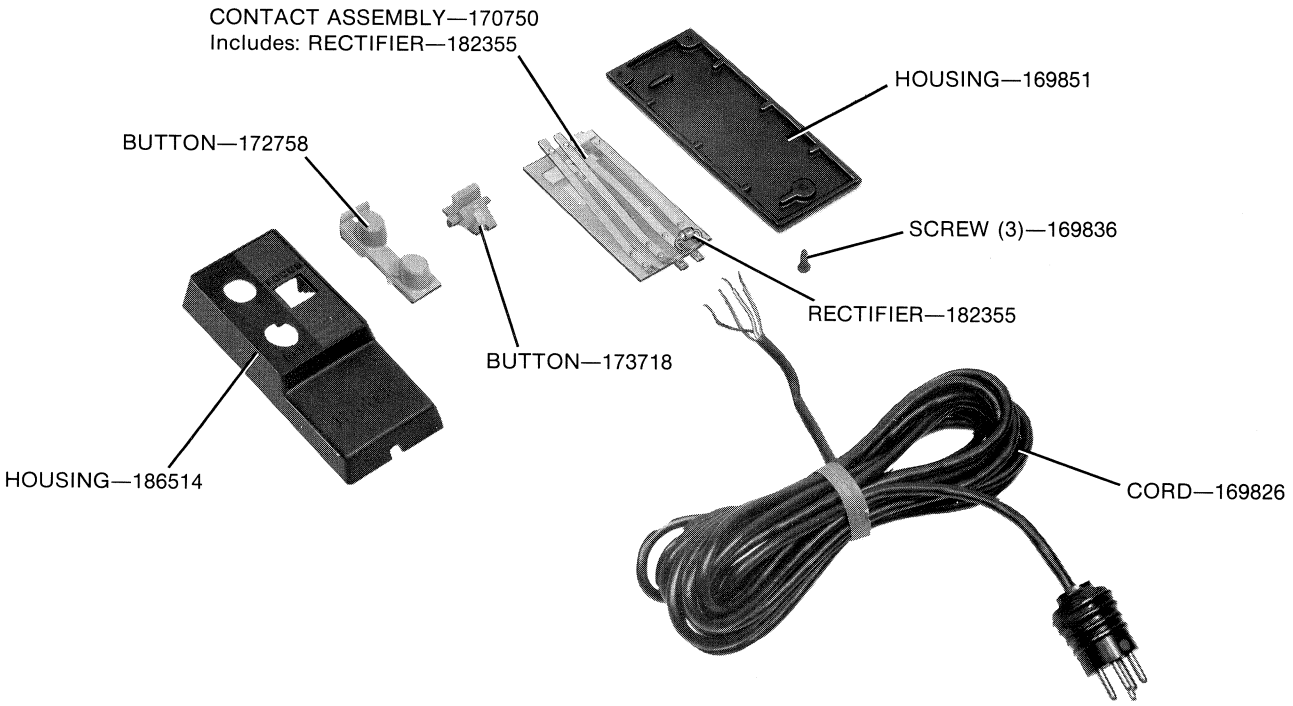
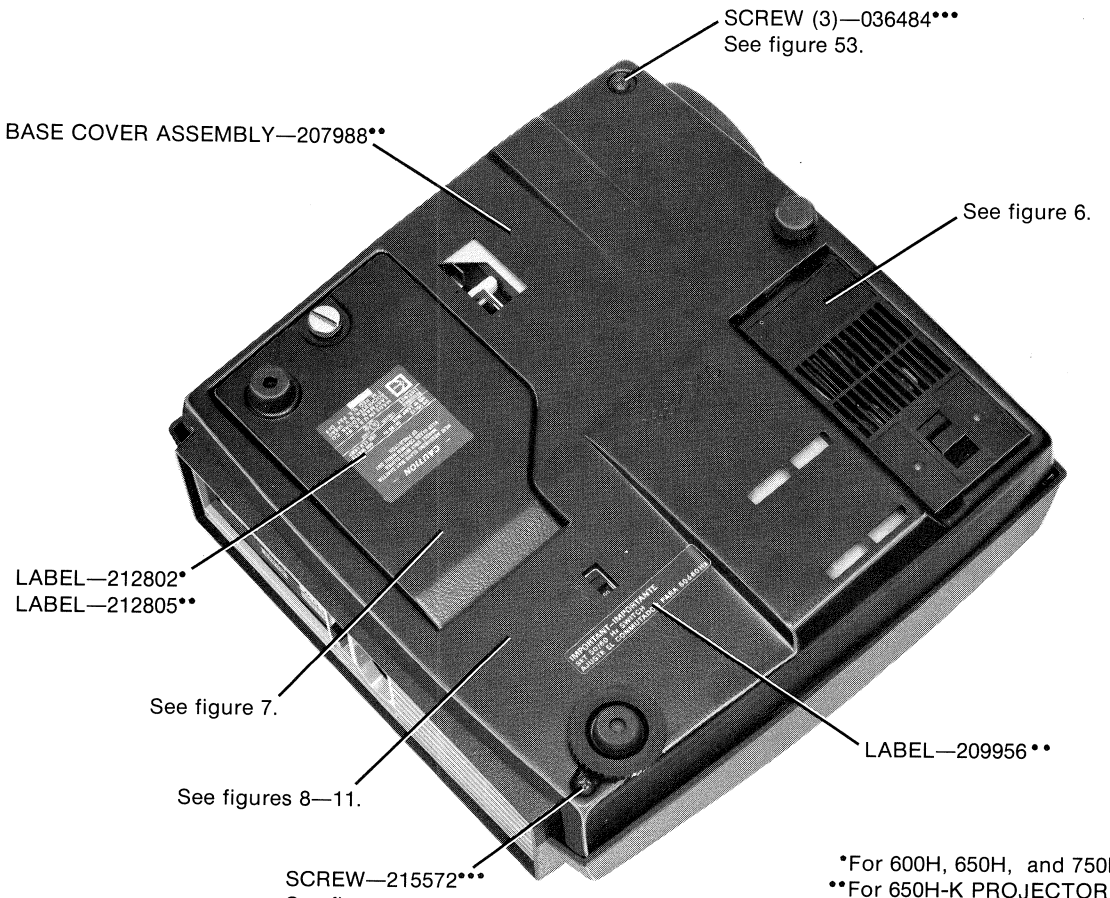


FIGURE 3 **REMOTE CONTROL ASSEMBLY (650, 650H, 650H-K, and 700 PROJECTORS)**
See the Kodak Price Catalog.



GURE 4 REMOTE CONTROL ASSEMBLY (750, 750H, 800, and 800H PROJECTORS)
See the Kodak Price Catalog.



•For 600H, 650H, and 750H PROJECTORS.
••For 650H-K PROJECTOR.
•••For PROJECTORS with plastic HOUSINGS.

GURE 5

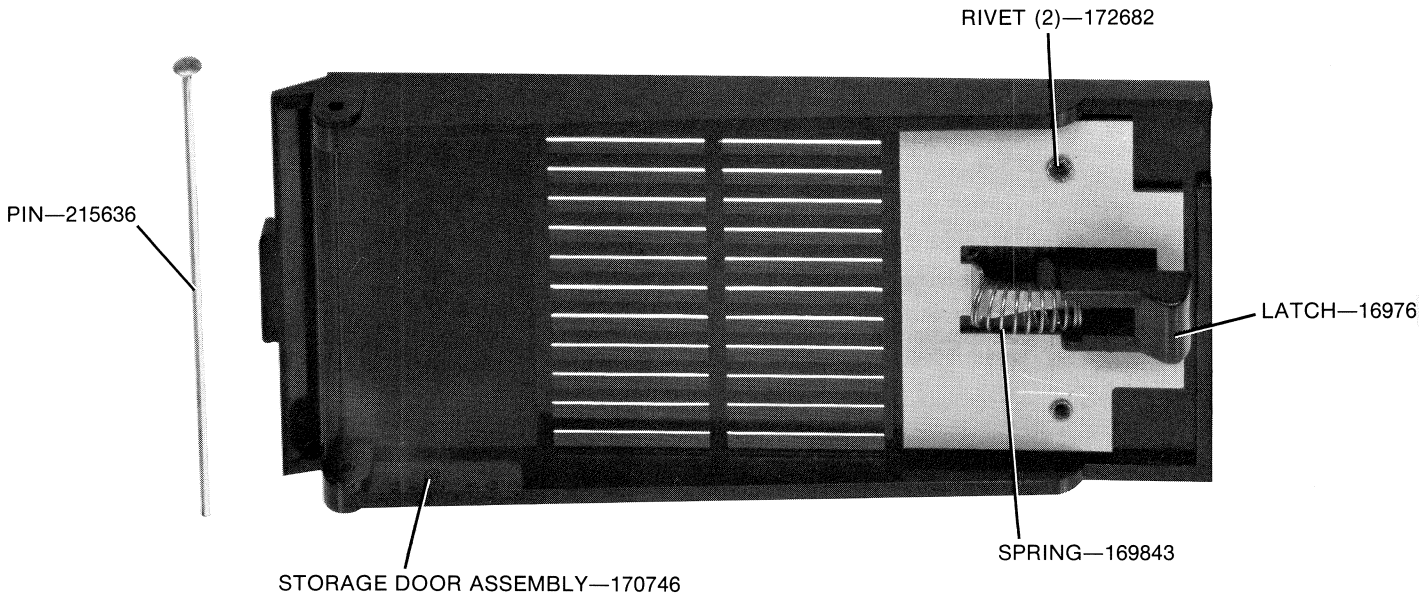


FIGURE 6

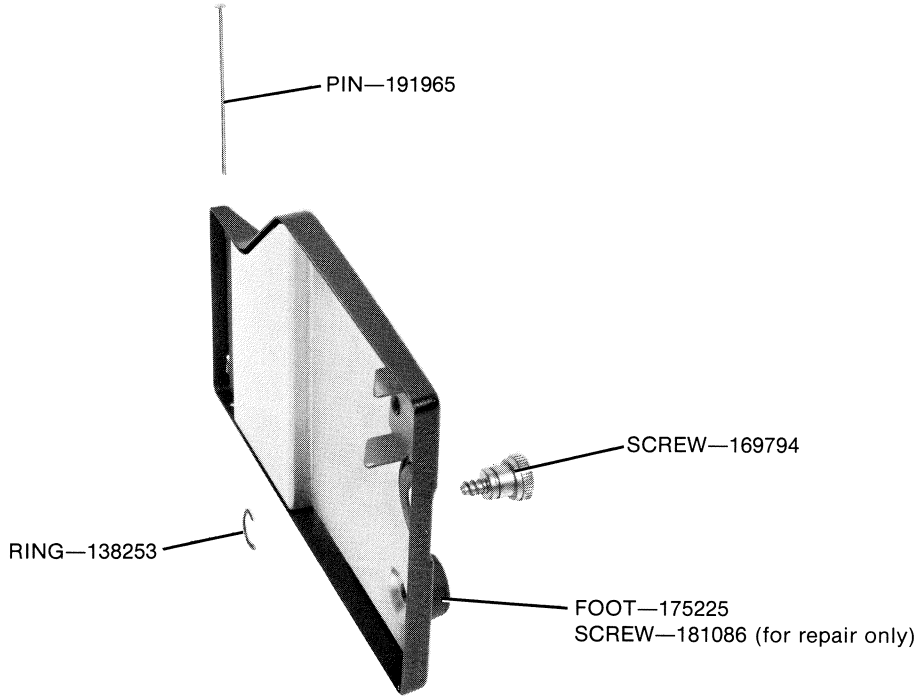


FIGURE 7 LAMPHOUSE DOOR ASSEMBLY (600H, 650H, 650H-K, 750H, and 800H PROJECTORS)—197288

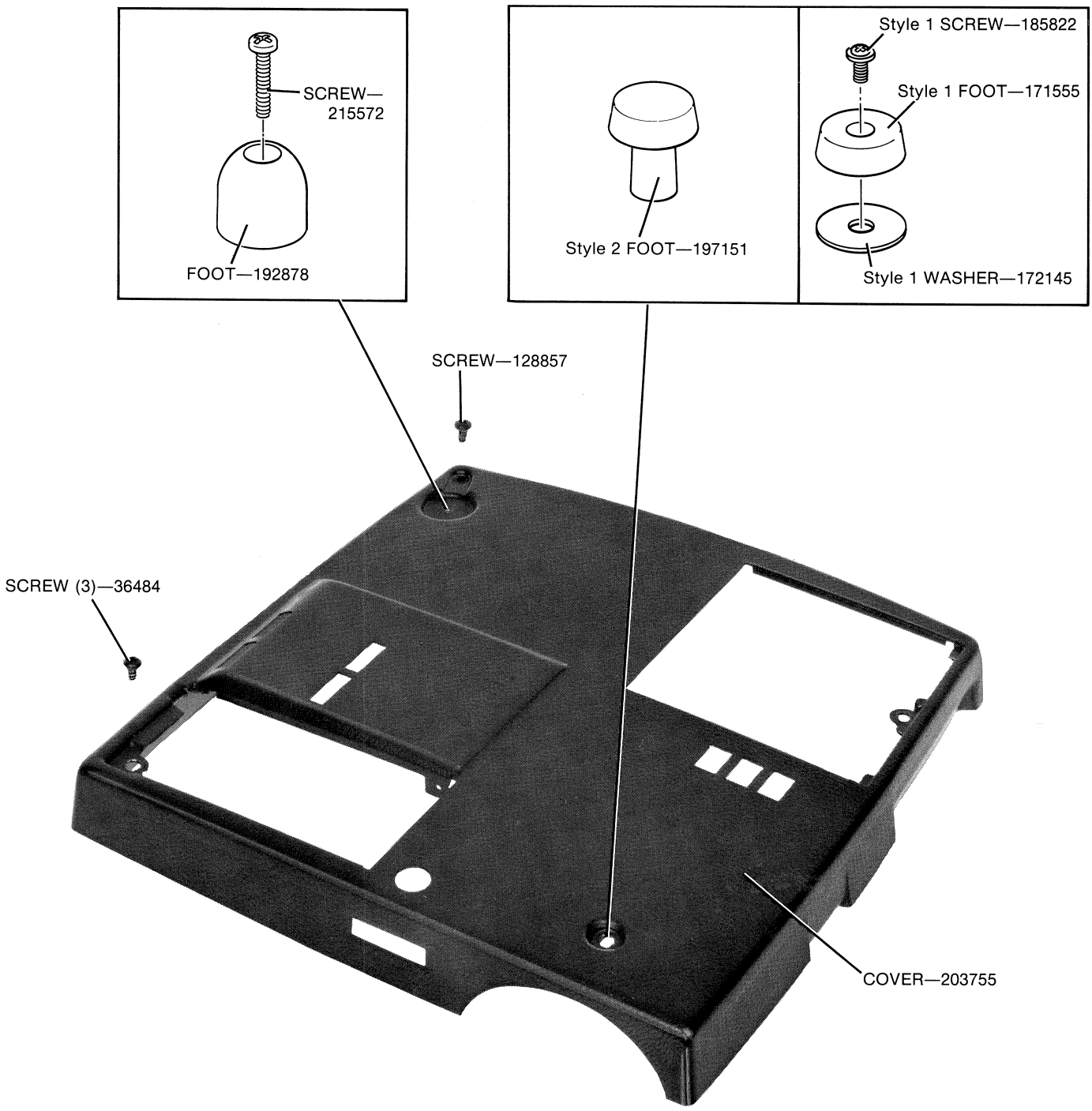


FIGURE 8 600 and 650 PROJECTORS

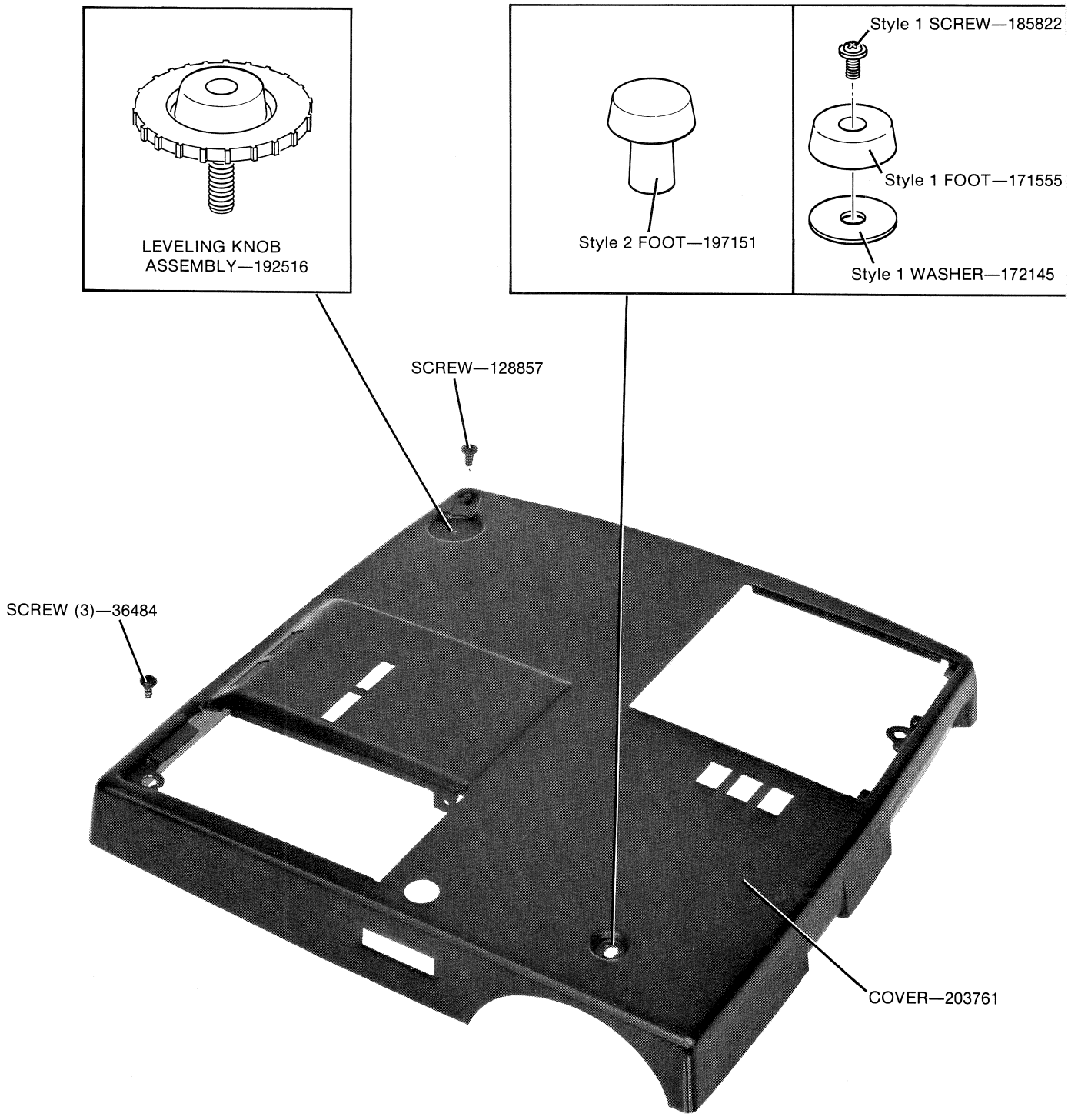


FIGURE 9 700, 750, and 800 PROJECTORS

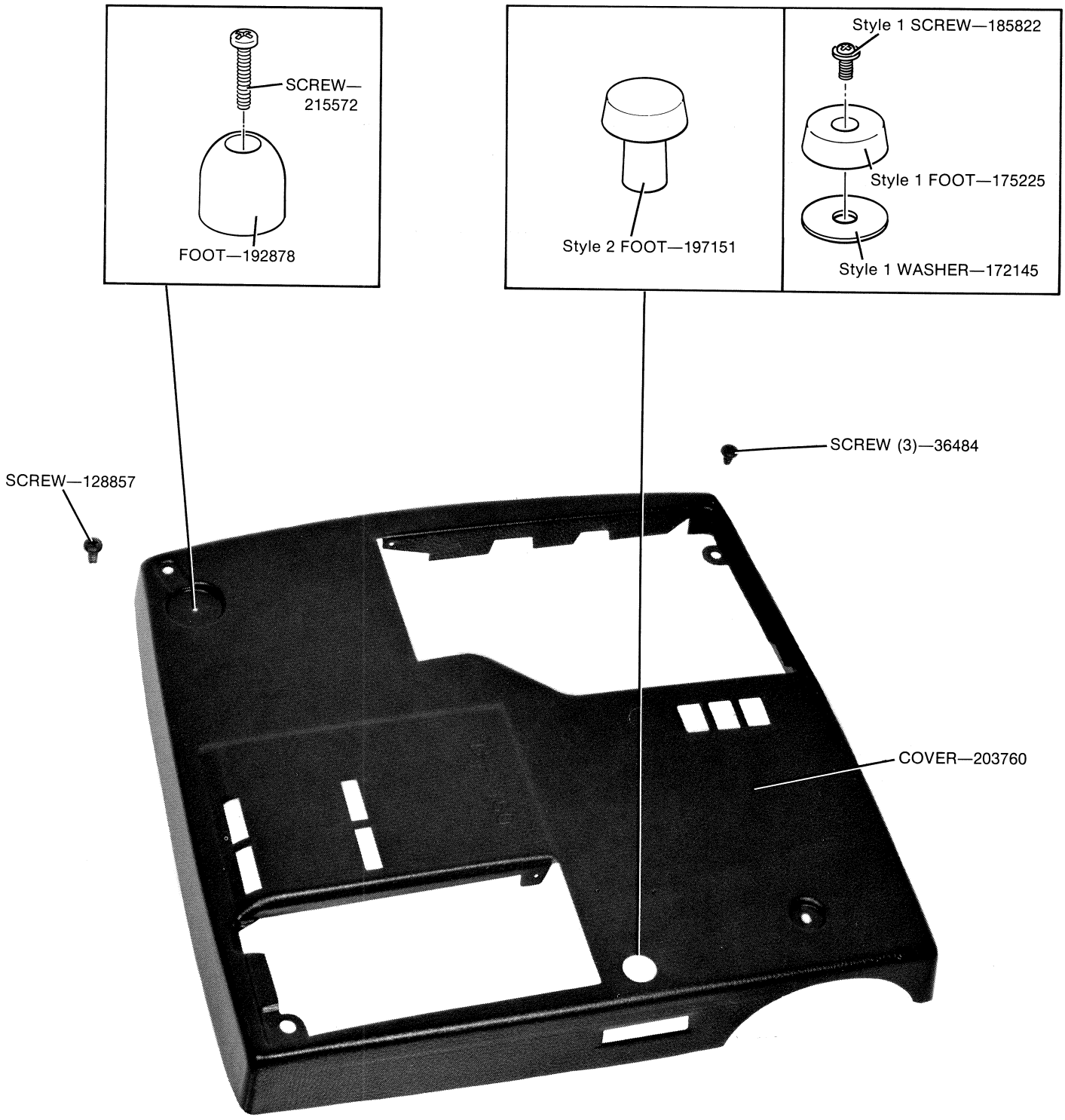


FIGURE 10 600H and 650H PROJECTORS

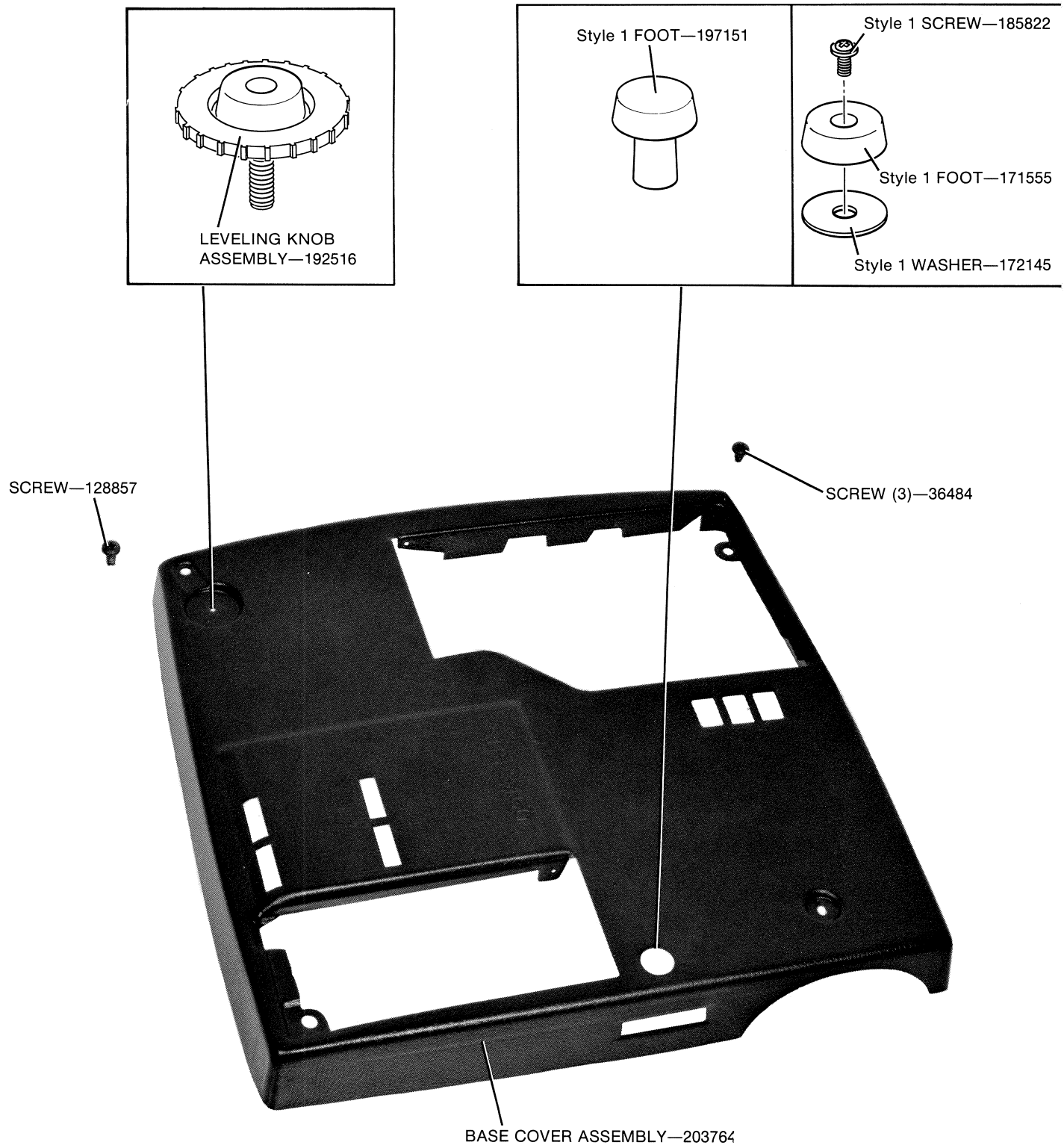


FIGURE 11 750H and 800H PROJECTORS

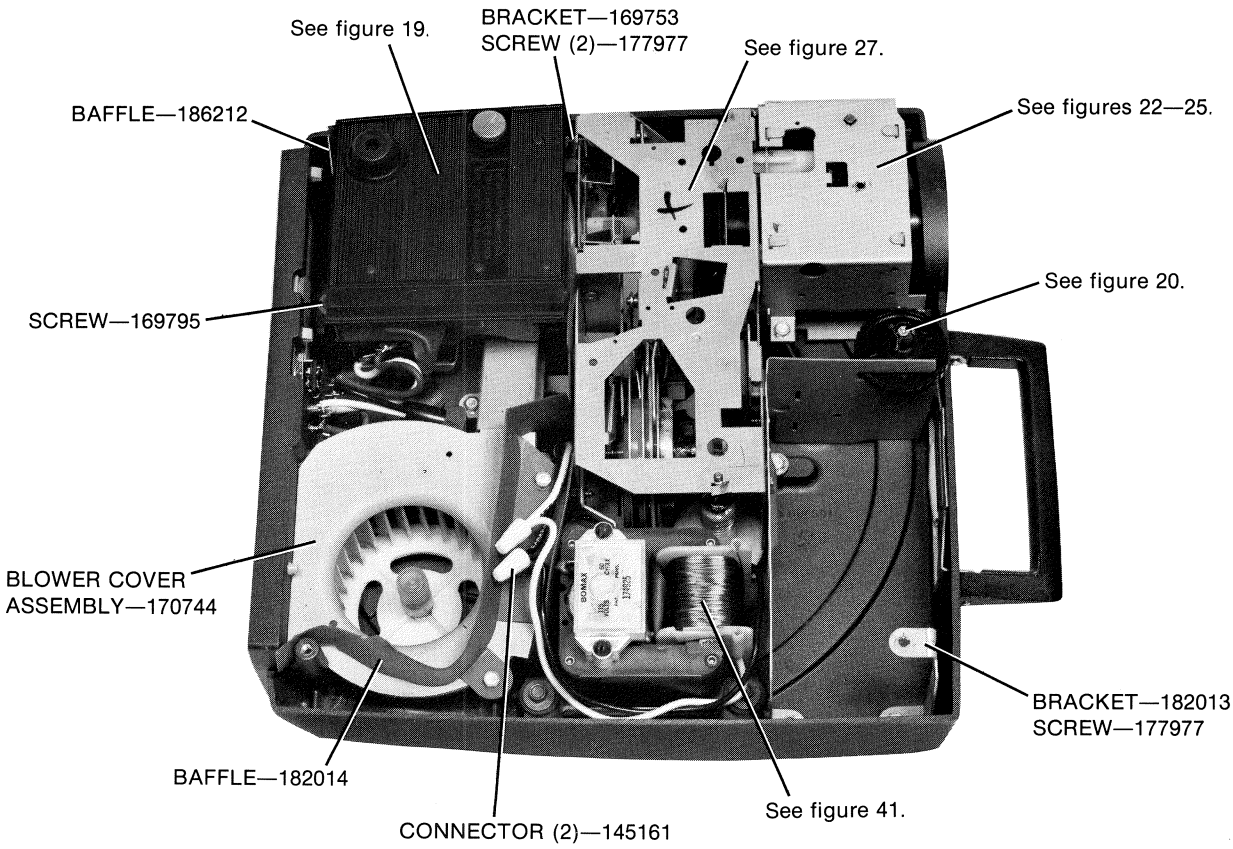
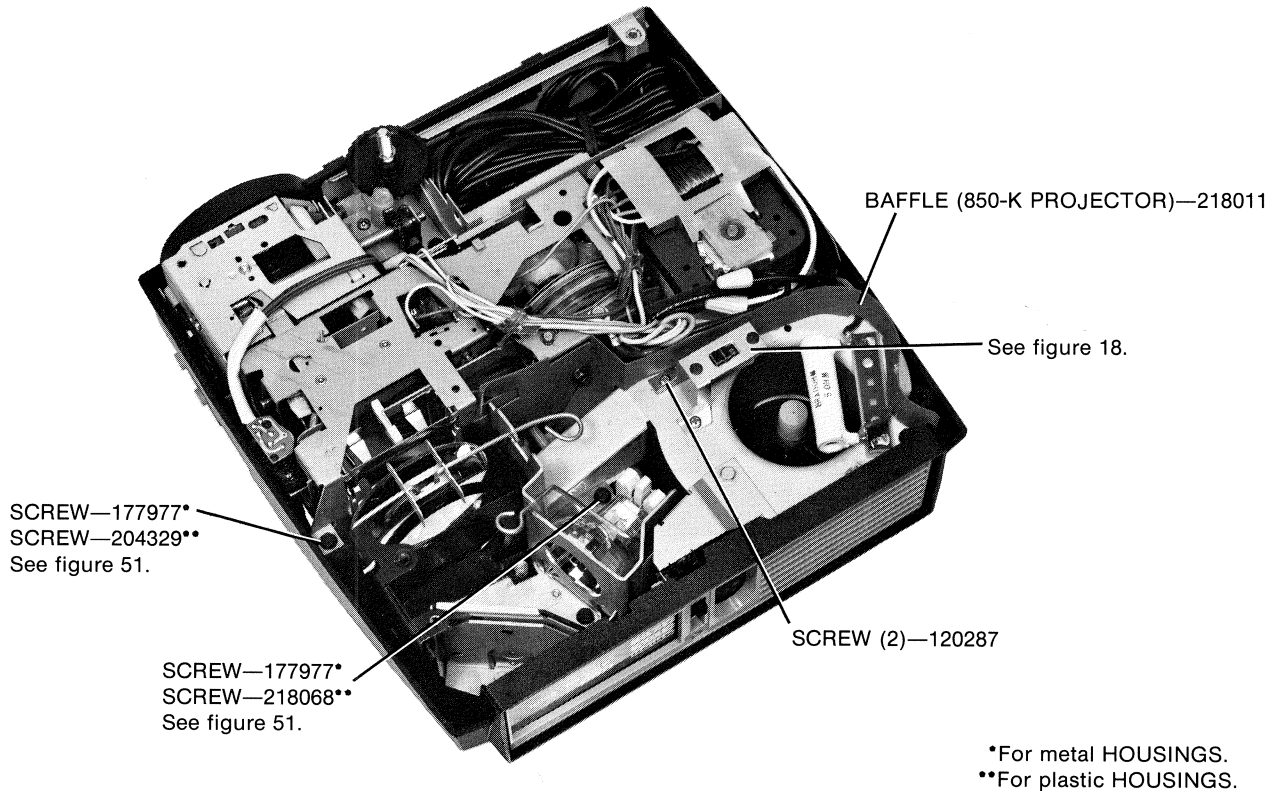


FIGURE 12 600, 650, and 700 PROJECTORS



•For metal HOUSINGS.
••For plastic HOUSINGS.

FIGURE 13

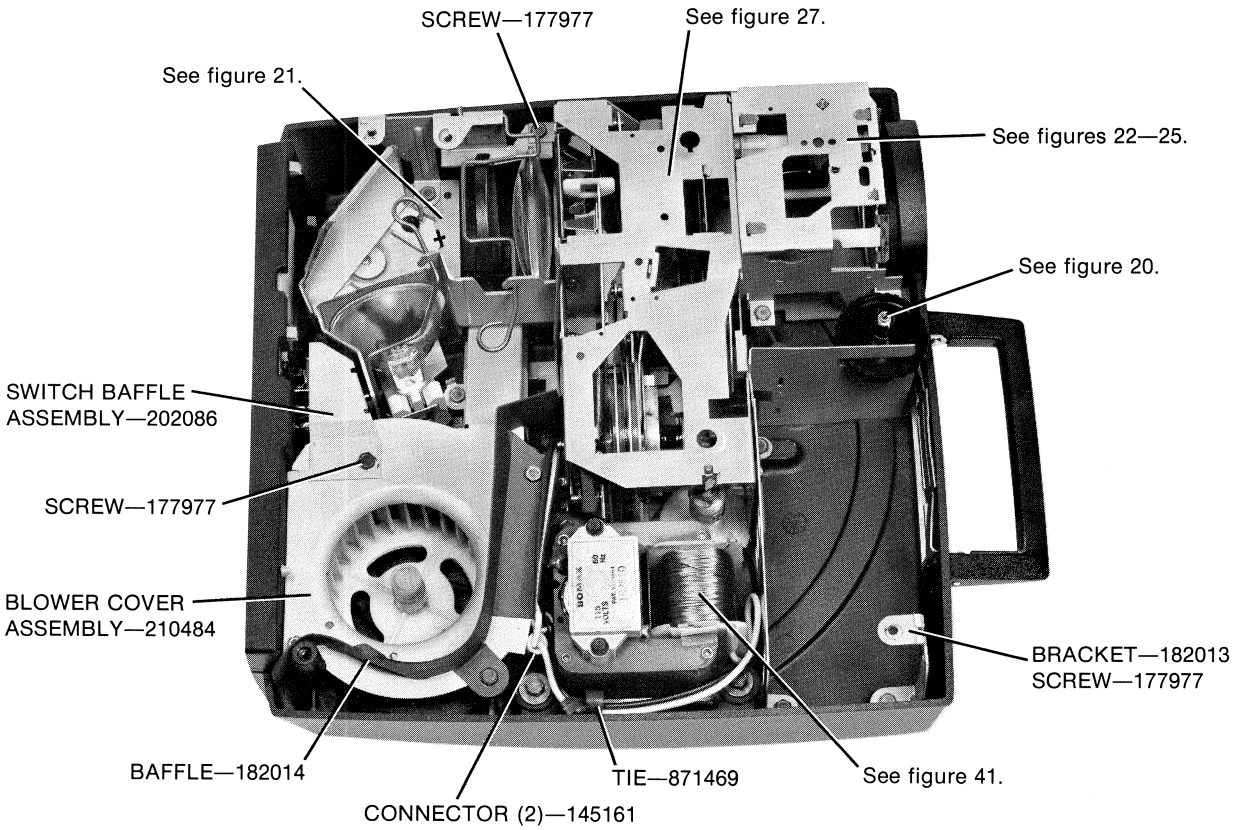


FIGURE 14 600H and 650H PROJECTORS with metal HOUSINGS

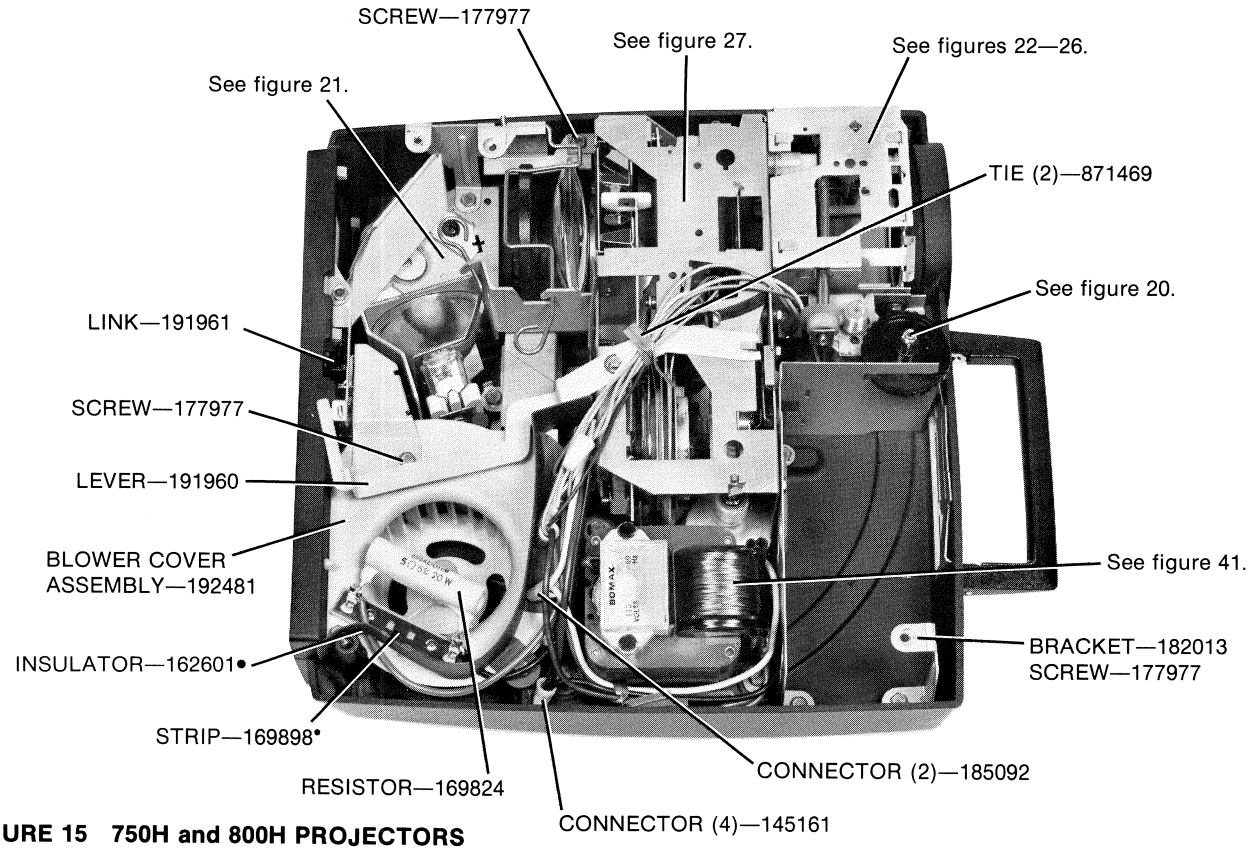


FIGURE 15 750H and 800H PROJECTORS

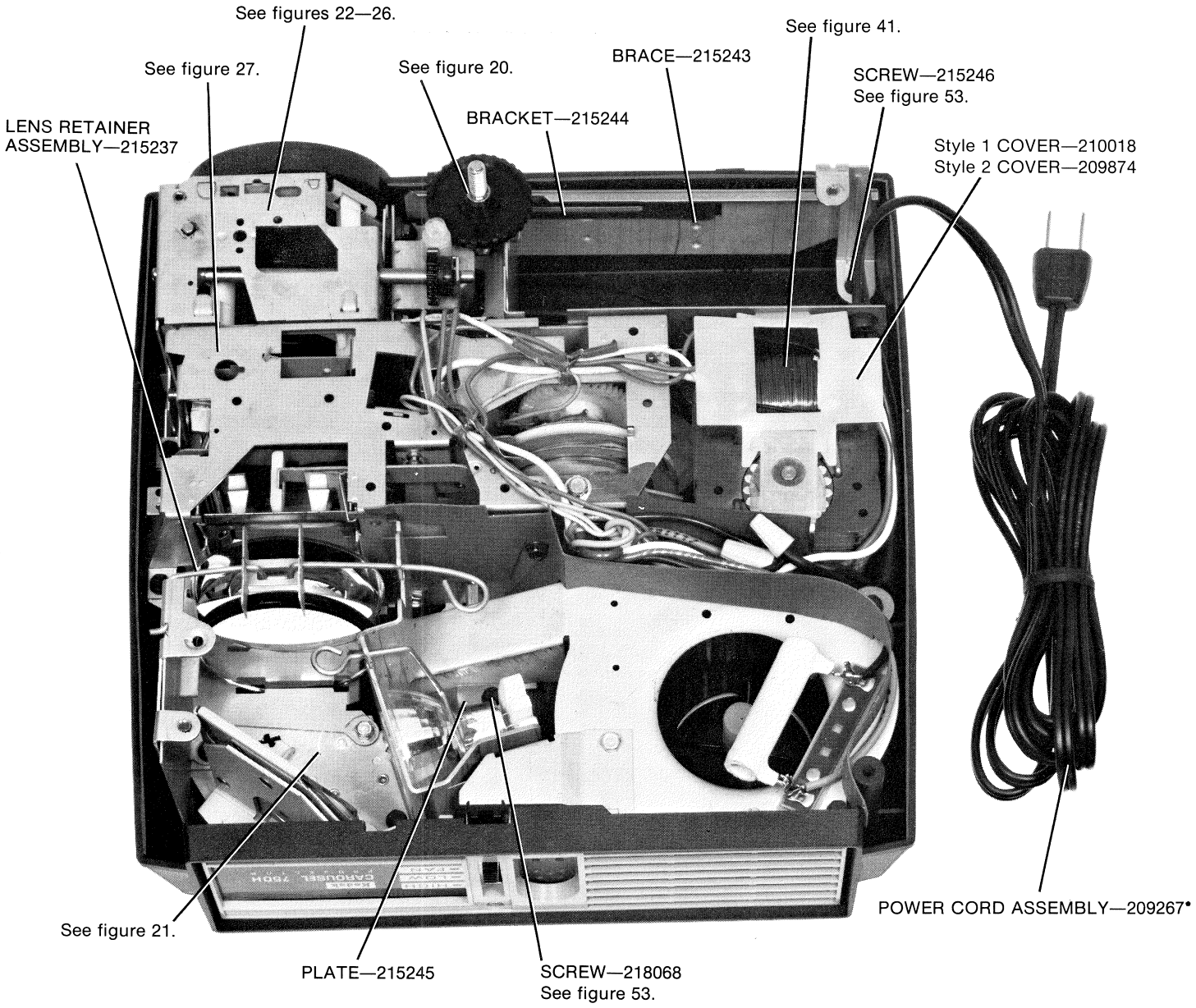


FIGURE 16 600H, 650H, 650H-K, 750H, and 800H PROJECTORS with plastic HOUSINGS

*Included in STYLE 2 600H, 650H, 750H, and 800H PROJECTORS with metal HOUSINGS.

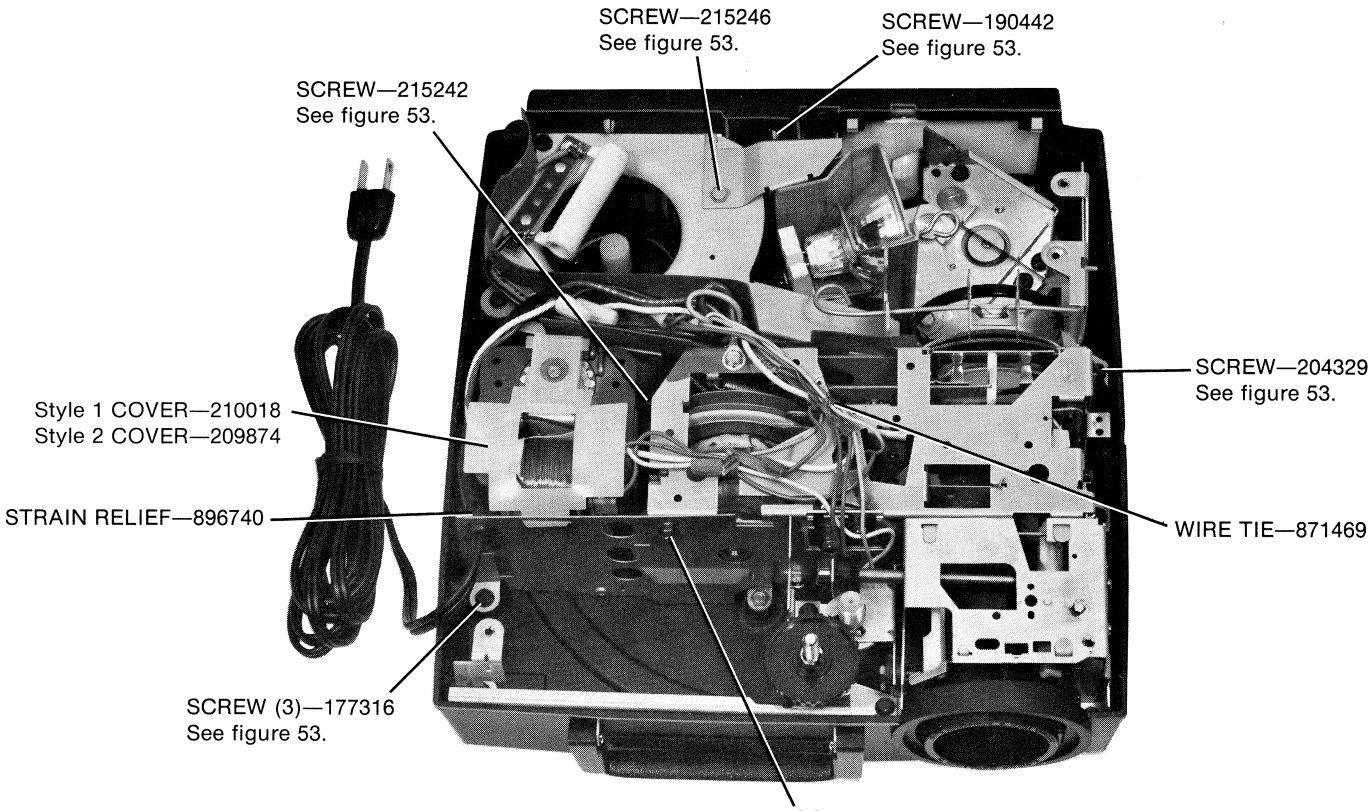


FIGURE 17 600H, 650H, 650H-K, 750H, and 800H PROJECTORS with plastic HOUSINGS

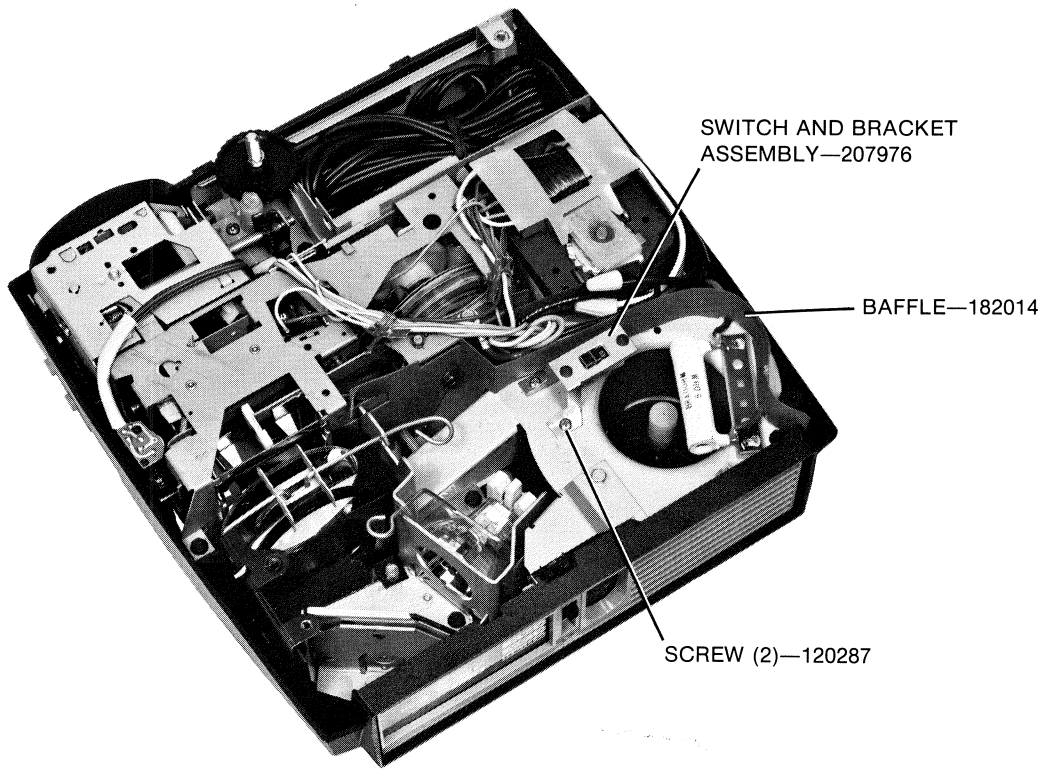


FIGURE 18 650H-K PROJECTOR

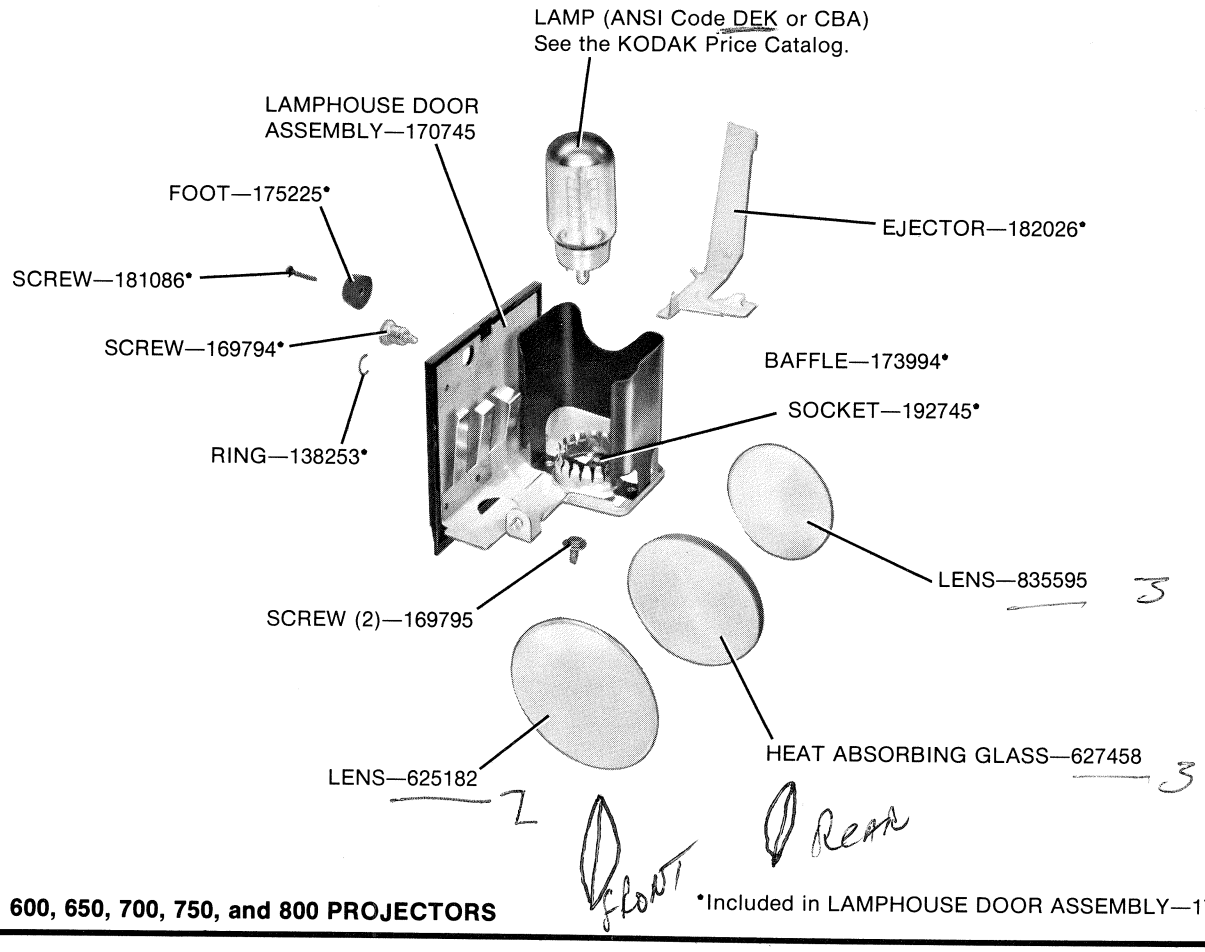


FIGURE 19 600, 650, 700, 750, and 800 PROJECTORS

•Included in LAMPHOUSE DOOR ASSEMBLY—170745.

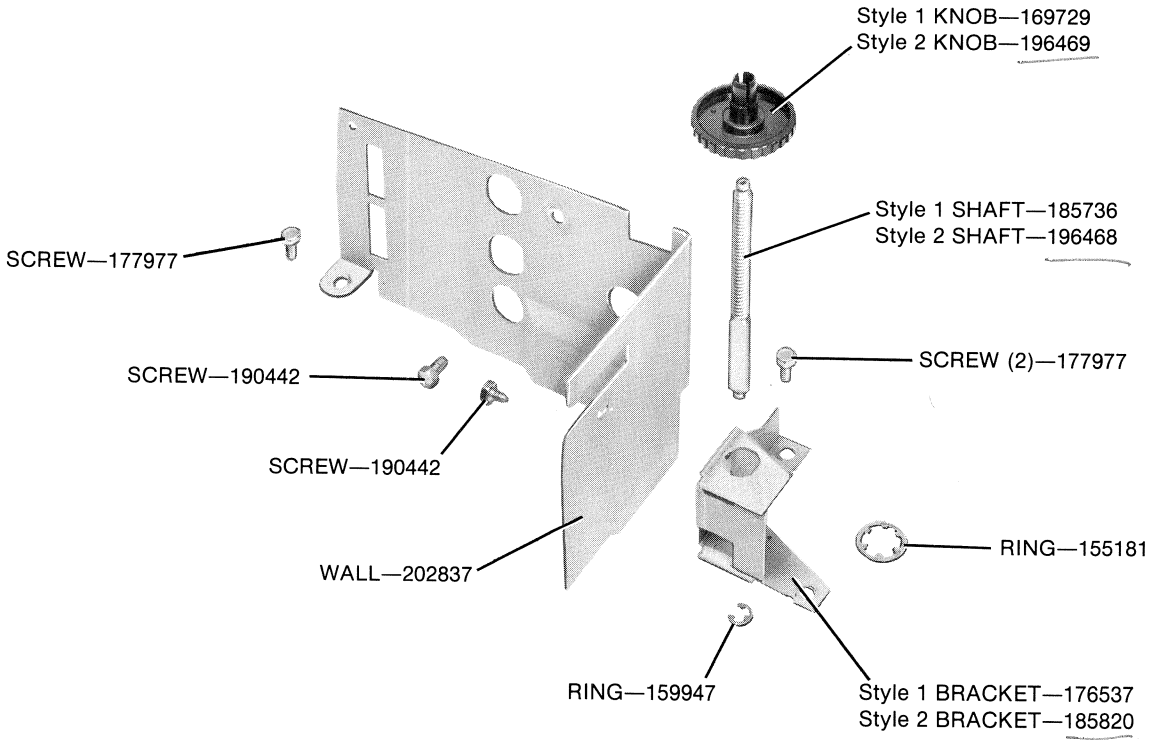
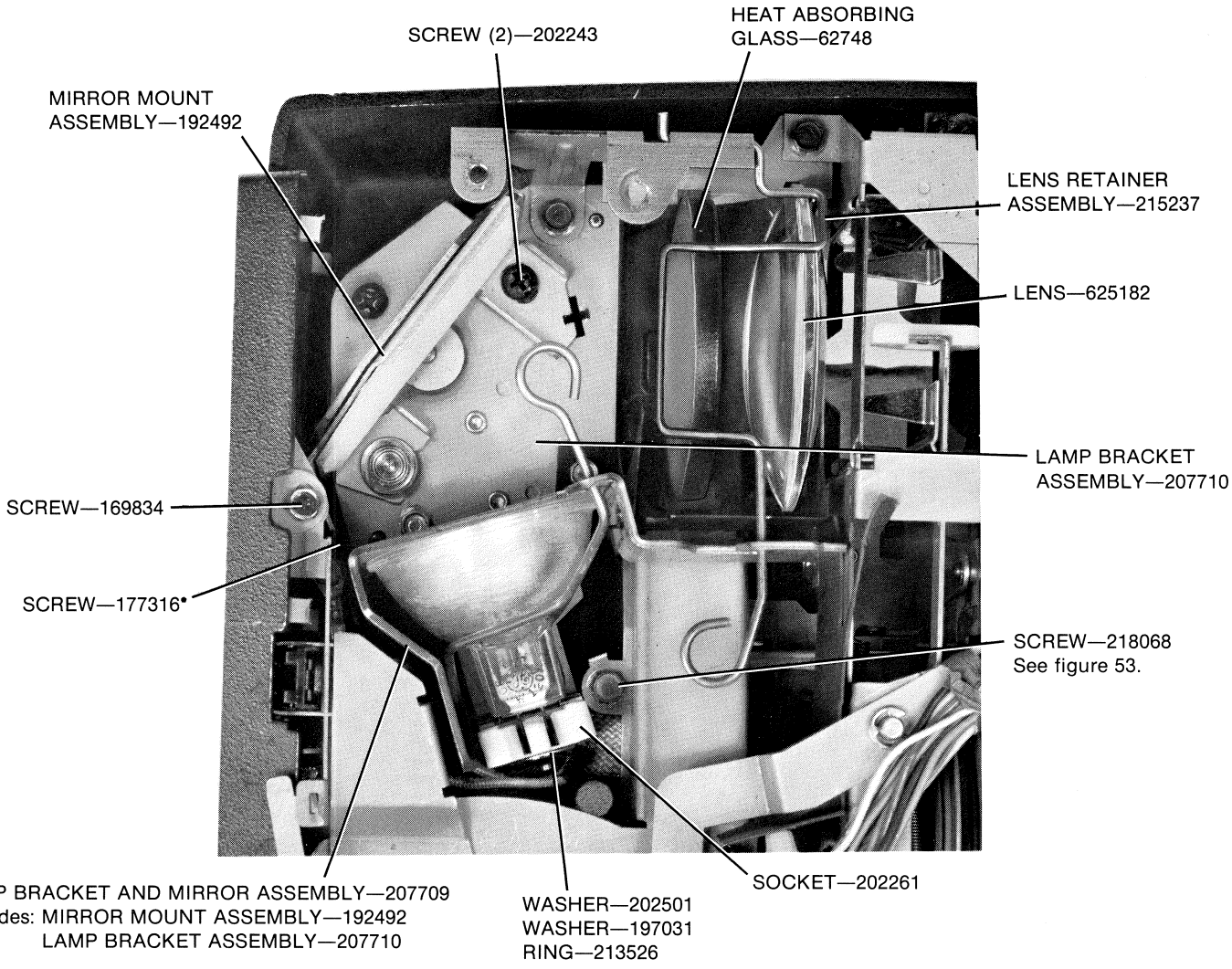


FIGURE 20



•For metal HOUSINGS only.

FIGURE 21 600H, 650H, 750H, and 800H PROJECTORS

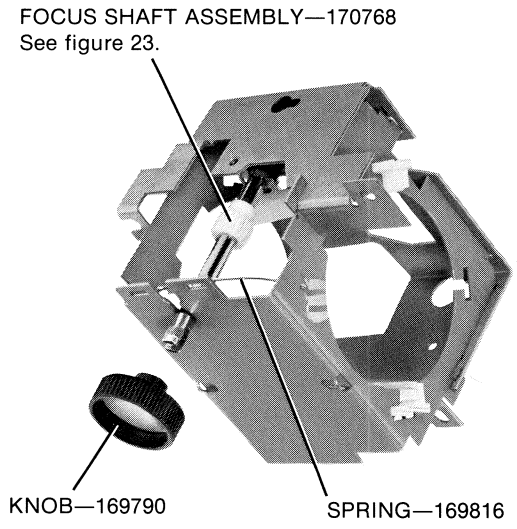


FIGURE 22

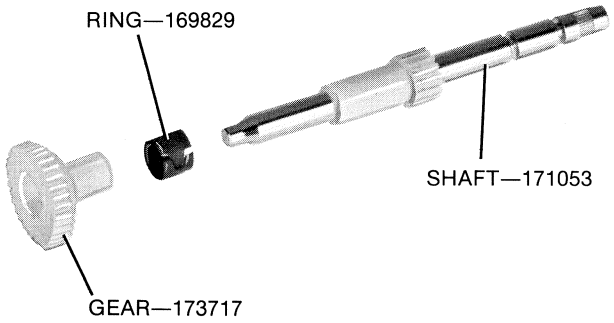


FIGURE 23 FOCUS SHAFT ASSEMBLY—170768

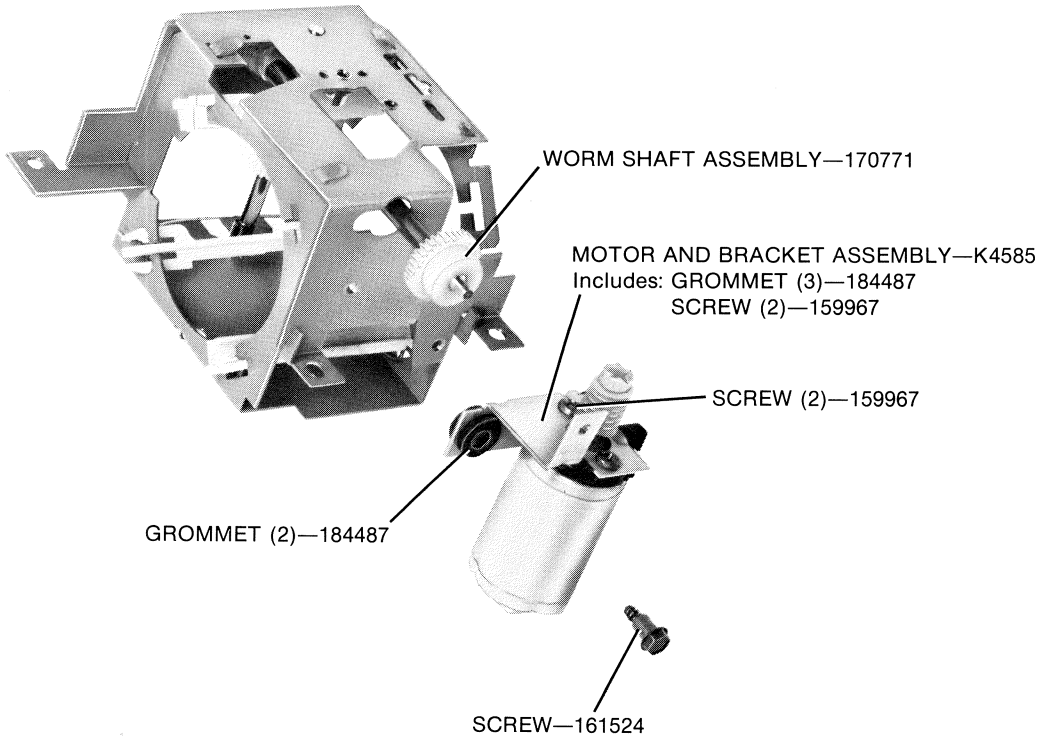


FIGURE 24 750, 750H, 800, and 800H PROJECTORS

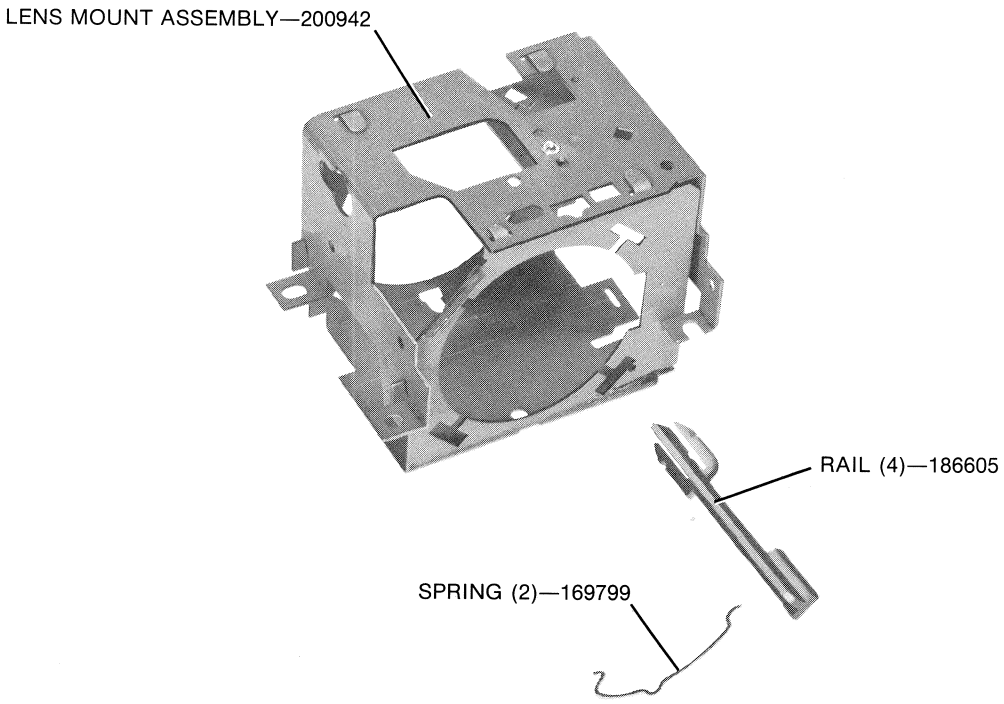


FIGURE 25

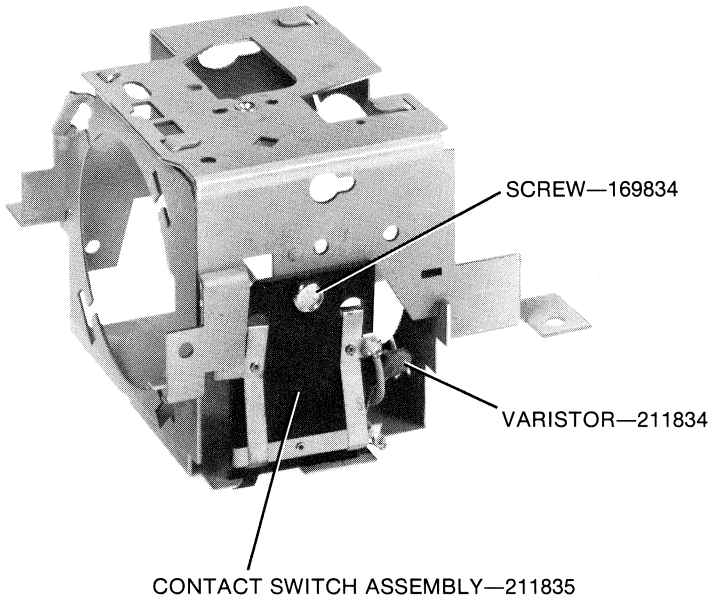
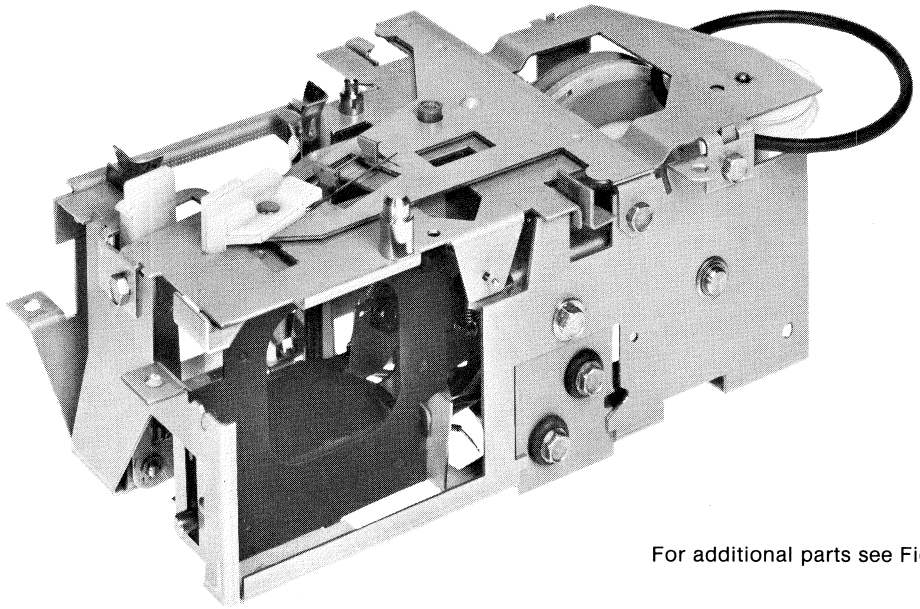


FIGURE 26



For additional parts see Figures 28—40.

FIGURE 27 MECHANISM ASSEMBLY (600 and 600H PROJECTORS)—215248
(650, 650H, 650H-K, 700, 750, and 750H PROJECTORS)—215250
(800 and 800H PROJECTORS)—170741

For additional parts see figures 27 and 29—40.

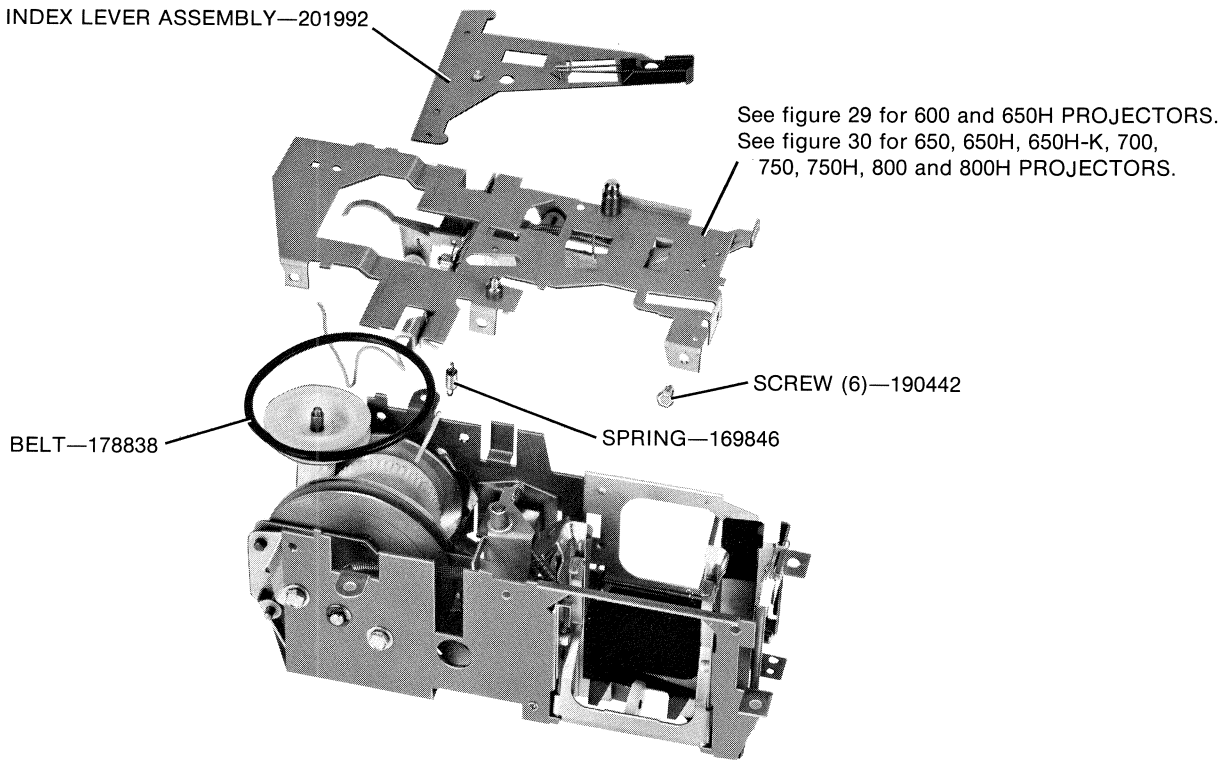


FIGURE 28 MECHANISM ASSEMBLY (600 and 600H PROJECTORS)—215248 (650, 650H, 650H-K, 700, 750, and 750H PROJECTORS)—215250 (800 and 800H PROJECTORS)—170741

For additional parts see figures 27—28 and 32—40.

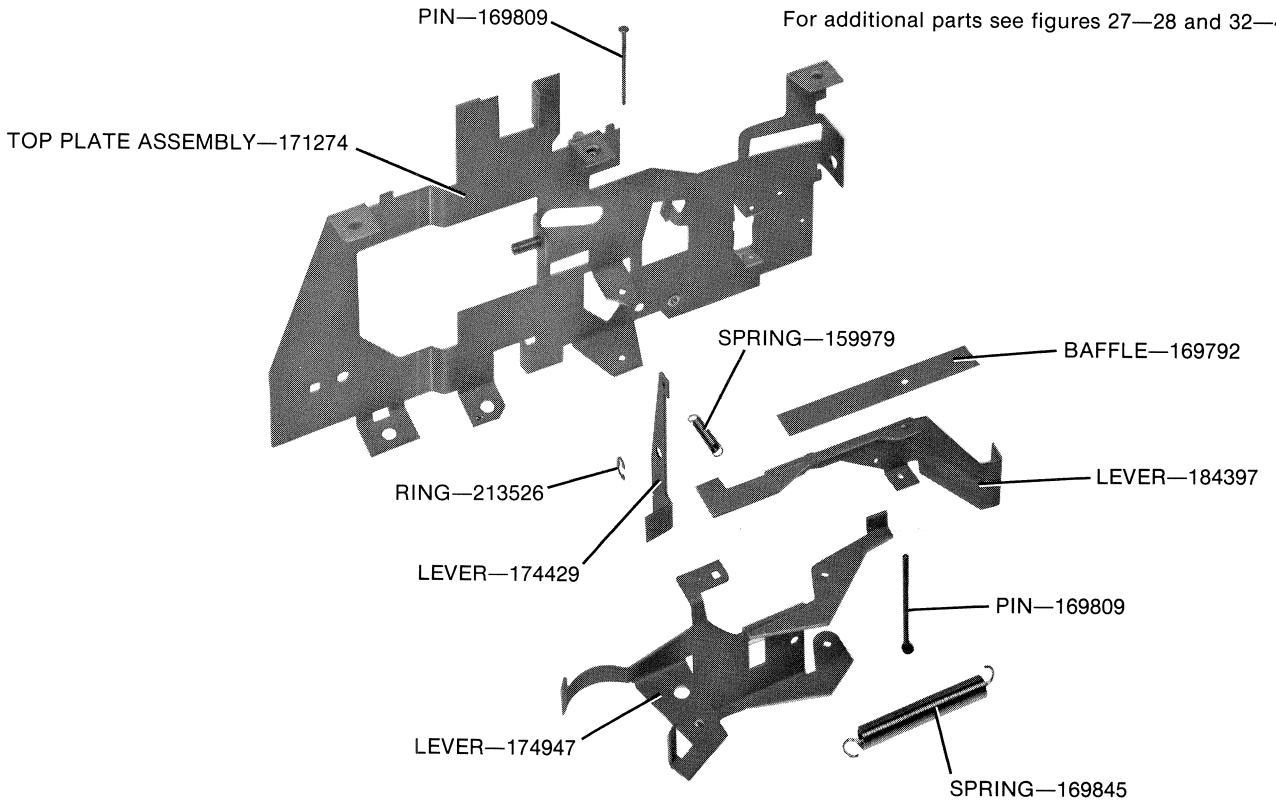


FIGURE 29 MECHANISM ASSEMBLY (600 and 600H PROJECTORS)—215248

•Included in DIRECTIONAL LEVER ASSEMBLY 170765.

For additional parts see figures 27—28 and 30—40.

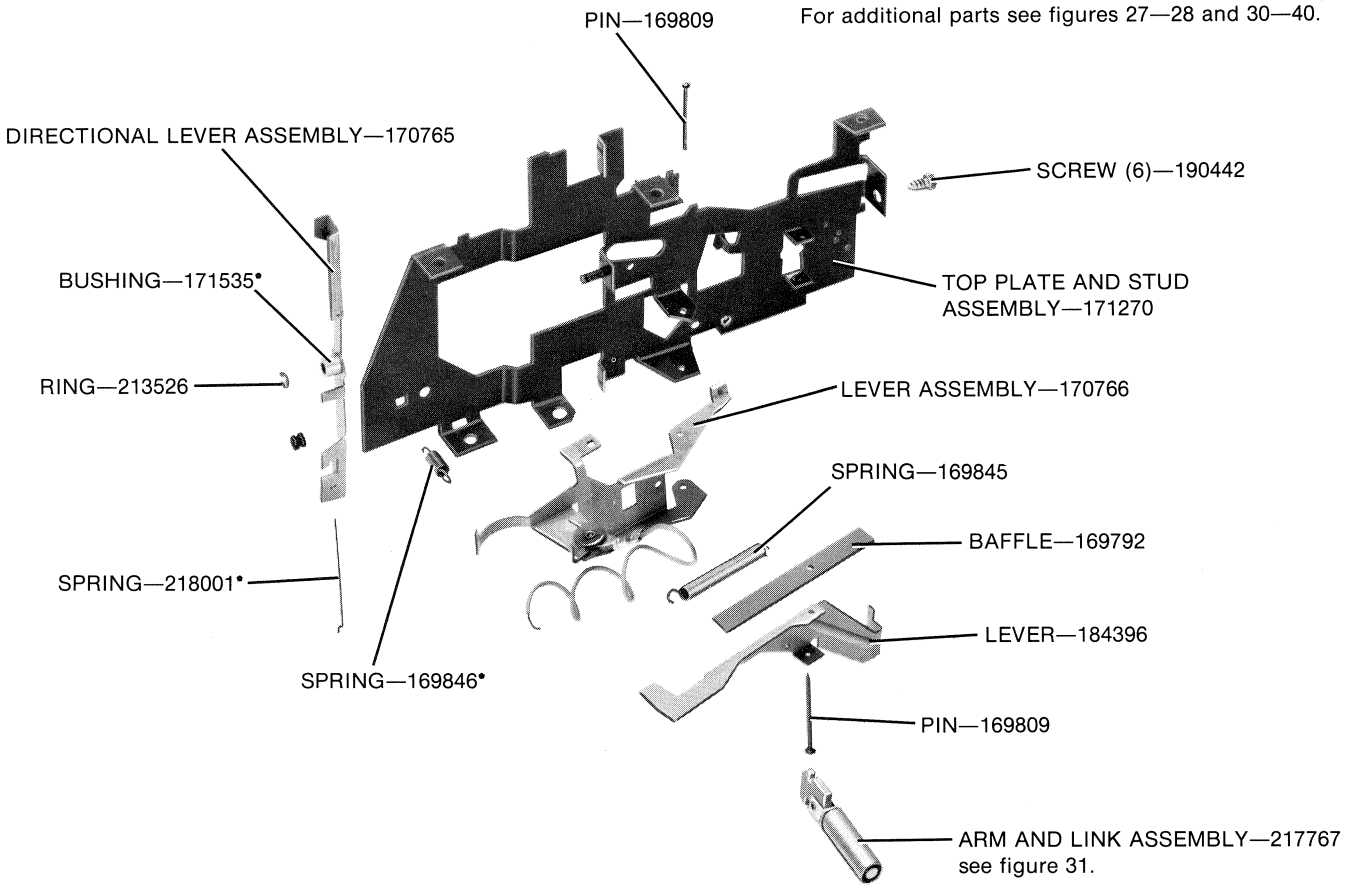


FIGURE 30 MECHANISM ASSEMBLY (650, 650H, 650H-K, 700, 750, and 750H PROJECTORS)—215250 (800 and 800H PROJECTORS)—170741

For additional parts see figures 27—28 and 30—40.

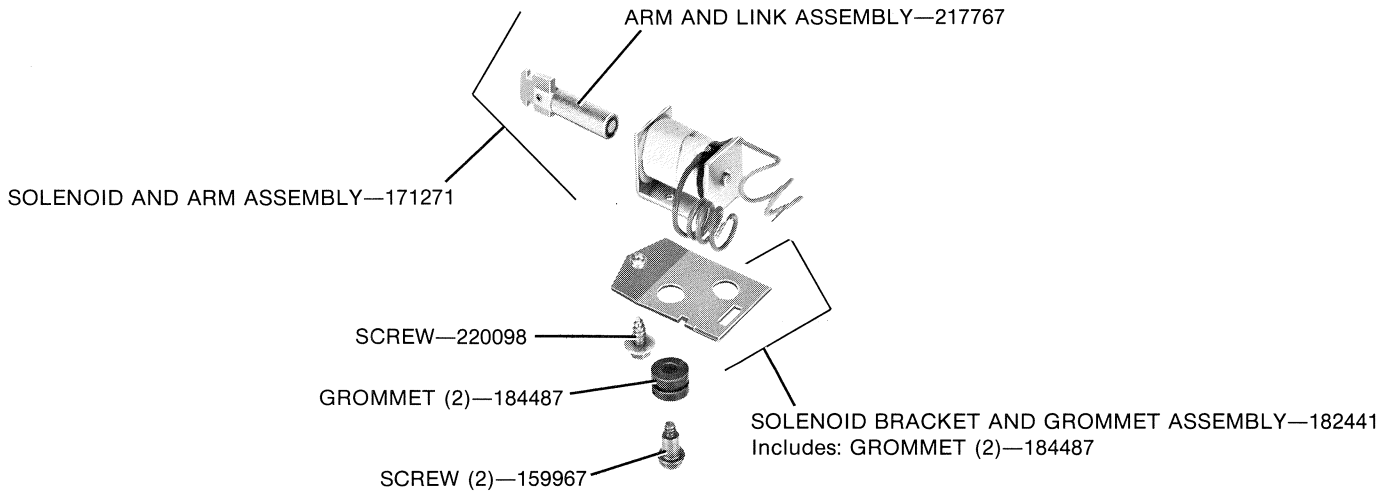
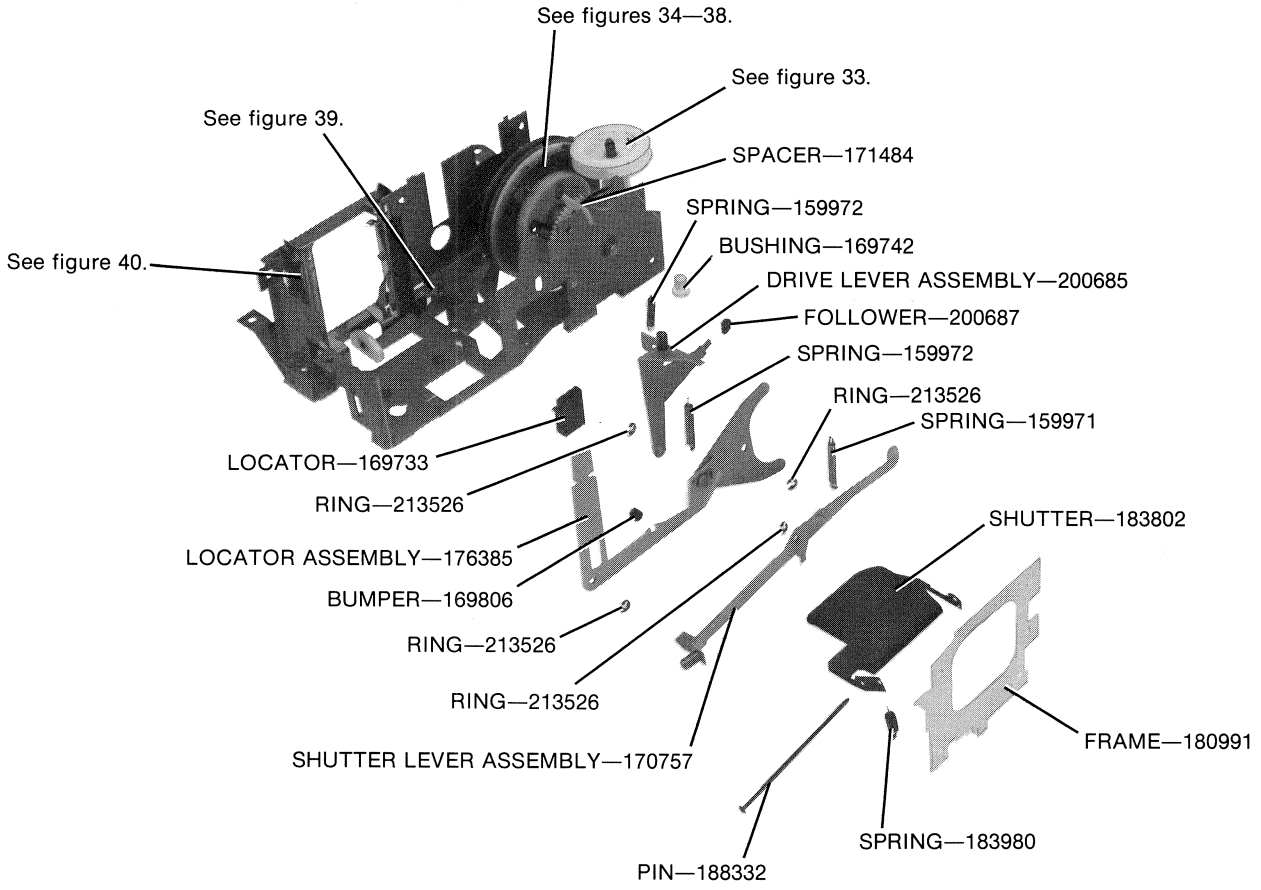
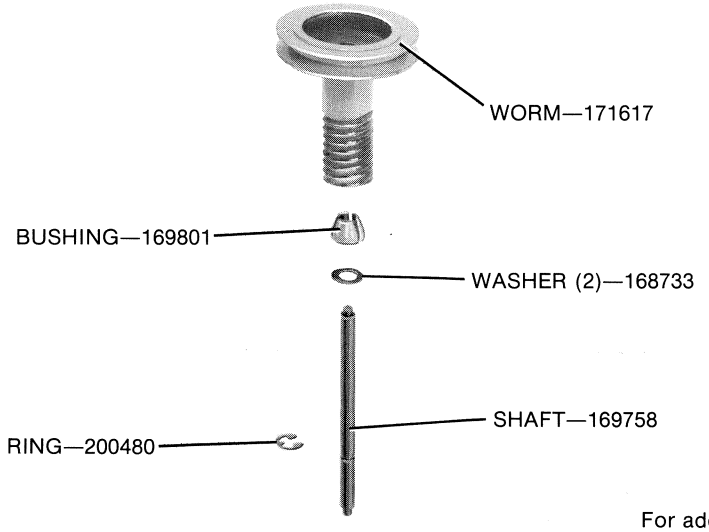


FIGURE 31 MECHANISM ASSEMBLY (650, 650H, 650H-K, 700, 750, and 750H PROJECTORS)—215250 (800 and 800H PROJECTORS)—170741



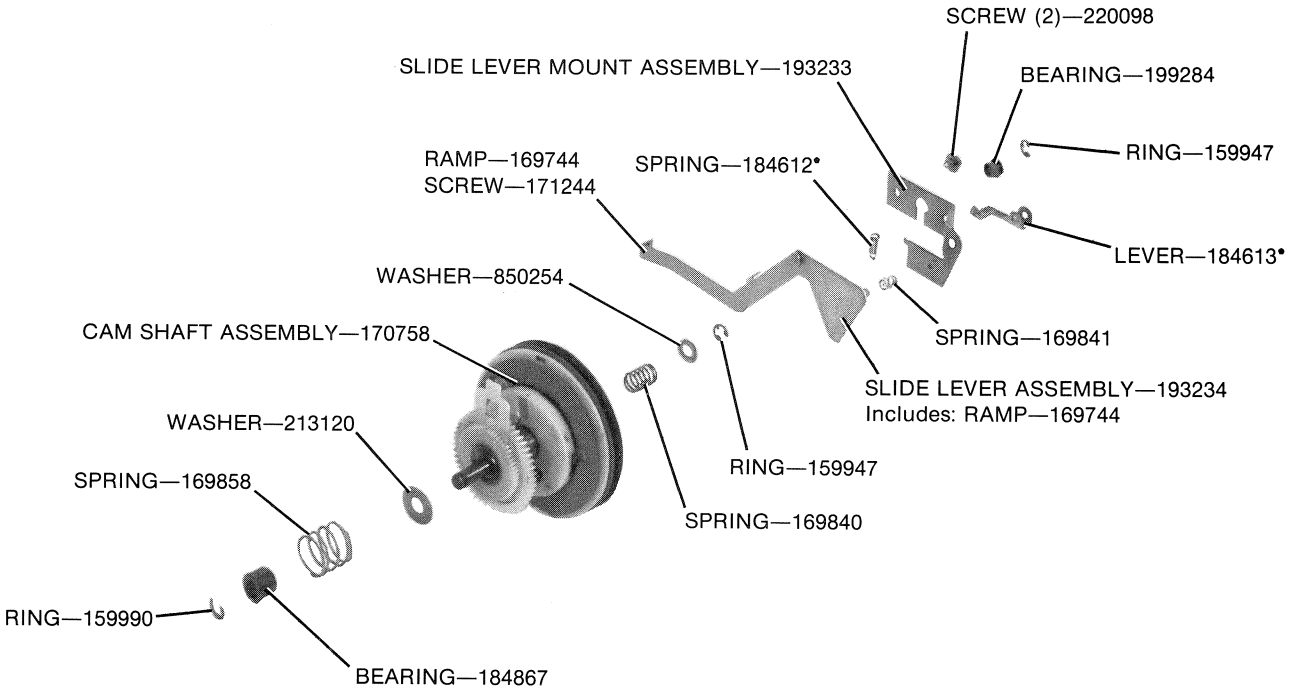
For additional parts see figures 27--40.

FIGURE 32 MECHANISM ASSEMBLY (600 and 600H PROJECTORS)—215248 (650, 650H, 650H-K, 700, 750, and 750H PROJECTORS)—215250 (800 and 800H PROJECTORS)—170741



For additional parts see figures 27—40.

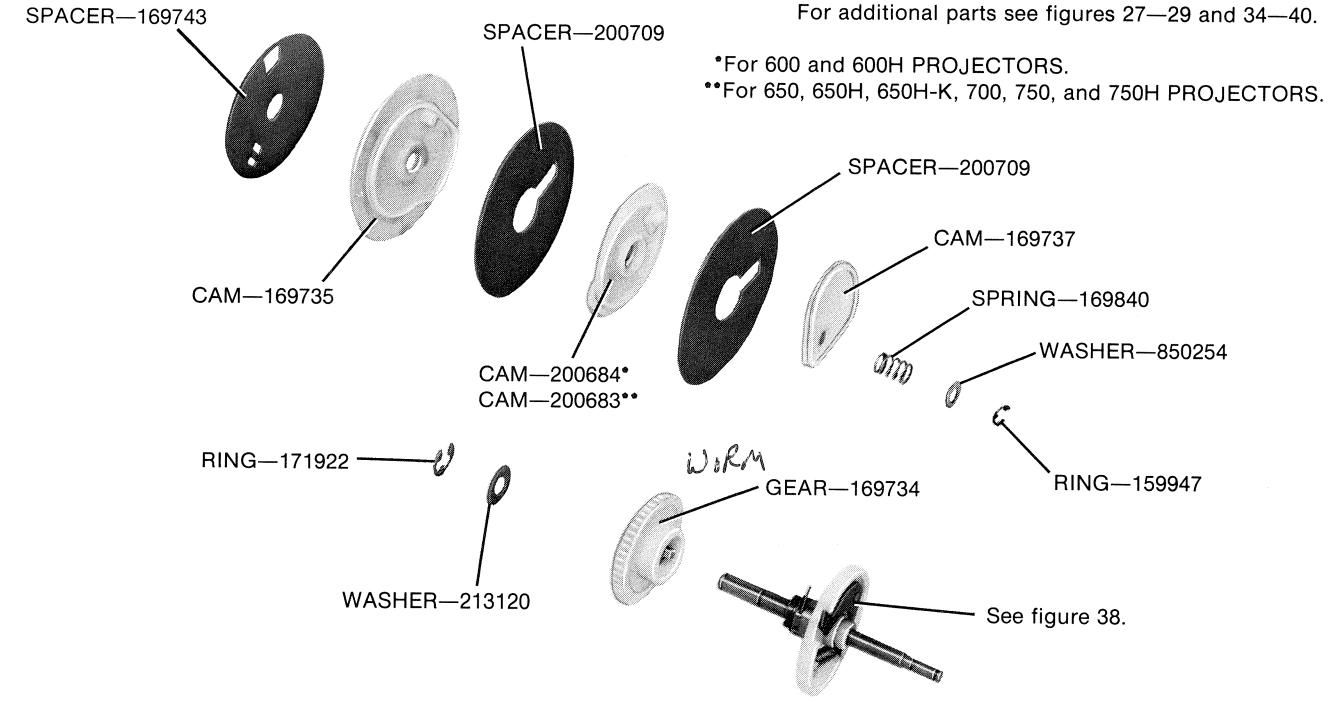
FIGURE 33 MECHANISM ASSEMBLY (600 and 600H PROJECTORS)—215248 (650, 650H, 650H-K, 700, 750, and 750H PROJECTORS)—215250 (800 and 800H PROJECTORS)—170741



For additional parts see figures 27—29 and 35—40.

•Included in SLIDE LEVER MOUNT ASSEMBLY—193233.

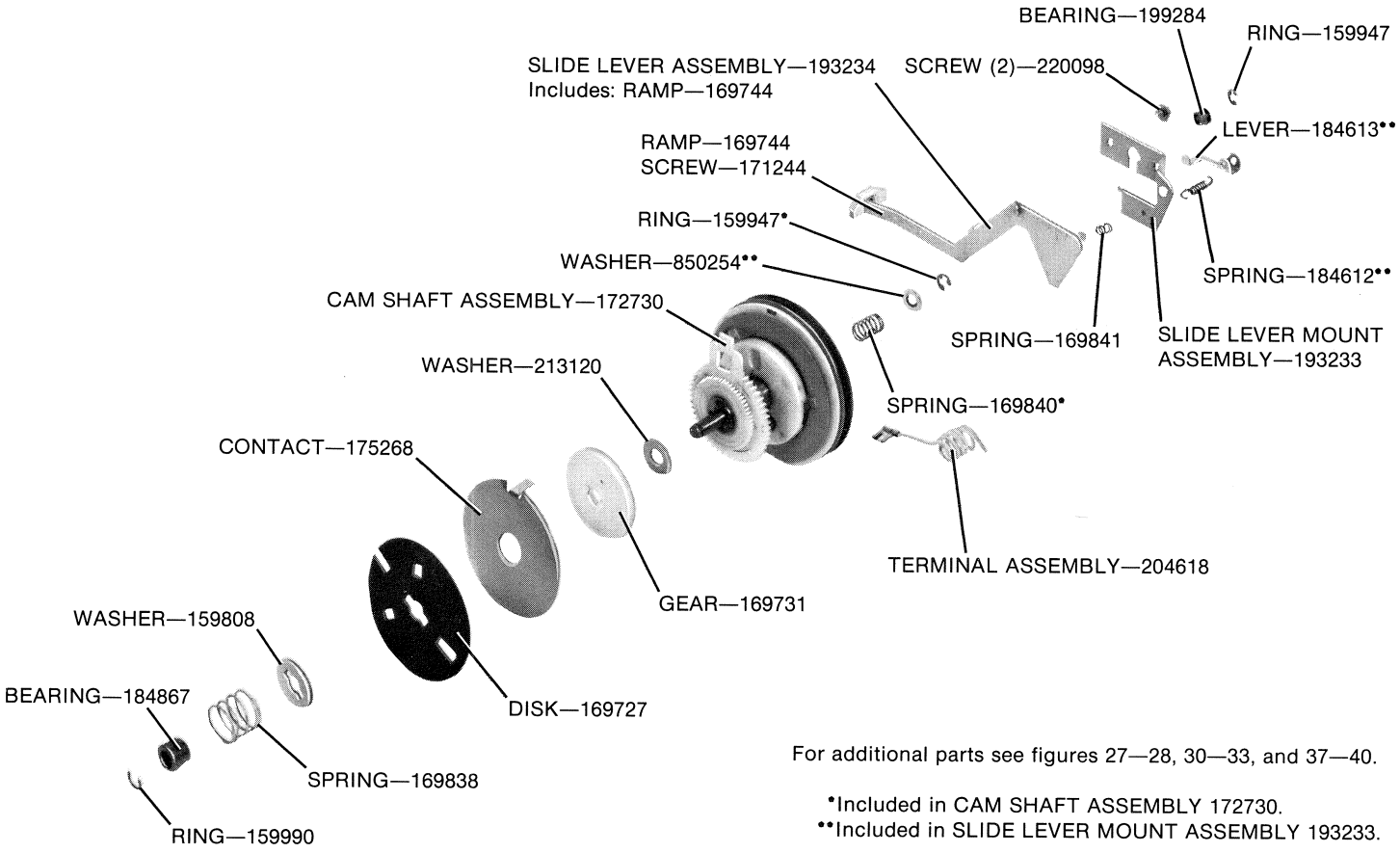
FIGURE 34 MECHANISM ASSEMBLY (600 and 600H PROJECTORS)—215248 (650, 650H, 650H-K, 700, 750, and 750H PROJECTORS)—215250



For additional parts see figures 27—29 and 34—40.

•For 600 and 600H PROJECTORS.
••For 650, 650H, 650H-K, 700, 750, and 750H PROJECTORS.

FIGURE 35 MECHANISM ASSEMBLY (600 and 600H PROJECTORS)—215248 (650, 650H, 650H-K, 700, 750, and 750H PROJECTORS)—215250



For additional parts see figures 27—28, 30—33, and 37—40.

•Included in CAM SHAFT ASSEMBLY 172730.
••Included in SLIDE LEVER MOUNT ASSEMBLY 193233.

FIGURE 36 MECHANISM ASSEMBLY (800 and 800H PROJECTORS)—170741

For additional parts see figures 27—28, 30—33, and 36—40.

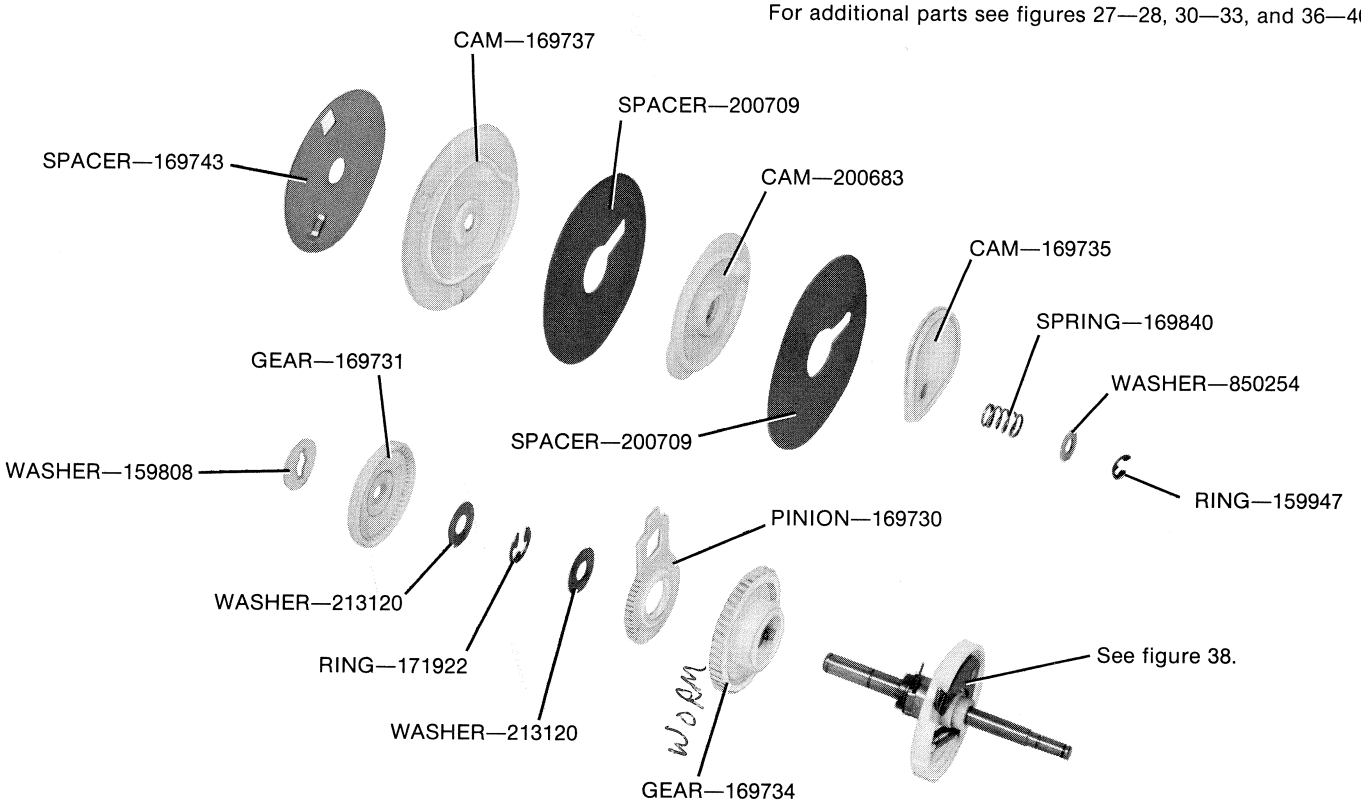
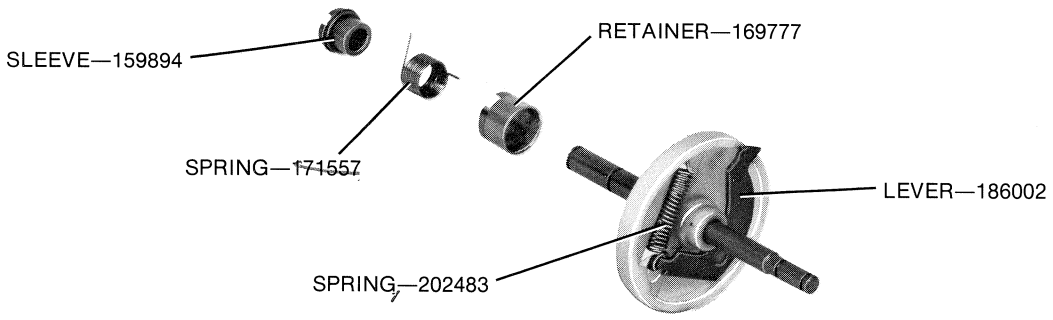
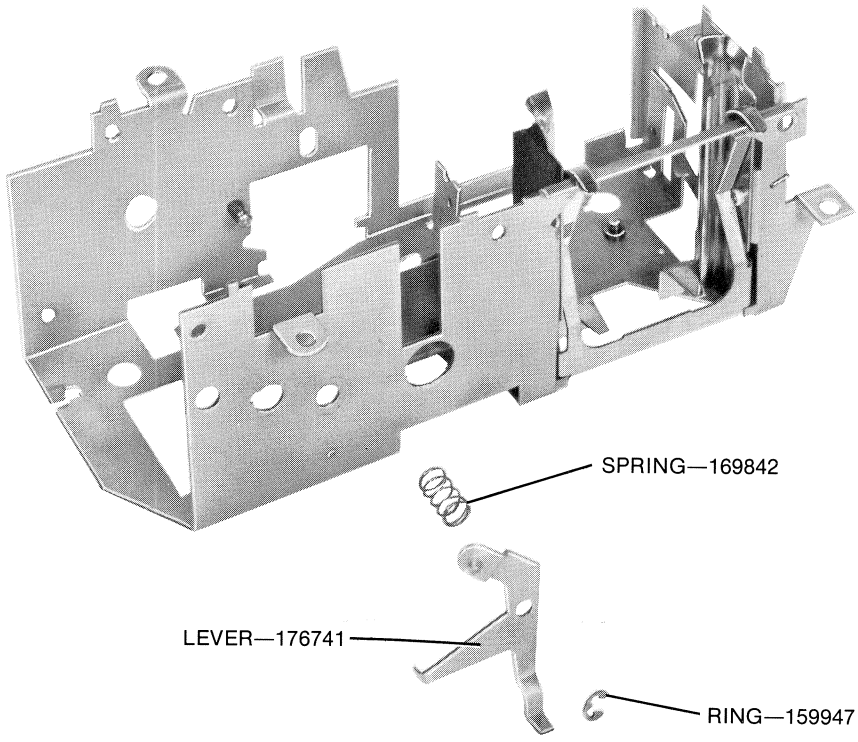


FIGURE 37 MECHANISM ASSEMBLY (800 and 800H PROJECTORS)—170741



For additional parts see figures 27—40.

FIGURE 38 MECHANISM ASSEMBLY (600 and 600H PROJECTORS)—215248 (650, 650H, 650H-K, 700, 750, and 750H PROJECTORS)—215250 (800 and 800H PROJECTORS)—170741



For additional parts see figures 27—38, 30—33, and 37—40.

FIGURE 39 MECHANISM ASSEMBLY (800 and 800H PROJECTORS)—170741

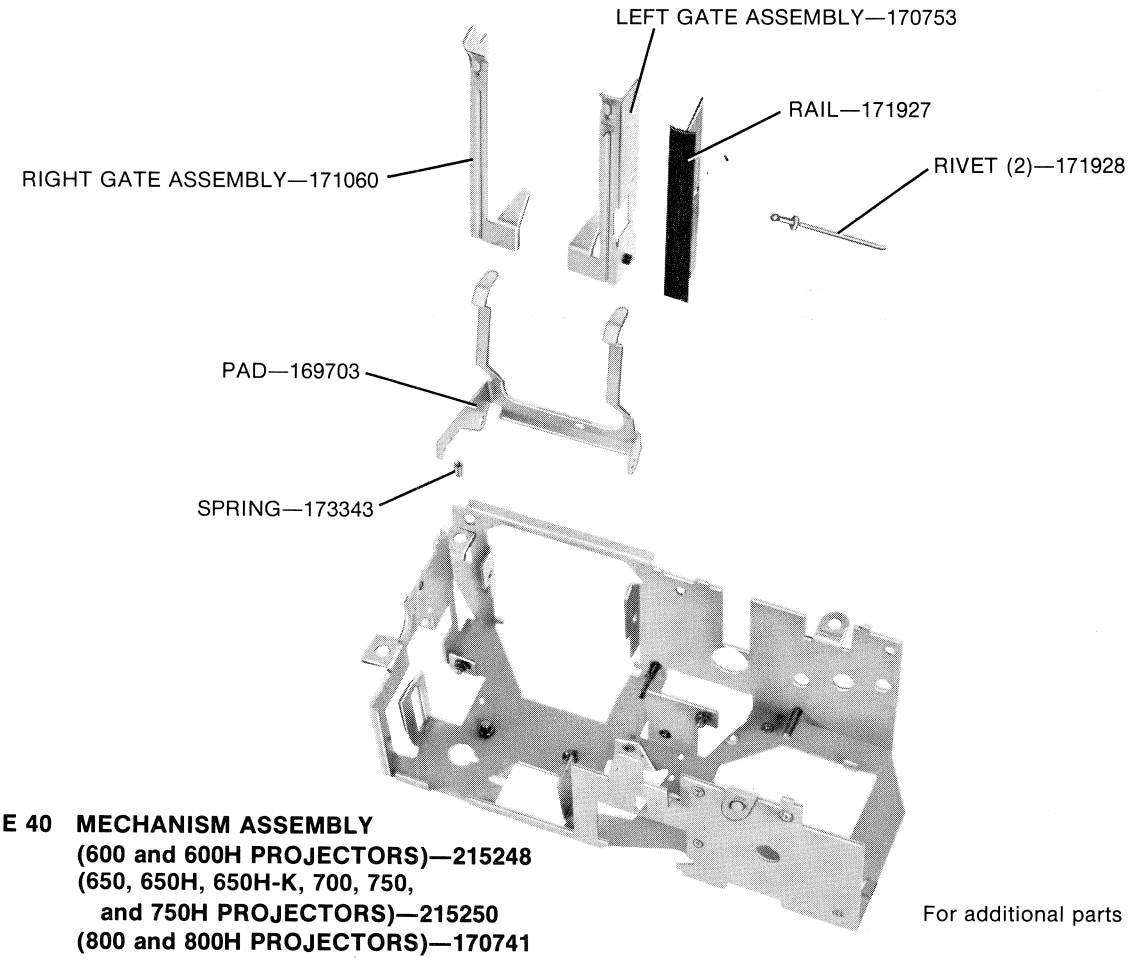
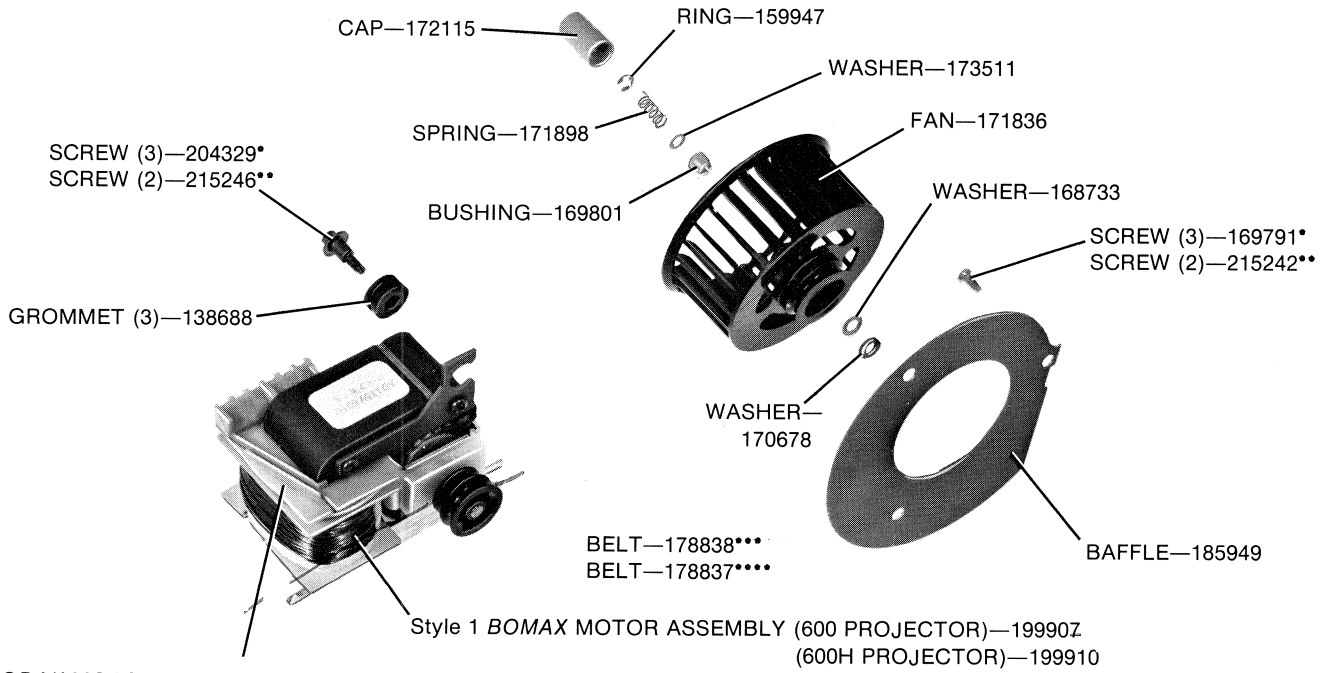


FIGURE 40 MECHANISM ASSEMBLY
(600 and 600H PROJECTORS)—215248
(650, 650H, 650H-K, 700, 750, and 750H PROJECTORS)—215250
(800 and 800H PROJECTORS)—170741

For additional parts see figures 27—39.



Style 1 *BOMAX* MOTOR ASSEMBLY (600 PROJECTOR)—199907
(600H PROJECTOR)—199910
(650, 700, 800 PROJECTORS)—203908
(650H, 750H, 800H PROJECTORS)—198609

Style 2 *KODAK* MOTOR ASSEMBLY (600 PROJECTOR)—202395
(600H PROJECTOR)—202289
(650H, 750H, and 800H PROJECTORS)—204610
(650H-K PROJECTOR)—198666

•For metal HOUSINGS only.
••For plastic HOUSINGS only.
•••600, 650, 700, and 800 PROJECTORS.
••••600H, 650H, 650H-K, and 800H PROJECTORS.

FIGURE 41

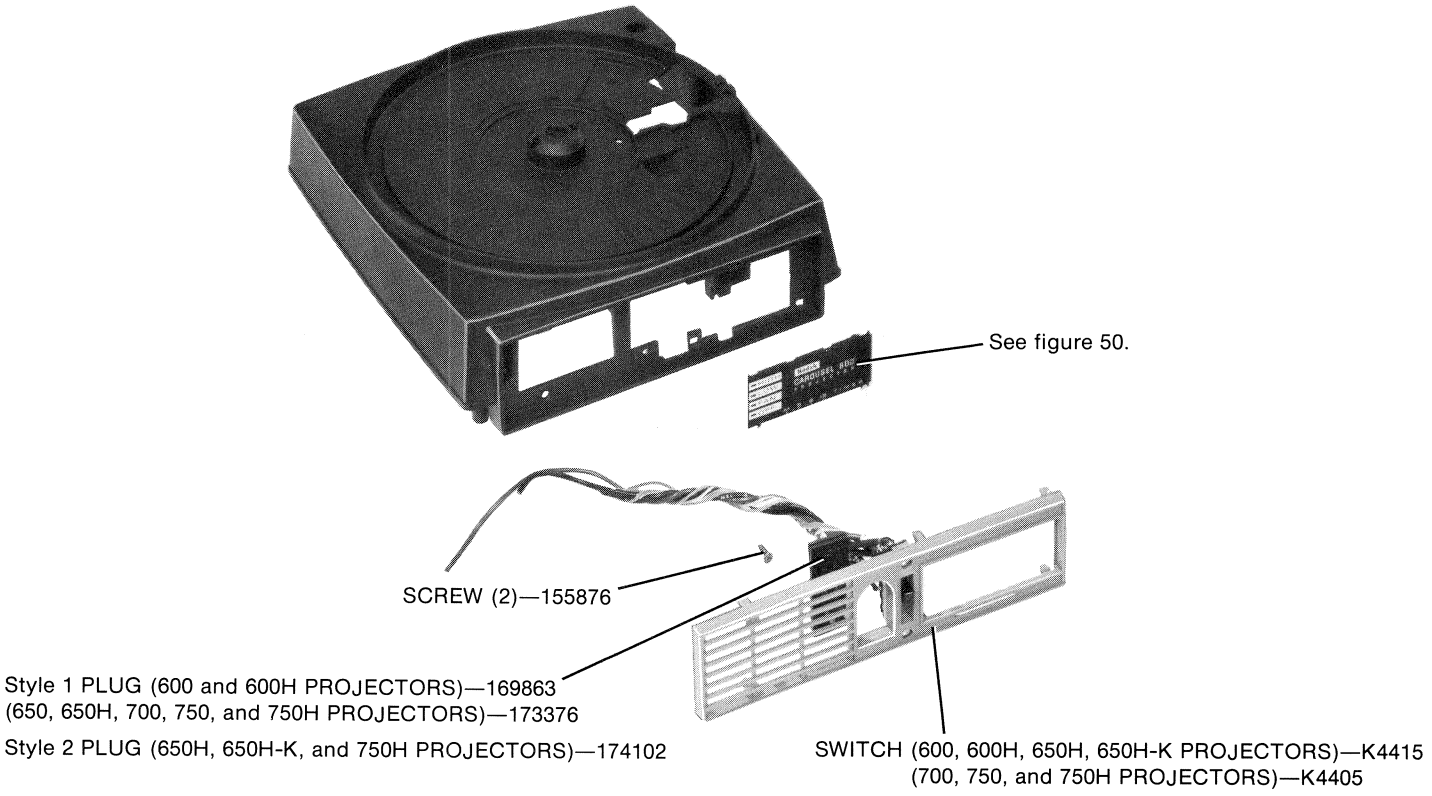


FIGURE 42

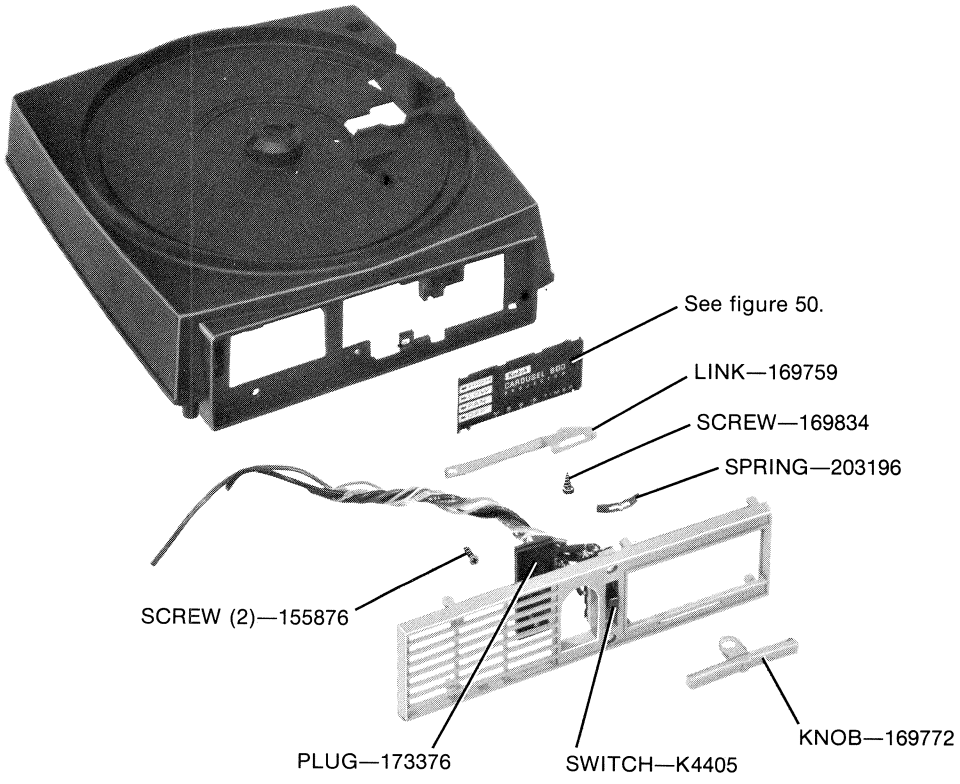


FIGURE 43 800 and 800H PROJECTORS

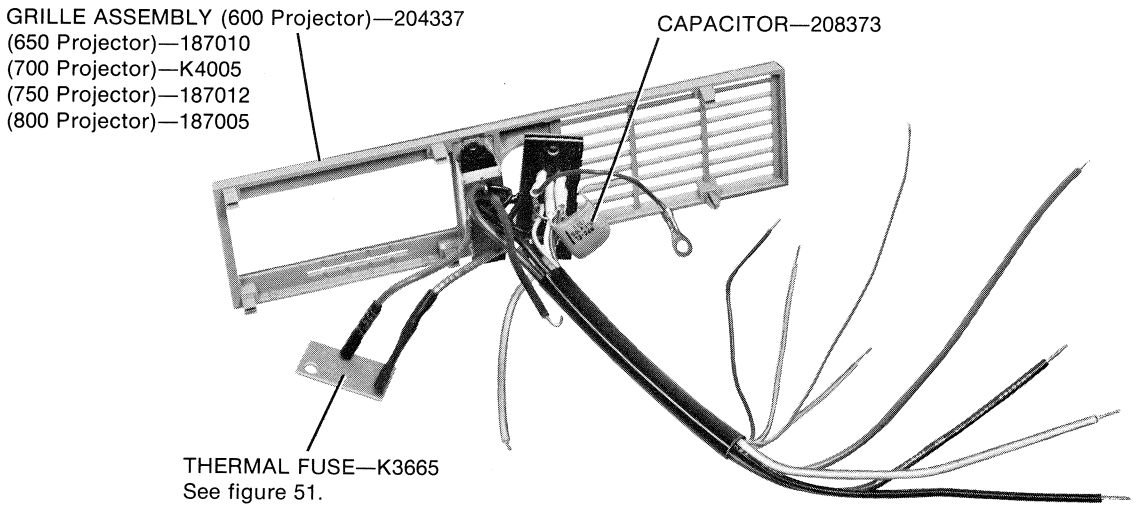


FIGURE 44

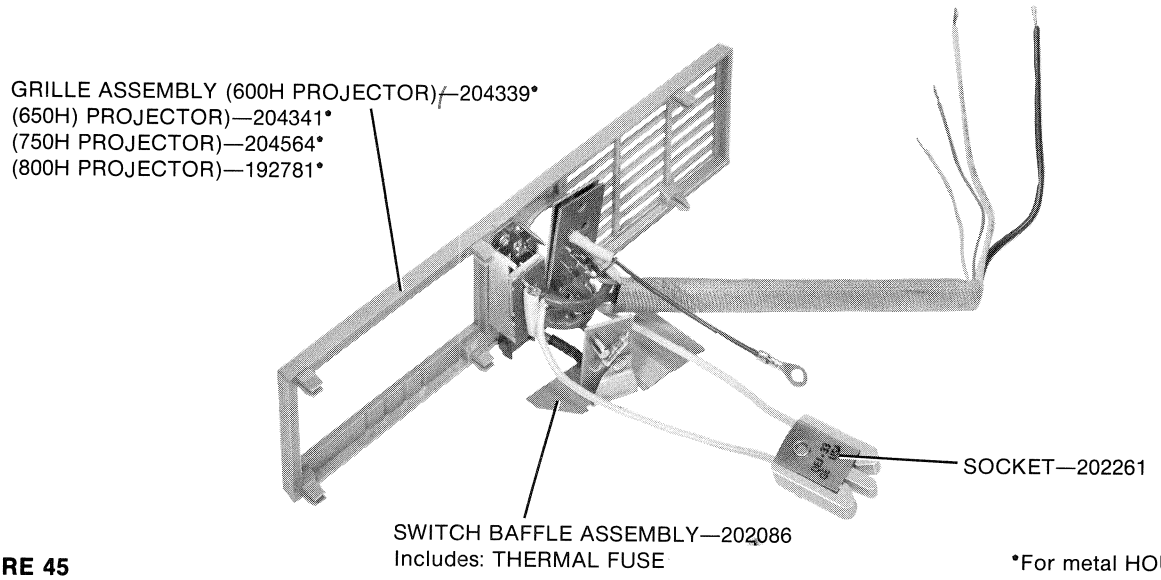


FIGURE 45

•For metal HOUSINGS only.

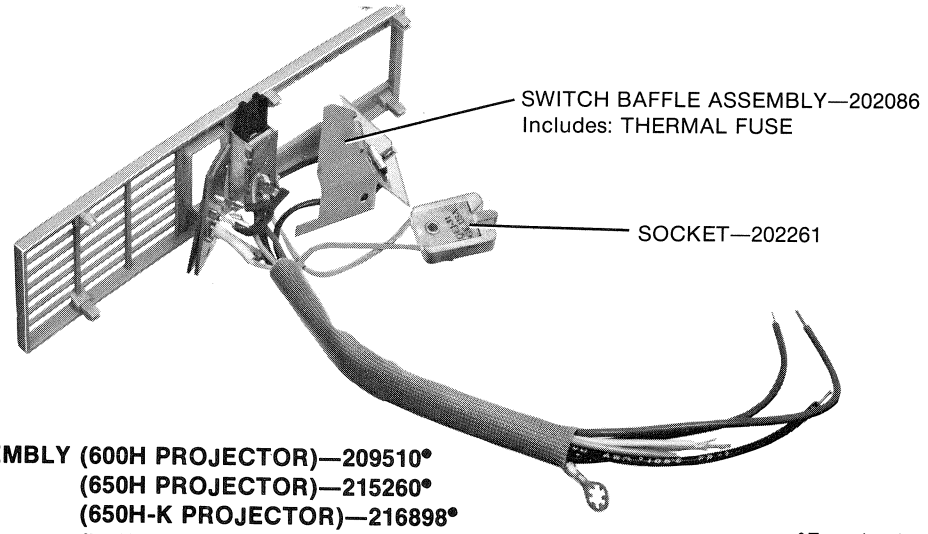


FIGURE 46 GRILLE ASSEMBLY (600H PROJECTOR)—209510•
(650H PROJECTOR)—215260•
(650H-K PROJECTOR)—216898•
(750H PROJECTOR)—215312•

•For plastic HOUSINGS only.

Style 1 HOUSING AND FAN SHAFT ASSEMBLY (600 PROJECTOR)—K3605•
(700 PROJECTOR)—K3615•
(800 PROJECTOR)—K3625•

Style 2 HOUSING AND FAN SHAFT ASSEMBLY (600 PROJECTOR)—177226•
(600H PROJECTOR)—192113*
(650, 700, 750, 800 PROJECTORS)—177277•
(650H, 750H, 800H PROJECTORS)—192114•

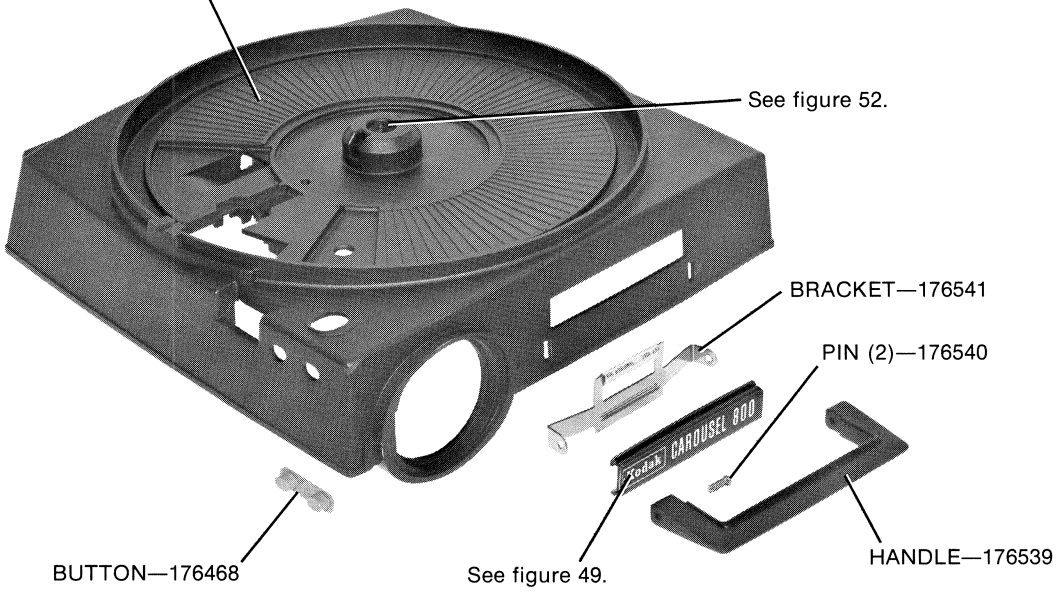


FIGURE 47 600, 650, 650H, 700, 750, 750H, 800 and 800H PROJECTORS

•For metal HOUSINGS only.

HOUSING AND FAN SHAFT ASSEMBLY—215661•

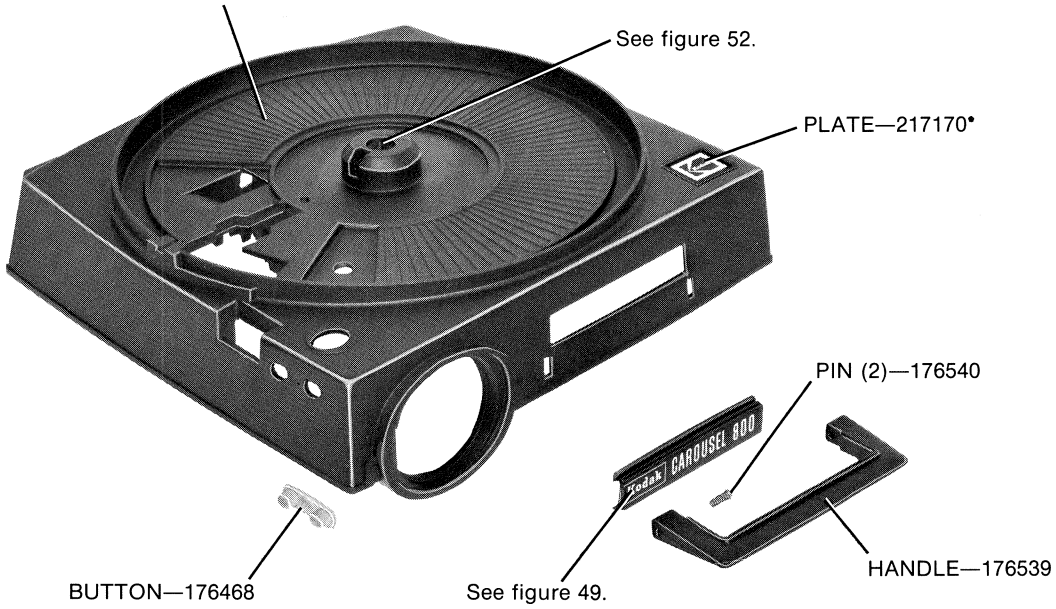


FIGURE 48 600H, 650H, 650H-K, 750H, and 800H PROJECTORS

•For plastic HOUSINGS only.

Style 1 NAMEPLATE (600 PROJECTOR)—169861
(700 PROJECTOR)—169856
(800 PROJECTOR)—169776

Style 2 NAMEPLATE (600 PROJECTOR)—176535
(600H PROJECTOR)—192503
(650 PROJECTOR)—180141
(650H PROJECTOR)—192513
(700 PROJECTOR)—176534
(750 PROJECTOR)—180059
(750H PROJECTOR)—192768
(800 PROJECTOR)—176553
(800H PROJECTOR)—192775

Style 3 NAMEPLATE (600H PROJECTOR)—215224•
(650H PROJECTOR)—215225•
(650H-K PROJECTOR)—216895•
(750H PROJECTOR)—215226•

•For plastic HOUSINGS only.

FIGURE 49

NAMEPLATE (600 PROJECTOR)—169862
(600H PROJECTOR)—192504
(650 PROJECTOR)—180146
(650H PROJECTOR)—192514
(650H-K PROJECTOR)—215706
(700 PROJECTOR)—169857
(750 PROJECTOR)—180058
(750H PROJECTOR)—192769
(800 PROJECTOR)—169768
(800H PROJECTOR)—192776

FIGURE 50

FIGURE 51 600, 650, 700, 750, and 800 PROJECTORS

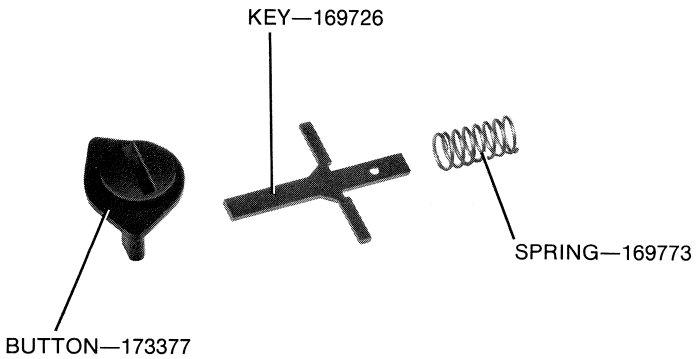
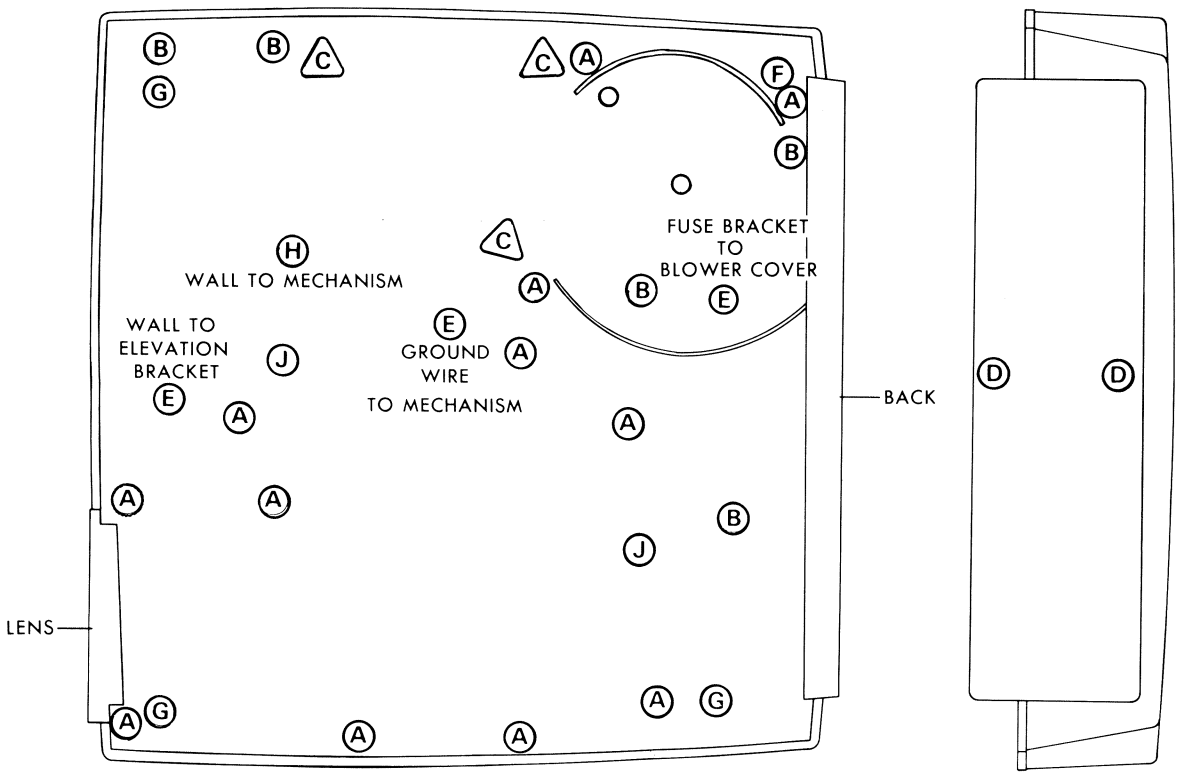
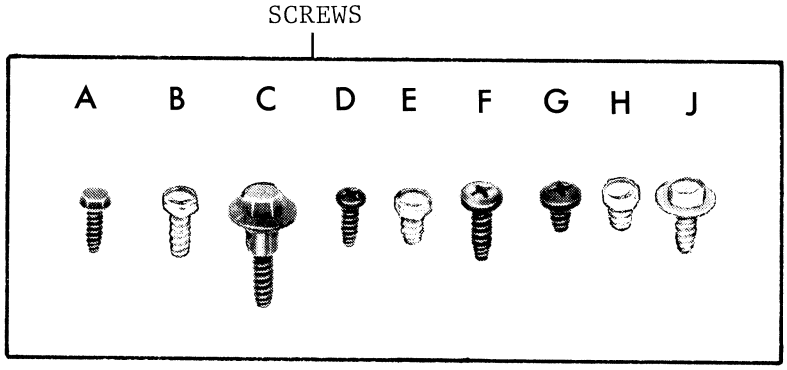


FIGURE 52





SCREW	PART NO.	DESCRIPTION
A	204329	Tap, Type BT, No. 8 x 1/2, upset hex hd
B	215246	Tap, Type BT, No. 8 x 7/16, upset hex hd
C	215242	Tap, Type BT, No. 8 x 3/8, hex hd
D	196244	Tap, Type B, No. 6 x 3/8, *PHILLIPS* EK min hd
E	177316	Tap, *SWAGEFORM*, 8-32 x 5/16, upset hex hd
F	215572	Tap, Type BT, No. 8 x 1/2, *PHILLIPS* pan hd
G	036484	Tap, Type B, No. 6 x 1/4, *PHILLIPS* pan hd
H	190442	Tap, Type AB, No. 8 x 5/16, upset hex hd
J	218068	Tap, Type BT, No. 8 x 7/16, upset hex hd

FIGURE 53 600H, 650H, and 750 H PROJECTORS with plastic HOUSINGS

PART NO.	DESCRIPTION	FIGURE
K3605	Housing and Fanshaft Assembly - Style 1	47
K3615	Housing and Fanshaft Assembly - Style 1	47
K3625	Housing and Fanshaft Assembly - Style 1	47
K3665	Thermal Fuse	44,51
K4055	Grille Assembly	44
K4405	Switch - Power	42,43
K4415	Switch - Power	42
K4585	Motor and Bracket Assembly	24
36484	Screw - Base cover	8-11,53
120287	Screw - Tap, type B, No. 4 x 1/4, *Phillips* pan head	18
128857	Screw - Base cover	8,9,10,11
138253	Ring - Retaining (Waldes Truarc No. 5103-37•)	7,19
138688	Grommet	41
144638	Ring - Retaining (Waldes Truarc No. 5133-15•)	19
145161	Connector - Wire (Ideal No. A-1 plastic•)	12,13,14,15
155181	Ring - Retaining (Waldes Truarc No. 5105-15•)	20
155876	Screw - Cord plug	42,43
159804	Cover - Slide tray	2
159808	Washer	36,37
159894	Sleeve	38
159947	Ring - Retaining (Waldes Truarc No. 5133-18•)	20,34,36,41
159967	Screw - Solenoid bracket	24,31,39
159971	Spring - Shutter lever	32
159972	Spring - Drive lever	32
159979	Spring	29
159990	Ring - Retaining (Waldes Truarc No. 5103-25•)	34,36
161524	Screw - Focus motor bracket	24
168733	Washer - Pulley worm shaft	33,41
169703	Pad - Pressure	40
169726	Key - Spindle	52
169727	Disk - Timing	36
169729	Knob - Elevating	20
169730	Pinion - Timing	37
169731	Gear - Timing	36,37
169733	Locator	32
169734	Gear - Worm	35,37
169735	Cam - Slide	35,37
169737	Cam - Locator	35,37
169742	Bushing - Drive	32
169743	Spacer - Drive	35,37
169744	Ramp - Slide lever	34,36
169746	Knob - Select	1
169753	Bracket - Condenser	12,13
169758	Shaft - Worm	33
169759	Link - Timer	43
169764	Lever - Timing	13
169767	Latch - Storage Door	6
169768	Nameplate - Rear	50
169772	Knob - Timer	43
169773	Spring - Spindle	52
169776	Nameplate - Front	49
169777	Retainer - Clutch	38
169790	Knob - Focus	22
169791	Screw - Motor Assembly	41
169792	Baffle - Shutter	29,30
169794	Screw - Door lock	7,19
169795	Screw - Lamphouse door	12,19
169799	Spring - Rail	25
169801	Bushing - Fan	33,41
169806	Bumper	30,32

PART NO.	DESCRIPTION	FIGURE
169809	Pin - Half cycle	29,30
169816	Spring - Focus Shaft	22
169824	Resistor - Dropping	13,15
169826	Cord - Remote	4
169829	Ring - Compression (*Tinnerman* C3157-20-4•)	23
169834	Screw - Timer Knob	26,43
169836	Screw - Remote control	3,4
169838	Spring - Drive	36
169840	Spring - Cam	34,35,36,37
169841	Spring - Slide	34,36
169842	Spring - Timer contact	39
169843	Spring - Storage door	6
169845	Spring - Select lever	29,30
169846	Spring - Direct	28,30
169847	Spring - Slide	33
169851	Housing - Remote control bottom	3,4
169854	Housing - Remote cord top	3
169856	Nameplate - Front	49
169857	Nameplate - Rear	50
169858	Spring - Drive	34
169861	Nameplate - Front	49
169862	Nameplate - Rear	50
169863	Plug - Cord	42
170678	Washer - Fan	41
170741	Mechanism Assembly	27,28,30,31,32,33,36,37,38,39,40
170744	Blower Cover Assembly	12,13
170745	Lamphouse Door Assembly	19
170746	Storage Door Assembly	6
170750	Contact Assembly	4
170753	Left Gate Assembly	40
170757	Shutter Lever Assembly	32
170758	Cam Shaft Assembly	34
170765	Directional Lever Assembly	30
170766	Lever Assembly	30
170768	Focus Shaft Assembly	22,23
170771	Worm Shaft Assembly	24
171053	Shaft - Focus	23
171055	Contact Assembly	3
171060	Right Gate Assembly	40
171244	Screw - Ramp	34,36
171270	Top Plate and Stud Assembly	30
171271	Solenoid and Arm Assembly	31
171274	Top Plate Assembly	29
171484	Spacer - Timing Contact	32
171535	Bushing - Directional lever	30
171555	Foot - Elevating knob	8,9,11
171557	Spring - Clutch	38
171617	Worm - Pulley	33
171836	Fan	41
171898	Spring - Fan	41
171922	Ring - Cam shaft	35,37
171927	Rail - Slide lever	40
171928	Rivet - Gate	40
172115	Cap - Fan	41
172145	Washer - Elevating foot	8,9,10,11
172730	Cam Shaft Assembly	36
172758	Button - Remote cord	3,4
173343	Spring - Pressure pad	40
173376	Plug - Cord	42,43
173377	Button - Spindle	52

PART NO.	DESCRIPTION	FIGURE
173511	Washer - Fan bushing	41
173717	Gear - Focus	23
173718	Button - Focus	4
173994	Baffle - Lamp	19
174102	Plug - Cord	42
174429	Lever - Cycle stop	29
174947	Lever - Cycle	29
175225	Foot - Leveling	7,10,19
175268	Contact - Timer	36
176385	Locator Assembly	32
176468	Button - Cycle	47,48
176534	Nameplate - Front	49
176535	Nameplate - Front	49
176537	Bracket - Elevating	20
176539	Handle	47,48
176540	Pin - Handle	47,48
176541	Bracket - Handle	47
176553	Nameplate - Front	49
176741	Lever - Timer	39
177226	Housing and Fanshaft Assembly - Style 2	47
177277	Housing and Fanshaft Assembly - Style 2	47
177316	Screw Tap, *Swageform,* upset hex hed, No. 8-32 x 5/16	17,21,53
177977	Screw - Tap, upset hex hd, No. 8-32 x 3/8	12,13,14,15,20
178837	Belt - Mechanism	41
178838	Belt - Mechanism	28,41
180058	Nameplate - Rear	50
180059	Nameplate - Front	49
180141	Nameplate - Front	49
180146	Nameplate - Rear	50
180991	Frame - Light	32
181376	Cord - Remote	3
182013	Bracket - Base cover	12,13,14,15
182014	Baffle - Air	12,13,14
182026	Ejector - Lamp	19
182355	Rectifier	4
182441	Bracket and Grommet Assembly	31
183802	Shutter	32
183980	Spring - Shutter	32
184396	Lever - Select	30
184397	Lever - Select	29
184487	Grommet - Solenoid	24,31
184612	Spring - Retard	34,36
184613	Lever - Cam retard	34,36
184867	Bearing - Cam shaft	34,36
185092	Connector - Wire (Ideal No. A-O, yellow plastic•)	13,15
185736	Shaft - Elevating Style 1	20
185820	Bracket - Elevating	20
185822	Screw - Elevating foot	8,9,10,11
185949	Baffle - Blower	41
186002	Lever - Clutch	38
186212	Baffle - Heat	12,13
186514	Housing - Remote top	4
186605	Rail - Lens	25
187005	Grille Assembly	44
187010	Grille Assembly	44
187012	Grille Assembly	44
188332	Pin - Shutter	32
190442	Screw - Tap, type AB, upset hex hd. No. 8 x 5/16	17,28,30,53
191960	Lever - Timer	15
191961	Link - Timer	15

PART NO.	DESCRIPTION	FIGURE
191965	Pin - Lamp door	7
192113	Housing and Fanshaft Assembly - Style 2	47
192114	Housing and Fanshaft Assembly - Style 2	47
192481	Blower Cover Assembly	15
192841	Blower Cover Assembly	15
192492	Mirror Mount Assembly	21
192503	Nameplate - Front	49
192504	Nameplate - Rear	52
192513	Nameplate - Front	49
192514	Nameplate - Rear	50
192516	Leveling Knob Assembly	9,11
192745	Socket - Lamp	19
192768	Nameplate - Front	49
192769	Nameplate - Rear	50
192775	Nameplate - Front	49
192776	Nameplate - Rear	50
192781	Grille Assembly	45
192878	Foot - Rear	8,10
193233	Slide Lever Mount Assembly	34,36
193234	Slide Lever Assembly	34,36
195276	Power Cord Assembly	1
196244	Screw - Tap, type B, No. 6 x 3/8 *Phillips* EK min hd	17,53
196468	Shaft - Elevating Style 2	20
196469	Knob - Elevating Style 2	20
197031	Washer - Spring	21
197151	Foot - Elevating	8,9,10,11
197288	Lamphouse Door Assembly	7
198609	*Bomax* Motor Assembly	41
198666	*KODAK* Motor Assembly	41
199284	Bearing - Cam shaft	34,36
199907	*Bomax* Motor Assembly	41
199910	*Bomax* Motor Assembly	41
200480	Ring - Retaining	33
200683	Cam - Index	35
200684	Cam - Index	35
200685	Drive Lever Assembly	32
200687	Follower- Drive lever	32
200709	Spacer - Cam	35,37
200942	Lens Bracket Assembly	25
201992	Index Lever Assembly	28
202086	Switch Baffle Assembly	14,46
202243	Screw	21
202261	Socket - Lamp	21,45,46
202289	*KODAK* Motor Assembly	41
202395	*KODAK* Motor Assembly	41
202483	Spring - Crank	38
202501	Washer - Socket	21
202837	Wall - Compartment	20
203196	Spring - Timer	43
203755	Cover - Base	8
203760	Cover - Base	10
203761	Cover - Base	9
203764	Cover - Base	11
203908	*Bomax* Motor Assembly	41
204329	Screw - Tap, type BT, No. 8 x 1/2, upset hex hd	17,41,53
204337	Grille Assembly	44
204339	Grille Assembly	45
204341	Grille Assembly	45
204564	Grille Assembly	45
204610	*KODAK* Motor Assembly	41

PART NO.	DESCRIPTION	FIGURE
204618	Terminal Assembly	36
207709	Lamp Bracket and Mirror Assemblies	21
207976	Switch and Bracket Assembly	18
207988	Base Cover Assembly	5
208373	Capacitor Assembly	44
209267	Power Cord Assembly	16
209510	Grille Assembly	46
207710	Lamp Bracket Assembly	21
209874	Cover - Motor	16,17
209956	Label	5
210484	Blower Cover Assembly	14,15
211834	Varistor	26
211835	Contact Switch Assembly	26
212802	Lamp - Label	5
212805	Label - Lamp	5
213120	Washer - Cam shaft	34,35,36,37
213526	Ring - Retaining (Waldes Truarc No. 5133-12*)	29,30,32
215224	Nameplate - Front	49
215225	Nameplate - Front	49
215226	Nameplate - Front	49
215237	Lens Retaining Assembly	16,21
215242	Screw - Tap, type BT, No. 8 x 7/16, upset hex, washer hd	17,41,53
215243	Brace - Handle	16
215244	Bracket - Handle	16
215245	Plate - Grounding	16
215246	Screw - Tap, type BT, No. 8 x 7/16, upset hex hd	16,17,41,53
215248	Mechanism Assembly	27,28,29,32,35,38,40
215250	Mechanism Assembly	27,28,30,31,32,33,34,35,38,40
215260	Grille Assembly	46
215312	Grille Assembly	46
215572	Screw - Base cover	5,8,10,53
215661	Housing and Fanshaft Assembly	48
215636	Pin - Storage door	6
215706	Nameplate - Rear	50
216895	Nameplate - Front	49
216898	Grille Assembly	46
217170	Plate - *KODAK* name	1,48
217767	Arm and Link Assembly	30,31
218001	Spring - Cycle	30
218014	Baffle - Air	18
218068	Screw - Tap, type BT, No. 8 x 7/16, upset hex hd	16,21,53
220098	Screw - Slide lever	31,34,36
625182	Lens - Condenser	19,21
627458	Heat Absorbing Glass	19,21
835595	Lens - Condenser rear	19
850254	Washer - Cam shaft	34,35,36,37
871469	Tie - Wire	13,14,15,17
896740	Strain Relief	17

*The manufacturer's name and part number shown in parentheses are being used by Kodak at this time for replacement parts. In an emergency, customers may be able to purchase this part locally in a minimum of time. There may be other manufacturers' parts with identical specifications that also may be suitable.

SEPTEMBER 1971

775054

Servicing the

KODAK CAROUSEL PROJECTOR

Models 600, 600H, 650, 650H, 700, 750, 750H, 800, and 800H

EASTMAN KODAK COMPANY • CUSTOMER EQUIPMENT SERVICES DIVISION
SERVICE ENGINEERING DEPARTMENT
800 LEE ROAD, ROCHESTER, NEW YORK 14650

TABLE OF CONTENTS

		PAGE
1.	GENERAL INFORMATION	
1.1	OPERATING VOLTAGE	4
1.2	PROJECTION LAMPS	4
1.3	DIELECTRIC STRENGTH TEST	4
1.4	DROPPING RESISTOR	4
1.5	OPTICAL SYSTEM	4
1.6	SLIDE TRAY	5
1.7	SELECT BUTTON	5
1.8	AUTOMATIC TIMER	5
1.9	REMOTE CONTROL UNIT	5
1.10	THERMAL FUSE	6
1.11	CAPACITOR	6
2.	SEQUENCE OF OPERATION	
2.1	FULL CYCLE, FORWARD	7
2.2	HALF-CYCLE	7
2.3	REVERSING	8
3.	DISASSEMBLY	
3.1	REMOVAL OF BASE COVER	10
3.2	REMOVAL AND REPLACEMENT OF THERMAL FUSE ASSEMBLY	10
3.3	LAMP AND MIRROR MOUNT BRACKET (MODELS 600H, 650H, 750H, AND 800H)	11
3.4	REMOVAL OF LAMPHOUSE DOOR ASSEMBLY (MODELS 600, 650, 750, AND 800)	12
3.5	REMOVAL OF MAIN DRIVE MOTOR	12
3.6	FAN REPLACEMENT AND/OR FAN BELT REPLACEMENT	12
3.7	REMOVAL OF GRILLE ASSEMBLY	13
3.8	REMOVAL OF MECHANISM ASSEMBLY AND LENS MOUNT ASSEMBLY	14
3.9	DISASSEMBLY OF LENS MOUNT ASSEMBLY	14
3.10	DISASSEMBLY OF MECHANISM ASSEMBLY	15
3.11	DISASSEMBLY OF CAM SHAFT	15
3.12	AUTOMATIC TIMER (MODELS 800 AND 800H ONLY)	16
3.13	WORM-PULLEY REPLACEMENT AND/OR MECHANISM BELT REPLACEMENT	16
3.14	REMOVAL OF SLIDE LEVER RAMP	17
3.15	DISASSEMBLY OF REMOTE CONTROL (MODELS 650, 650H, 700, 750, 750H, 800, AND 800H)	17
3.16	REMOVAL OF CARRYING HANDLE AND FRONT NAMEPLATE	17
3.17	REMOVAL OF REAR LEVELING FOOT ASSEMBLY	17
4.	ADJUSTMENTS	
4.1	CYCLE SOLENOID (MODELS 650, 650H, 700, 750, 750H, 800, AND 800H)	19
4.2	LOCATOR LEVER	19
4.3	SLIDE LEVER	20
4.4	GATE ALIGNMENT	20
4.5	MIRROR ALIGNMENT (MODELS 600H, 650H, 750H, AND 800H)	22

PAGE

5. TROUBLESHOOTING 23

6. TOOLS, LUBRICANTS AND CEMENTS

6.1 SPECIAL SERVICE TOOLS 26
6.2 CEMENT 26
6.3 LUBRICANTS
6.4 LUBRICATION AND APPLICATION

WIRING DIAGRAMS 27

PLEASE NOTE

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No patent license is granted by this manual.

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1. GENERAL INFORMATION

1.1 OPERATING VOLTAGE

110-125 volts, 60 Hz, ac

1.2 PROJECTION LAMPS

For Models 600, 650, 700, 750 and 800 - 500-watt horizontal-burning, ANSI Code DEK lamp, 115-120 volt T-12 clear bulb, C-130 filament.

For Models 600H, 650H, 750H and 800H - 300-watt quartz-halogen, elliptical reflector, ANSI Code ELH, projection lamp.

1.3 DIELECTRIC STRENGTH TEST

A dielectric strength test should be performed on the projector and should meet the following requirements:

Leakage current must not exceed 2.5 milliamperes with 900 volts, 60 Hz, ac applied for one minute between the shorted prongs of the power plug and the frame with the power switch in the lamp or high position.

1.4 DROPPING RESISTOR

Extends lamp life when power switch is in the low position
For Models 700, 750 and 800 - 3 ohms
For Models 750H and 800H - 5 ohms

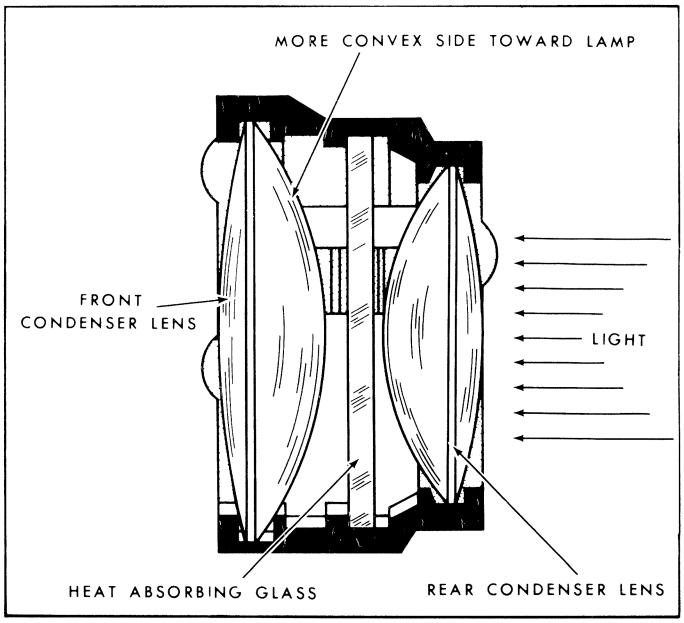
1.5 OPTICAL SYSTEM

1.5.1 PROJECTION LENSES:

The current line of *KODAK* Projection *EKTANAR* and *EKTANON* Lenses may be used.

1.5.2 The condenser system in the 600 through 800 (Non-"H") models contains two (2) lenses and a heat-absorbing glass. Install as indicated in sketch.

1.5.3 The condenser system in the 600H, 650H, 750H and 800H models contains a front condenser lens and heat-absorbing glass only. Install as indicated in sketch for the heat-absorbing glass and front condenser lens only.



1.6 SLIDE TRAY

1.6.1 The slide tray is high-quality molding with one (1) index position and eighty or one-hundred and forty slide positions (depending on the tray).

1.6.2 There are four models of the tray that may be used: the *KODAK CAROUSEL* Slide Tray, Model 1 (black), *KODAK CAROUSEL* Universal Slide Tray (gray), the *KODAK CAROUSEL* 140 Slide Tray and the *KODAK CAROUSEL* Slide Tray for the German *KODAK CAROUSEL* S Projector.

1.6.3 Emergency release of the slide tray: Insert a coin in wide slot in center spindle. Turn coin left or right and lift tray from projector.

1.7 SELECT BUTTON

1.7.1 Models 600 and 600H - The select button serves two purposes:

1. When depressed LIGHTLY and released, mechanism will advance the tray and show the next slide.
2. When DEPRESSED ALL THE WAY AND HELD, mechanism will advance to half-cycle or select position and tray can be rotated (see 2.2). When the select button is depressed, the tray is free to rotate to any position or to move to the indexed area for tray removal.

1.7.2 Models 650, 650H, 700, 750, 800, and 800H - The select button is not designed to advance the tray, but when DEPRESSED ALL THE WAY AND HELD will advance the mechanism to half-cycle or select position (see 2.2). When the select button is depressed, the tray is free to rotate to any position or to move to the indexed area for tray removal.

1.8 AUTOMATIC TIMER

Automatic operation is provided in Models 800 and 800H only. It is accomplished by setting the timer "knob" to 5, 8 or 15 (seconds). The remote control assembly is not required for automatic operation, but may be used for either forward or reverse actuation to override the automatic operation. The built-in forward and reverse switch will also override the automatic operation.

1.9 REMOTE CONTROL UNIT

1.9.1 Models 600 and 600H - Not available in these models.

1.9.2 Models 650, 650H, 700, 750, 750H, 800, and 800H - Includes "FOR" button for forward operation and "REV" button for reverse operation.

a. Forward operation is controlled by momentary pressure all the way down on the "FOR" button, followed by immediate release.

b. Reverse operation requires a slightly longer hold all the way down on the "REV" button, followed by immediate release.

NOTE: If the pressure and release on the reverse button is quick or if it is not pushed all the way down, the mechanism may be "tricked" into advancing instead of reversing.

1.9.3 Models 750, 750H, 800, and 800H - In addition to the forward and reverse buttons described in 1.9.2, these models have a focus button for remotely adjusting focus.

1.10 THERMAL FUSE

The thermal fuse is a safety device which protects the projector from overheating and possible damage caused by overheating within the projector housing.

There is no visible change in the appearance of the fuse when it burns out. The most obvious symptoms: Projector will stop running or cannot be turned on.

1.11 CAPACITOR

The capacitor suppresses electrical noise which otherwise might be picked up by other electrical equipment (e.g., associated tape recorder).

2. SEQUENCE OF OPERATION

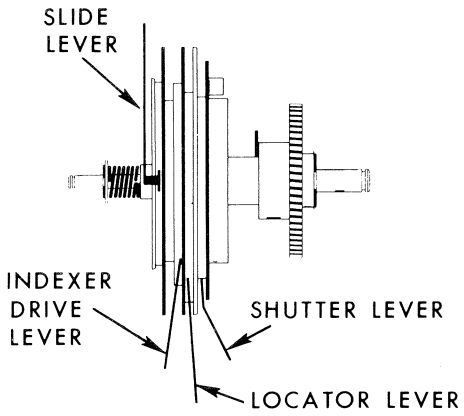
2.1 FULL CYCLE, FORWARD (See foldout from Page 9.)

2.1.1 When the projector is turned on, main drive motor runs continuously. Power is transferred to the fan by a belt and to the worm pulley by a second belt.

2.1.2 The worm-pulley (10) rotates worm gear and clutch sleeve driver (11) continuously. The clutch spring (9) is held in relaxed position by clutch contact lever (4) which allows cam stack and shaft (8) to remain stationary.

2.1.3 A forward cycle (except for Models 600 and 600*) is started when solenoid (5) momentarily pulls the cycle lever (17) away from clutch spring (9). This action simultaneously breaks electrical contact to solenoid and allows clutch spring (9) to tighten on revolving clutch sleeve, starting cam shaft rotation. The cams move mechanism levers and one revolution accomplishes one cycle.

2.1.4 As shutter (13) closes, drive lever (6) and index lever (1) begin to move and slide lever (7) begins to eject slide from gate (16).



2.1.5 As slide lever ejects slide from gate, shutter lever (12) continues moving and, in turn, opens pressure pads (15).

2.1.6 When slide lever lifts slide completely into tray, locator (14) disengages tray lugs and index lever (1) continues its movement to rotate slide tray forward.

2.1.7 Index lever completes moving tray forward, then withdraws and locator moves to engage tray lugs which accurately align tray over gate.

2.1.8 As slide lever (7) descends, slide drops by gravity into open gate. When slide lever hits bottom, pressure pads close, index lever returns to starting position and shutter (13) opens.

2.1.9 The clutch spring (9) contacts clutch contact (4), clutch begins to slip, and cam shaft (8) ceases to rotate.

*A forward cycle is started in Models 600 or 600H when the clutch contact lever (9) is mechanically pulled away from the clutch spring by the select lever (18).

2.2 HALF-CYCLE

2.2.1 The purpose of half-cycle or use of SELECT button is to:
a. Return slide from gate to tray for editing.

b. Allow tray to be rotated manually to any numbered slide position, or to "0" position for removal of tray from projector.
c. Allow slide opposite gate index to drop and be shown when button is released.

2.2.2 When SELECT button is pressed ALL THE WAY DOWN AND HELD, the select lever (18) moves cycle lever (17) to disengage clutch spring (9). The clutch spring tightens on rotating clutch sleeve (11) and cam shaft (8) starts to rotate.

2.2.3 The drive lever (6) is pushed off its cam by select lever (18) blocking its movement.

2.2.4 All other levers operate as in first half of a full cycle forward. Shutter closes, slide lever pushes slide into tray and locator pulls out of contact with lugs of tray.

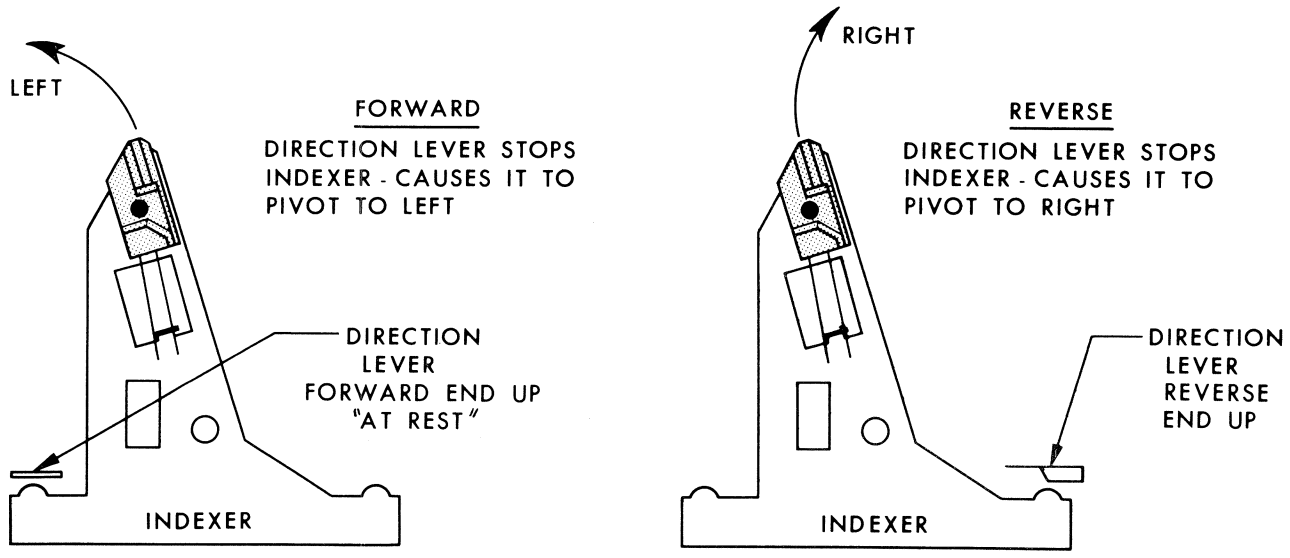
2.2.5 With SELECT button still depressed ALL THE WAY DOWN, the clutch spring is stopped by half-cycle arm (3) of cycle lever, approximately 180° from its starting position. The cam shaft stops rotating and all lever action stops at this point.

2.2.6 When SELECT button is released, the half-cycle arm of cycle lever releases clutch spring and remaining half-cycle is performed as in full cycle; locator positions tray, slide lever descends, pressure pads close and shutter opens.

2.3 REVERSING

2.3.1 Models 600 and 600H have no reverse operation. They may be reversed manually by pressing select button ALL THE WAY DOWN AND HOLDING allowing the slide tray to be moved by hand.

2.3.2 Forward and reverse in Models 650, 650H, 700, 750, 750H, 800, and 800H is determined by the position of the direction lever (2). Normal or AT REST position is for forward operation.



2.3.3 When the reverse button is pushed for a slightly longer* time than required for forward operation, the cycle lever pivots the "reverse" end of direction lever up for a long enough time to trap index lever as it moves. Index lever then pivots in the opposite (reverse) direction from forward operation. The cycle switch does not operate the solenoid during reverse operation.

*Customer must hold the button for the extra time required.

3. DISASSEMBLY

3.1 REMOVAL OF BASE COVER

3.1.1 Turn projector upside down; remove one (1) Phillips head screw visible next to leveling foot. Note that this is a machine screw thread and must be replaced in the same location.

3.1.2 Remove remaining three (3) Phillips head tapping screws. One is visible, No. 2 is hidden by lamphouse door and No. 3 is hidden by cord compartment door.

3.1.3 Remove screw from center of rubber foot and washer on fully retracted elevation leg. Then, with the lamphouse door partially open, guide base cover over elevating knob.

3.1.4 In reassembling base cover, make sure all electrical wires are dressed in their proper locations so they will not be pinched by cover.

3.1.5 Guide base cover over elevating knob.

3.1.6 Replace screws and rubber elevation foot and washer; run elevation up before tightening foot screw.

3.2 REMOVAL AND REPLACEMENT OF THERMAL FUSE ASSEMBLY

3.2.1 For Models 600H, 650H, 750H, and 800H.

3.2.2 Remove base cover (3.1).

3.2.3 Disengage spring clamp for condenser lenses and remove lenses.

3.2.4 Remove three (3) 1/4-inch hex head screws. One is directly in front of the lamp opening, the second is in the same piece of metal toward the front of the projector holding the black mask, and the third to toward the outer edge of the projector holding the lens clamp assembly.

NOTE: The two (2) hex head screws closest to the lamp are nickel-plated while the one (1) farthest away is not plated.

3.2.5 Guide the lamp and mirror mount assembly out of the projector, over the two (2) locating lugs in the housing.

3.2.6 Remove screen holding thermal fuse assembly to blower cover.

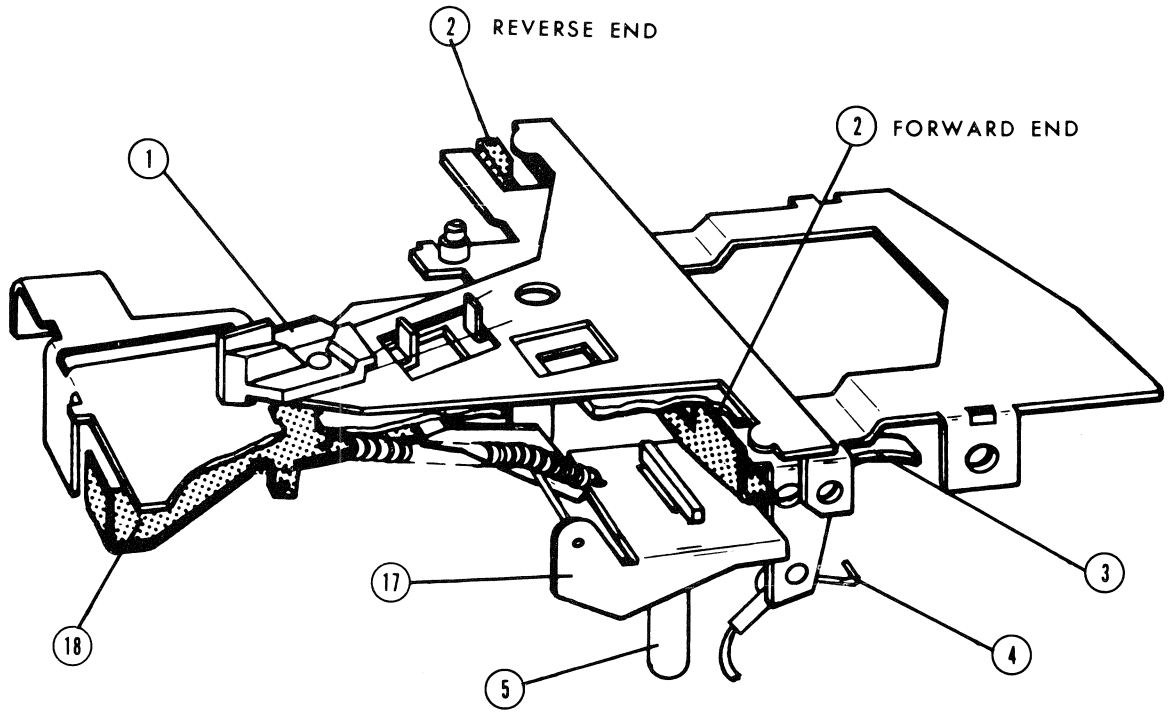
3.2.7 Guide fuse assembly out of slot in blower cover and from under edge of casting.

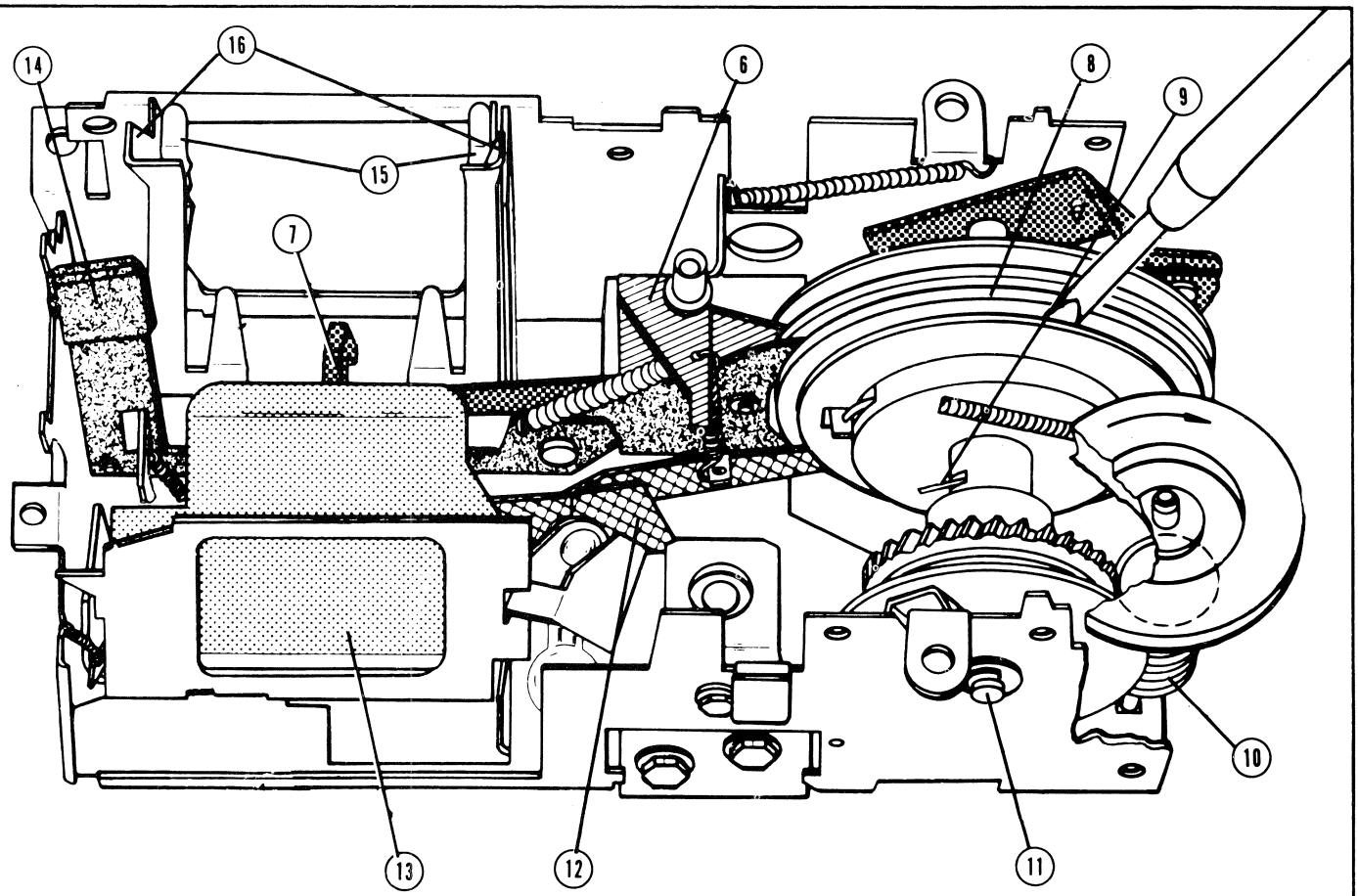
3.2.8 Unsolder lead (short) to switch.

3.2.9 Cut other lead (long) at fuse; remove fuse.

3.2.10 Solder lead (long) of new fuse to cut lead and pull through sleeving.

3.2.11 Unsolder lead (long) and *WIRE-NUT*.





MECHANISM ASSEMBLY

3.2.12 Solder short lead to switch.

3.2.13 Reassemble in reverse order.

3.2.14 For Models 600, 650, 700, 750, and 800.

3.2.15 Remove base cover (3.1).

3.2.16 Remove the screw holding the burned out fuse.

3.2.17 Lift out fuse and cut leads at sleeving. Remove sleeving and strip wire for 1/2-inch. Join old leads to new leads with wire connectors, part No. 145161.

3.2.18 Install new thermal fuse; secure phenolic mounting board with hex head screw.

NOTE: Dress wires and connectors into space between lamphouse door hinge post and rear nameplate. Be sure everything is clear. Try lamphouse door and other moving parts for clearance.

3.2.19 Replace base cover.

3.3 REMOVAL OF LAMP AND MIRROR MOUNT BRACKET (MODELS 600H, 650H, 750H, AND 800H)

3.3.1 Remove base cover (3.1).

3.3.2 Remove condenser lens and heat-absorbing glass by disengaging the wire clamp from under the hook and swing it out of the way. Lift the two (2) pieces of glass out of the projector.

3.3.3 Remove the lamp by similarly disengaging the wire clamp. As the wire clamp is swung out of the way, the lamp is disengaged from the socket and is lifted free.

CAUTION: Lamp must be cool before removal.

3.3.4 Remove the thermal fuse assembly from the blower cover (3.2).

3.3.5 Remove three (3) 1/4-inch hex head screws. One is directly in front of the lamp opening, the second is in the same piece of metal toward the front of the projector holding the black mask, and the third is toward the outer edge of the projector holding the lens clamp assembly.

NOTE: The two (2) hex head screws closest to the lamp are nickel-plated while the one (1) farthest away is not plated.

3.3.6 Guide the lamp and mirror mount assembly out of the projector, over the two (2) locating lugs in the housing.

3.3.7 Reassemble in reverse order. Mirror adjustment is covered under Section 4, Adjustments.

3.4 REMOVAL OF LAMPHOUSE DOOR ASSEMBLY (MODELS 600, 650, 700, 750, AND 800)

3.4.1 Remove base cover (3.1).

3.4.2 Open lamphouse door and remove three (3) glass lenses. Loosen 1/4-inch hex head screw at pivot point of door between switch-nameplate (rear) and lamphouse door assembly. Loosen 1/4-inch hex head screw at pivot point near front condenser lens position.

3.4.3 Guide door assembly out as far as wires will allow; unsolder wires and remove door.

3.4.4 Replace in reverse order. Lenses will fit only in their proper locations (see illustration 1.5.3).

3.5 MAIN DRIVE MOTOR

3.5.1 Remove base cover (3.1).

3.5.2 Remove three (3) 1/4-inch hex head mounting screws.

3.5.3 Disengage fan belt and worm-pulley belt as motor is lifted out of projector housing.

3.5.4 Electrically disconnect motor by removing all *WIRE-NUTS* securing motor wires.

3.5.5 To reassemble, worm-pulley belt should be positioned first, then fan belt.

NOTE: Take care not to nick or cut belt as this will cause belt to tear.

3.6 FAN REPLACEMENT AND/OR FAN BELT REPLACEMENT

3.6.1 Remove base cover (3.1).

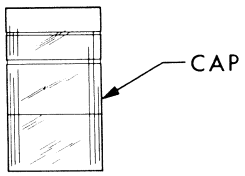
3.6.2 Remove timer lever (Models 800 and 800H only).

a. Remove wire tie from wires secured to frame of mechanism assembly near cam shaft.
b. Remove "E" ring from brass pivot.
c. Lift timer lever off pivot, disengage from lug on end of timer contact arm, and finally disengage from timer link.

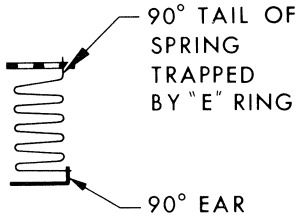
3.6.3 Remove thermal fuse (Models 600H, 650H, 750H, and 800H Only) (3.2).

3.6.4 Remove four (4) 1/4-inch hex head screws from blower housing cover; then remove paper baffle and fan cover. If anchor foot from plastic grille interferes, snap it back out of the way.

3.6.5 Remove plastic fan cap, "E" ring, spring, washer, fan bushing; next, disengage fan belt and remove fan. This leaves a plain washer and a cork washer on fan shaft.

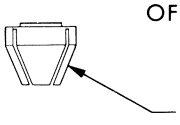


3.6.6 Loosen three (3) hex head mounting screws holding main drive motor, lift motor, and remove belt.



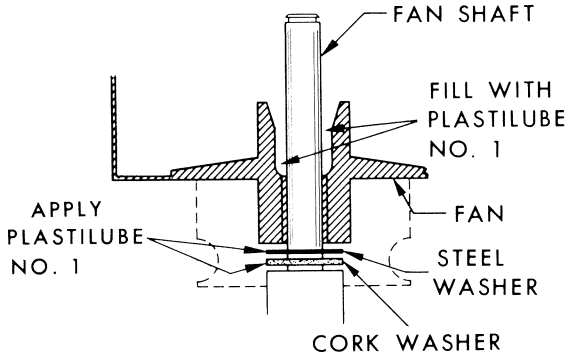
3.6.7 To reassemble, place belt over fan shaft; then lubricate shaft with Plastilube #1.

3.6.8 Place fan over shaft; then fill its cavity with Plastilube #1.



3.6.9 Reassemble remaining fan mounting parts.

3.6.10 Position belt on fan pulley, lift motor, stretch belt and position around motor pulley, reposition motor, and tighten motor mounting screws.



NOTE: Fan belt must be placed on fan pulley first, then motor pulley. Otherwise, belt may be nicked or cut when stretched past upper blower baffle cover.

3.6.11 Replace blower housing cover, paper baffle, timer lever; redress wires with a wire tie; and finally, replace base cover.

3.7 REMOVAL OF GRILLE ASSEMBLY

3.7.1 Remove base cover (3.1), thermal fuse ("H" Models Only) (3.2), and blower housing cover (3.6.4).

3.7.2 Remove 1/4-inch hex head screw from timer knob and timing lever link. Remove flat beryllium spring from under timing lever link.

3.7.3 In "Non-H" Models having fuse, remove 1/4-inch hex head screw from fuse board.

3.7.4 Unsolder leads from lamp socket (excluding "H" Models) and dropping resistor; remove *WIRE-NUTS* which connect grille leads to leads of other components.

3.7.5 The grille is held in position by six (6) bosses that snap into openings in projector housing. The grille may be removed by applying pressure to the bosses with a flat-blade screwdriver. Pull out on grille until two (2) Phillips head screws retaining plug receptacle are exposed. Remove screws and finish pulling grille from housing.

3.7.6 When replacing grille assembly, dress the sleeve so as to give as much room as possible toward junction with *WIRE-NUTS;* resolder lamp and dropping resistor wires and make sure all wire is secured.

3.7.7 Replace fuse, timer assembly, blower housing cover, and base cover.

3.8 REMOVAL OF MECHANISM ASSEMBLY AND LENS MOUNT ASSEMBLY

3.8.1 Remove focus knob by pulling straight off.

3.8.2 Turn projector upside down and remove base cover and blower housing (3.1 and 3.6); remove thermal fuse (For "H" Models Only) (3.2); lamphouse door assembly need not be removed on "Non-H" Models.

3.8.3 Remove main drive motor (3.5) without disconnecting its 120-volt leads.

NOTE: When reassembling motor, belt from mechanism is driven by pulley closest to motor, and belt from fan is driven by other pulley.

3.8.4 Disconnect the low-voltage system leading to mechanism assembly and focus motor (does not apply to Models 600 and 600H).

3.8.5 Remove storage compartment wall and elevation assembly [four (4) 1/4-inch hex head screws] and lift out.

3.8.6 Remove six (6) 1/4-inch hex head screws holding lens mount and mechanism assemblies.

3.8.7 Grasp lens mount and mechanism assemblies with both hands and carefully lift out of housing. After removal from housing, very carefully separate assemblies.

NOTE: It is possible to operate mechanism assembly by hand, duplicating all the functions of the projector related to cycling.

3.8.8 In reassembling, nest lens mount and mechanism assemblies together; then locate both in housing.

3.8.9 Reassemble balance of components in reverse order.

NOTE: Do not forget "Select" button and "Forward and Reverse" button. Position both before locating lens mount and mechanism assemblies.

3.9 DISASSEMBLY OF LENS MOUNT ASSEMBLY

3.9.1 Remove lens mount assembly (3.8).

3.9.2 Remove focus motor.

a. Remove two (2) Phillips head screws which secure motor to motor bracket.
b. When reassembling motor, position ear on end bell in bracket recess and replace screws.

3.9.3 Remove lower lens barrel rails by grasping tines of rail with thumb and forefinger, squeeze together and push out.

3.9.4 Remove upper lens barrrel rails by first removing two (2) lens rail springs; then remove rails as in 3.9.3.

3.9.5 Built-in forward and reverse switch may be removed by removing 1/4-inch hex head screw and disengaging tabs from slots (except Models 600 and 600H).

3.9.6 Remove focus shaft bby disengaging focus shaft spring, and then tip and pull shaft from square bearing hole.

3.9.7 Remove focus motor bracket [three (3) 1/4-inch hex head screws through rubber grommets] and then the focus worm shaft assembly.

3.9.8 Reassemble components of lens mount assembly in reverse order.

3.10 DISASSEMBLY OF MECHANISM ASSEMBLY

3.10.1 Remove mechanism assembly (3.8).

3.10.2 Remove six (6) 1/4-inch hex head screws and disconnect direction lever spring, then carefully lift off top plate assembly.

3.10.3 Remove one (1) 1/4-inch hex head screw and slide solenoid mount assembly out of mechanism assembly.

3.10.4 Cam shaft assembly. Remove two (2) bronze bearings from ends of cam shaft [one (1) "E" ring and one (1) "C" ring]. Remove spring between index lever and mechanism frame, disconnect spring between slide lever and mechanism frame, then remove timer contact spacer (800 and 800H Models only).

3.10.5 Remove slide mount lever and spring assembly [two (2) 1/4-inch hex head screws]; then spread sides of mechanism assembly frame and lift out cam shaft.

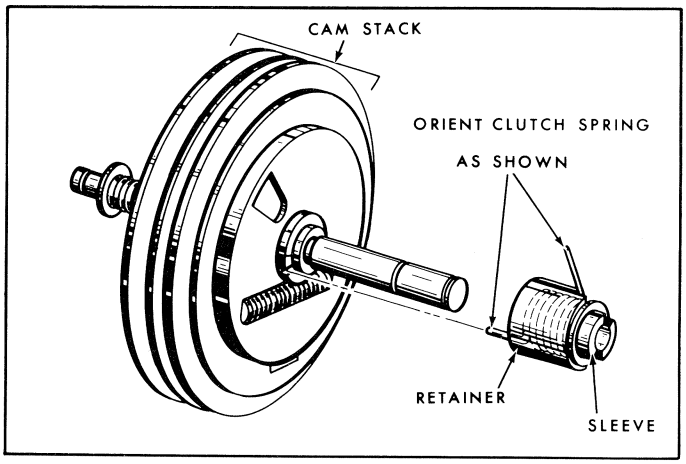
3.10.6 Reassemble in the reverse order.

3.11 DISASSEMBLY OF CAM SHAFT

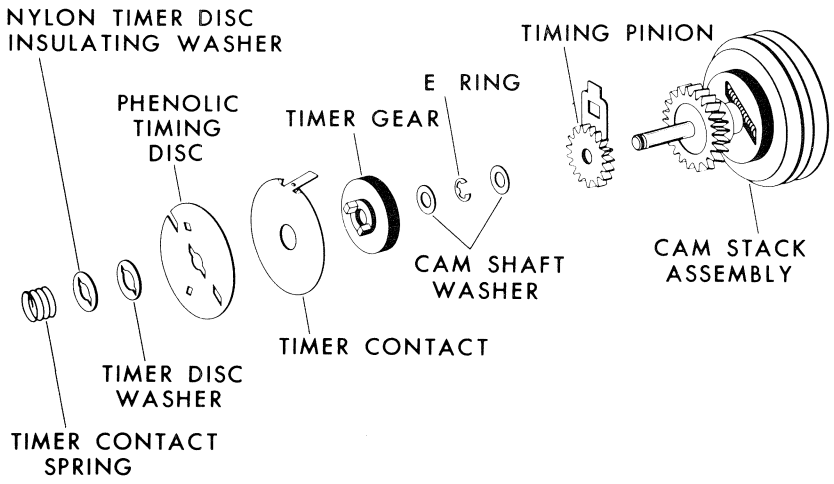
3.11.1 Remove cam shaft (see section 3.10).

3.11.2 Remove components: "E" ring, washer, worm gear, clutch spring retainer, clutch spring and sleeve. Replace any defective parts and lubricate clutch spring shaft and sleeve. Reassemble in reverse order.

NOTE Clutch spring must be assembled as shown for correct timing.



3.12 AUTOMATIC TIMER (MODELS 800 AND 800H ONLY)



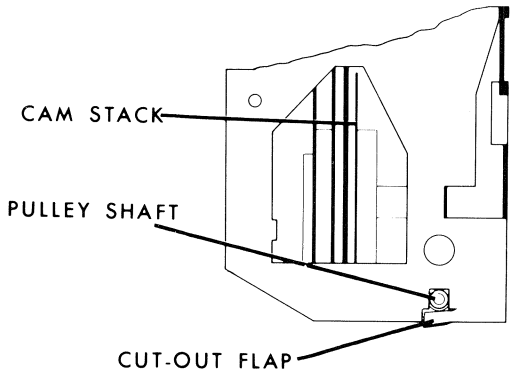
The parts comprising the timer are mounted on the cam shaft as shown, but are not part of the cam shaft assembly. The phenolic timer disk may become torn or the timer contact disk tab broken; otherwise, no replacements are likely.

3.13 WORM-PULLEY REPLACEMENT AND/OR MECHANISM BELT REPLACEMENT

3.13.1 Remove base cover (3.1) and main drive motor (3.5). Lift motor out and set aside without disconnecting wires.

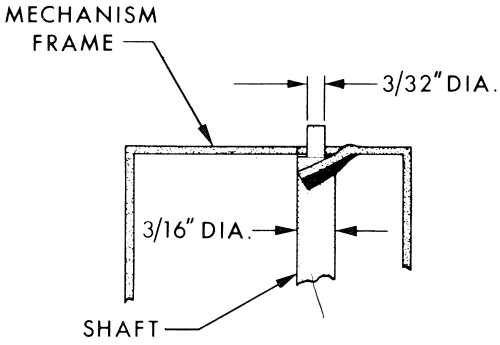
3.13.2 Bend flap of mechanism frame down to release shaft.

3.13.3 Lift out entire shaft and worm-pulley. Replace with worm-pulley, lubricate shaft with light coat of Plastilube #1; replace belt and reassemble.



CAUTION: Bend flap of mechanism frame slowly and easily so it will not break off.

3.13.4 In repositioning the shaft, flap presses against the 3/16-inch diameter with enough force to keep shaft from rotating. Worm-pulley rotates on shaft.



3.14 REMOVAL OF SLIDE LEVER RAMP

3.14.1 Remove the retaining rivet by any suitable means (hand file, punch or small electric grinder).

NOTE: In all instances, be sure not to bend the slide lever and keep the filings and grindings out of the mechanism.

3.14.2 When replacing the new ramp, insert the screw through the ramp and drive the screw into the metal. Be sure the screw is fully seated.

3.15 DISASSEMBLY OF REMOTE CONTROL (MODELS 650, 650H, 700, 750, 750H, 800, AND 800H)

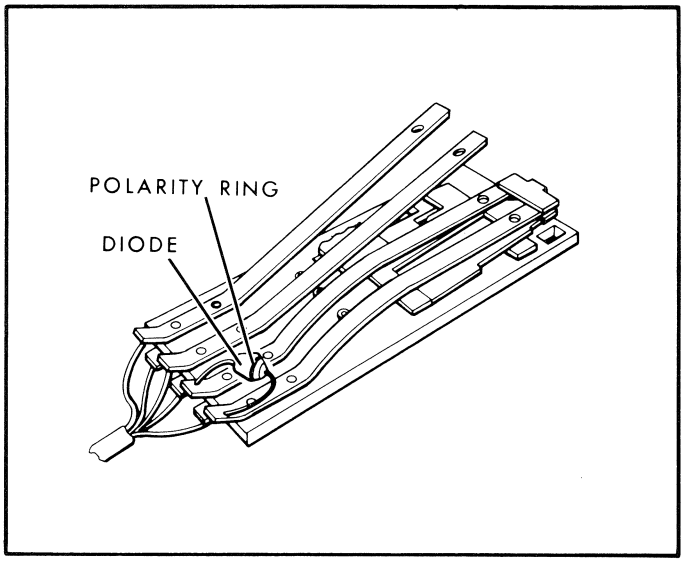
3.15.1 Remove three (3) screws and lift half of switch housing.

3.15.2 Remove cycle and focus buttons.

3.15.3 Disengage remote cord from switch housing and lift out cord with contact assembly attached.

3.14.4 Diode may be removed by unsoldering leads (Models 750, 750H, 800, and 800H).

NOTE: Observe polarity of diode when removing and replace in same direction (see illustration).



3.16 REMOVAL OF CARRYING HANDLE OR FRONT NAMEPLATE

3.16.1 Remove base cover (3.1).

3.16.2 Remove compartment wall with elevating knob assembly, by removing four (4) 1/4-inch hex head screws.

3.16.3 Remove handle, handle bracket and nameplate by knocking out two (2) knurled pins in handle with a 1/16-inch punch.

3.16.4 Replace nameplate or handle as necessary. If the bracket does not hold nameplate in tightly, bend fingers of bracket as required.

3.17 REMOVAL OF REAR LEVELING FOOT ASSEMBLY

3.17.1 Remove base cover (3.1).

3.17.2 Grasp leveling foot and unscrew past the bind until removed. If the plastic knob is broken, use pliers to grasp leveling foot.

3.17.3 Install new leveling foot.

3.17.4 Crimp the top three (3) or four (4) threads of the leveling foot assembly perpendicular to the threads using a pair of diagonal cutters.

3.17.5 Replace base cover.

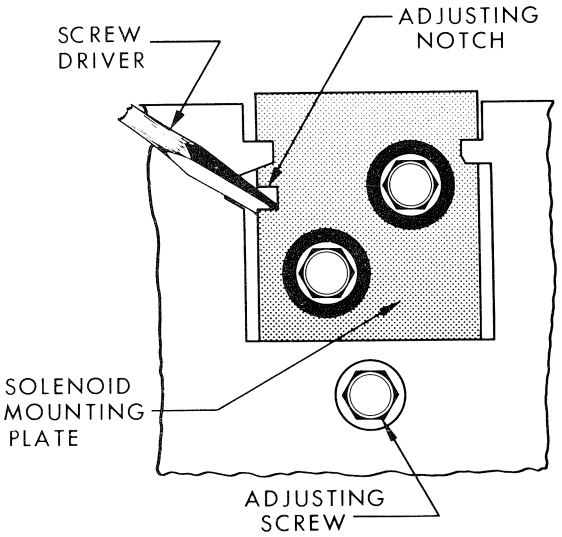
4. ADJUSTMENTS

4.1 CYCLE SOLENOID (MODELS 650, 650H, 700, 750, 750H, 800, AND 850H)

4.1.1 Solenoid should operate without chattering.

4.1.2 To adjust for minimum noise, loosen adjusting screw slightly and insert screwdriver into notch. Raise or lower solenoid mount as necessary. Tighten screw. If solenoid stroke is too short, reverse cycle will not work.

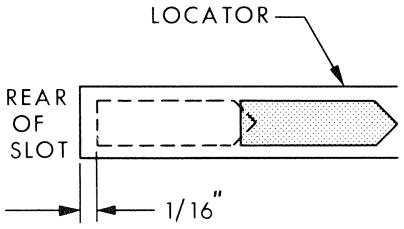
NOTE: This adjustment may be done with only the base cover removed.



4.2 LOCATOR LEVER

4.2.1 Locator should withdraw from lugs of slide tray and stop within 1/16-inch of, but not touching rear of slot in the mechanism frame.

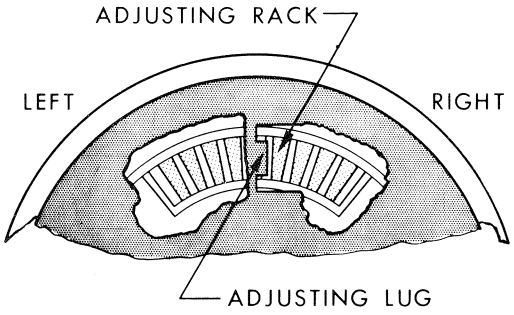
When locator moves again, any movement to the rear indicates that the cam is "out of time".



4.2.2 Erratic or jerky movement of the slide tray is an indication that the cam shaft is "out of time".

4.2.3 Disengage clutch spring from contact. Rotate cam shaft, with thumb, so top moves toward main motor until the cam has rotated approximately 180°.

4.2.4 Insert a screwdriver in cam shaft and spread as indicated in Mechanism Assembly drawing.



4.2.5 Adjusting lug will probably be found in or near center of adjusting rack.

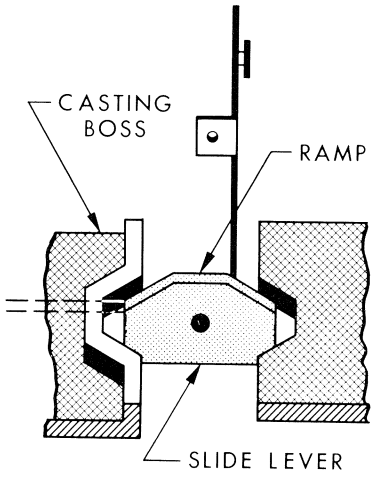
4.2.6 Moving lug to the left (toward motor) will cause locator to move closer to rear of slot.

NOTE: This adjustment may be done with only the base cover removed.

4.3 SLIDE LEVER

4.3.1 Slide lever must raise slide fully into tray so tray may rotate to next slide. It must not raise slide so high that the tray is raised by the slide going into its compartment.

4.3.2 Loosen the inner screw on slide lever bracket, and with a small adjustable wrench, grasp bracket and move it to change pivot location of slide lever. Tighten screw.



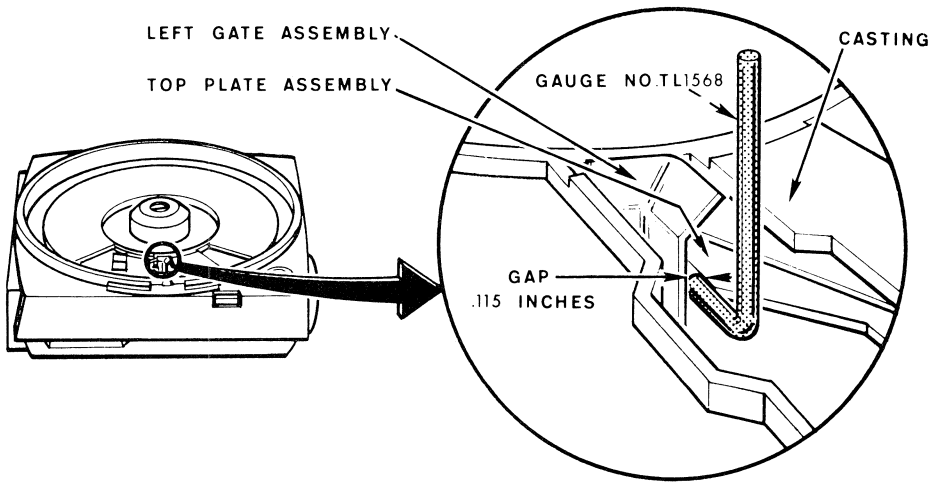
4.3.3 This adjustment may be made with mechanism in projector housing and only base cover removed. Turn projector over and observe ramp of slide lever; at half-cycle position, its lower shoulder should be roughly level with surrounding casting boss of projector.

4.4 GATE ALIGNMENT

4.4.1 Remove the slide tray and any slide left in the projector gate.

4.4.2 Check the gap between the LEFT GATE ASSEMBLY and the edge of the TOP PLATE ASSEMBLY of the mechanism, with gauge (#TL1568). The diameter of this tool is .115-inch. The tool should just pass through the gap. Clearance should not be excessive.

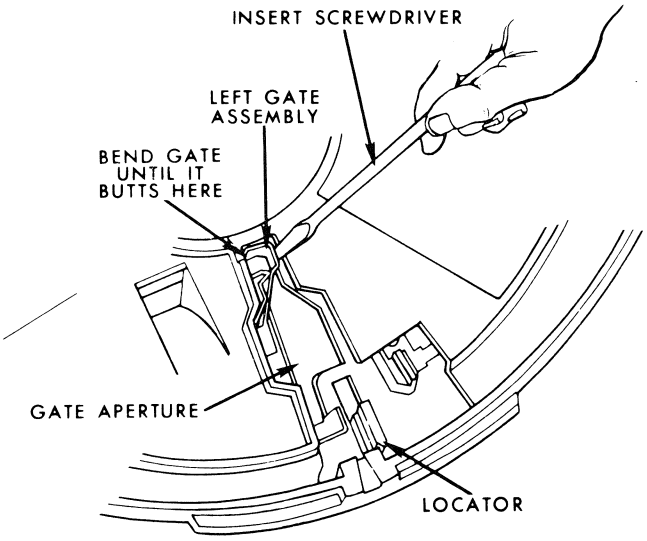
NOTE: Make sure the measurement is checked between the shiny, plated portion of the GATE ASSEMBLY and the gray sheet-metal TOP PLATE of the internal projector mechanism. Avoid measuring to the main cast housing of the projector.



If the gap is less than .115-inch, follow steps 4.4.3 through 4.4.8.

4.4.3 Disconnect the power cord.

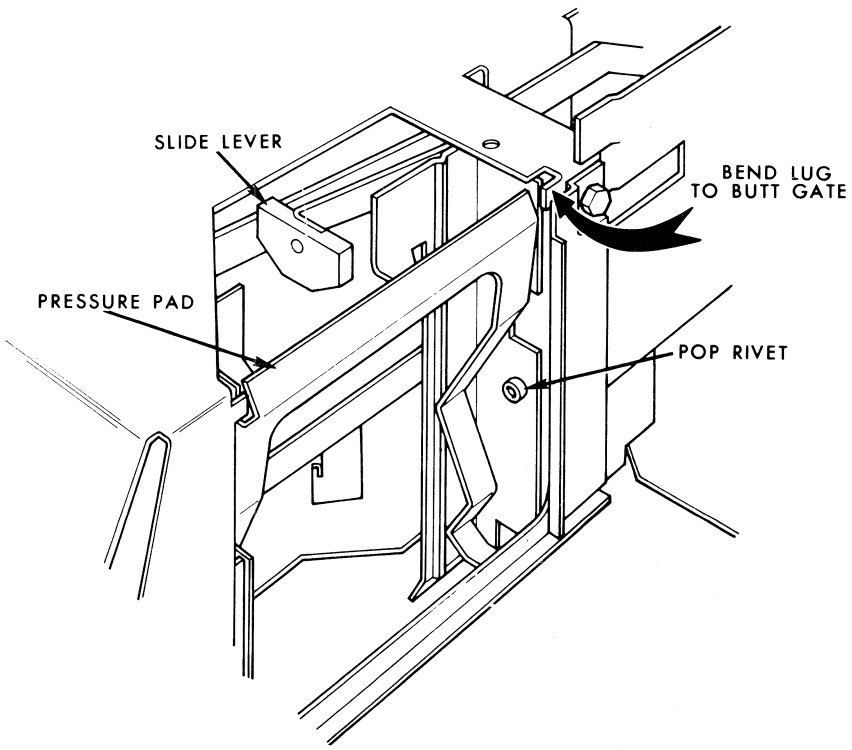
4.4.4 Insert a flat-blade screwdriver between the front edge of the LEFT GATE ASSEMBLY and the top of the main projector housing, as shown. Move the screwdriver handle toward the front of the projector. Pry the assembly until it touches the housing casting at the point indicated in the diagram. The prying action will cause the GATE ASSEMBLY to pivot on the RIVET. When the screwdriver is withdrawn, the GATE ASSEMBLY will spring back slightly.



4.4.5 Check to see that the gap between the LEFT GATE ASSEMBLY and the TOP PLATE ASSEMBLY is at least .115-inch. If it is not, repeat 4.4.4 and check again.

4.4.6 Turn the projector upside down, open the lamphouse door, and remove the front condenser lens and the heat-absorbing glass. Locate the LUG (indicated by the heavy arrow immediately to the right of the cover assembly lip as you look toward the front of the projector). Bend the LUG in the direction shown by the arrow, until it just touches the GATE ASSEMBLY. This can be accomplished by placing the end of a screwdriver against the LUG and tapping the handle lightly with a small hammer. It will prevent the GATE ASSEMBLY from slipping out of alignment again.

OPERATING MECHANISM



4.4.7 Replace heat-absorbing glass and the front condenser lens in the lamphouse compartment.

4.4.8 Close and lock lamphouse cover.

4.5 MIRROR ALIGNMENT (MODELS 600H, 650H, 750H, AND 800H)

4.5.1 Remove projection lens and replace with mirror alignment tool (#TL1759).

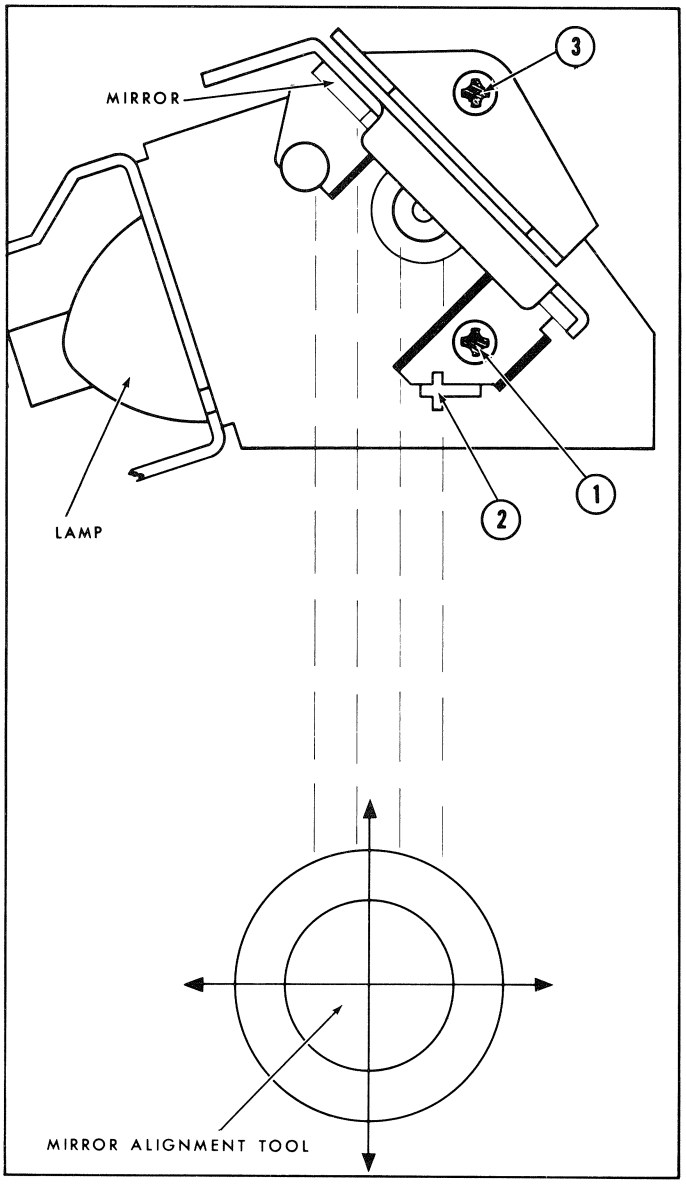
4.5.2 Plug the projector into a variable voltage source (Variac) set at 40 volts, ac. If you do not have a variable voltage supply, you may use either a neutral density slide or a cardboard slide with a 1/2-inch hole at center, to reduce light intensity.

NOTE: 40 volts ac or a special slide is used so that the lamp filament image on the mirror alignment tool can be looked at without doing harm to your eyes.

4.5.3 Place the power switch in the "Low" position. Alignment is proper when the circle of light is centered on the alignment tool. [If the circle is left or right of center, loosen screw (1), place a flat-blade screwdriver in the adjustment slot (2) and twist to align]. Tighten screw.

4.5.4 If the circle is up or down from center, adjust by turning screw (3) clockwise to move up and counterclockwise to move down.

4.5.5 After adjustment is complete, cement screw heads.



5. TROUBLESHOOTING

SYMPTOM	POSSIBLE CAUSE	REMEDY
5.1 Projector will not cycle (forward).	1. Cycle solenoid failure. (Does not apply to Models 600 or 600H).	1. Check 24-volt supply. If 24V ± 4Vac is not present, replace main motor. If present, replace solenoid (3.10.3).
	2. Clutch spring may be bent.	2. Replace cam shaft assembly or clutch spring (3.10 or (3.11).
	3. Check for bind in cycle lever.	3. Remove bind.
	4. Check for clearance between clutch contact arm of cycle lever and TIP of clutch spring.	4. Form cycle lever.
5.2 Continuous cycling.	1. Clutch spring bent or broken.	1. Replace clutch spring or cam shaft (3.10 or 3.11).
	2. Short in remote cord. (Does not apply to Models 600 or 600H).	2. Check cord (3.15); replace if necessary.
	3. Bind in select, cycle, or direction lever.	3. Re-form levers for bind and lubricate.
	4. Clutch spring not being stopped by contact arm of cycle lever.	4. Replace spring, replace cam shaft or re-form contact arm of cycle lever (3.10 or 3.11).
5.3 Projector will not index (forward or reverse).	1. Select lever interferes with movement of index drive lever, as in half-cycle operation.	1. Check for binds in select lever.
	2. Index drive lever not shifting to low side of cam.	2. Check for burr on drive lever.
5.4 Projector will not reverse. (Does not apply to Models 600 or 600H).	1. Cycle solenoid out of adjustment.	1. Readjust (4.1).

SYMPTOM	POSSIBLE CAUSE	REMEDY
	2. Bind in cycle lever and/or direction lever.	2. Check and remove bind; lubricate if necessary.
	3. Direction lever hairspring missing.	3. Remove mechanism (3.8) and install index lever.
	4. Clutch spring bent.	4. Replace cam shaft (3.11).
	5. Reverse button of remote control unit not held long enough.	5. Customer error.
	6. Cycle solenoid does not operate.	6. Check 24-volt supply. If 24V $\pm$ 4Vac is not present, replace main motor. If present, replace solenoid (3.10.3).
5.5 Projector always reverses. (Does not apply to Models 600 or 600H).	1. Bind between direction lever and mechanism frame.	1. Remove bind and lubricate if necessary.
	2. Defective remote cord.	2. Check for bind between reverse and forward contacts (3.15).
5.6 Noisy operation.	1. Broken or malformed ribs on fan causing "fluttering" noise.	1. Replace fan (3.6).
	2. Lack of lubrication on shaft.	2. Lubricate shaft (3.6).
	3. Fan cap not fully seated.	3. Seat with thumb.
	4. Worm-pulley with a high spot will cause a "fluttering" noise.	4. Replace worm-pulley (3.13).
	5. Gear noise from focus motor. (Does not apply to Models 650 or 650H).	5. Increase backlash between gears or install new motor (3.9.2).
5.7 Tray cannot be rotated when select button is held down.	1. Projector not on.	1. Projector must be turned "On".

SYMPTOM	POSSIBLE CAUSE	REMEDY
	2. Locator does not withdraw from tray lugs.	2. Check locator adjustment (4.2).
	3. Slide lever not raising slide fully into tray.	3. Check slide lever adjustment (4.3).
5.8 Shutter "hang-up".	1. Shutter spring unhooked or missing.	1. Remove mechanism (3.8) and replace spring.
	2. Shutter may be striking cycle lever.	2. Remove mechanism (3.8), file cycle lever at point of contact with shutter. Do Not file shutter, or light leak on projection screen may result.
5.9 Focus motor dead. (Models 700, 750, 750H, 800, and 800H).	1. Possible loose *WIRE-NUTS* on focus motor.	1. Tighten *WIRE-NUTS*.
	2. Dead spots in focus motor.	2. Replace focus motor (3.9.2).
5.10 Remote focus fails. (Models 700, 750, 750H, 800, and 800H).	1. Diode in remote control defective.	1. Replace diode (3.15). (NOTE Polarity).
	2. Main motor 24-volt winding burned out.	2. Replace motor (3.5).
	3. Focus motor dead.	3. Replace focus motor (3.9.2).
5.11 Slides jam.	1. Gate not properly aligned.	1. Align gate (4.4).
5.12 Projector stops running or will not start.	1. No power to projector.	1. Check power supply and power cord.
	2. Thermal fuse open.	2. Check fuse for continuity using a volt ohmmeter. If fuse is open, replace fuse (3.2).
5.13 Illumination uneven.	1. Mirror alignment incorrect.	1. Adjust mirror alignment (4.5).

6. TOOLS, CEMENTS AND LUBRICANTS

6.1 SPECIAL SERVICE TOOLS

Tool #TL 862	Glass-mounted test slide
Tool #TL 972	*KODAK READY-MOUNT* Test Slide
Tool #TL1031	1/4-inch hex socket wrench with 6 inch shank and plastic handle
Tool #TL1115	Mechanism operating fixture (optional)
Tool #TL1568	Gate alignment tool
Tool #TL1759	Mirror alignment tool

6.2 LUBRICANTS AND APPLICATION

*Part No.	Description
763001	(A&O 61-3686) SAE #20 *CITGO PACEMAKER*, T 30 Oil
763002	(A&O 61-3655) Plastilube #1
763003	(A&O 10-592) Plastilube #1 Grease plus 12% Moly

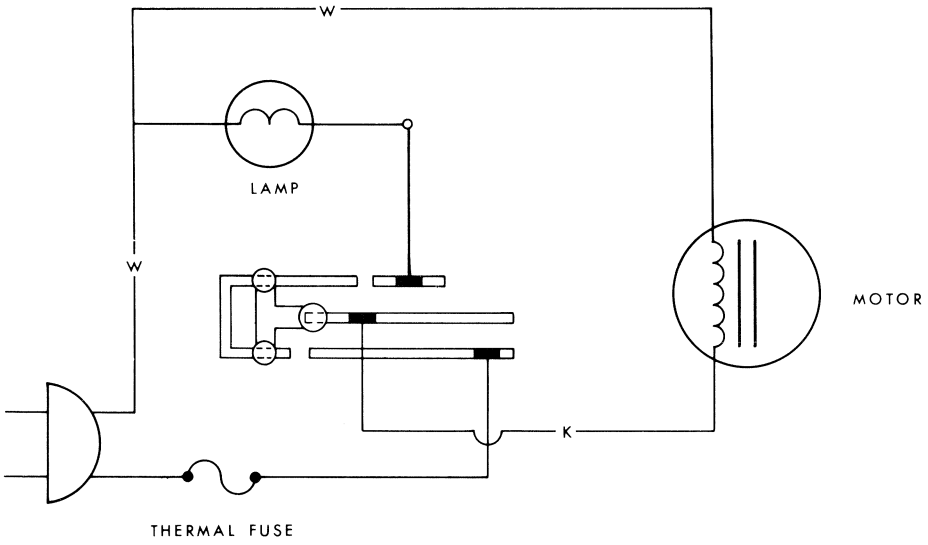
*Lubricants with part numbers are supplied only in convenient one-ounce plastic tubes. Order by part number.

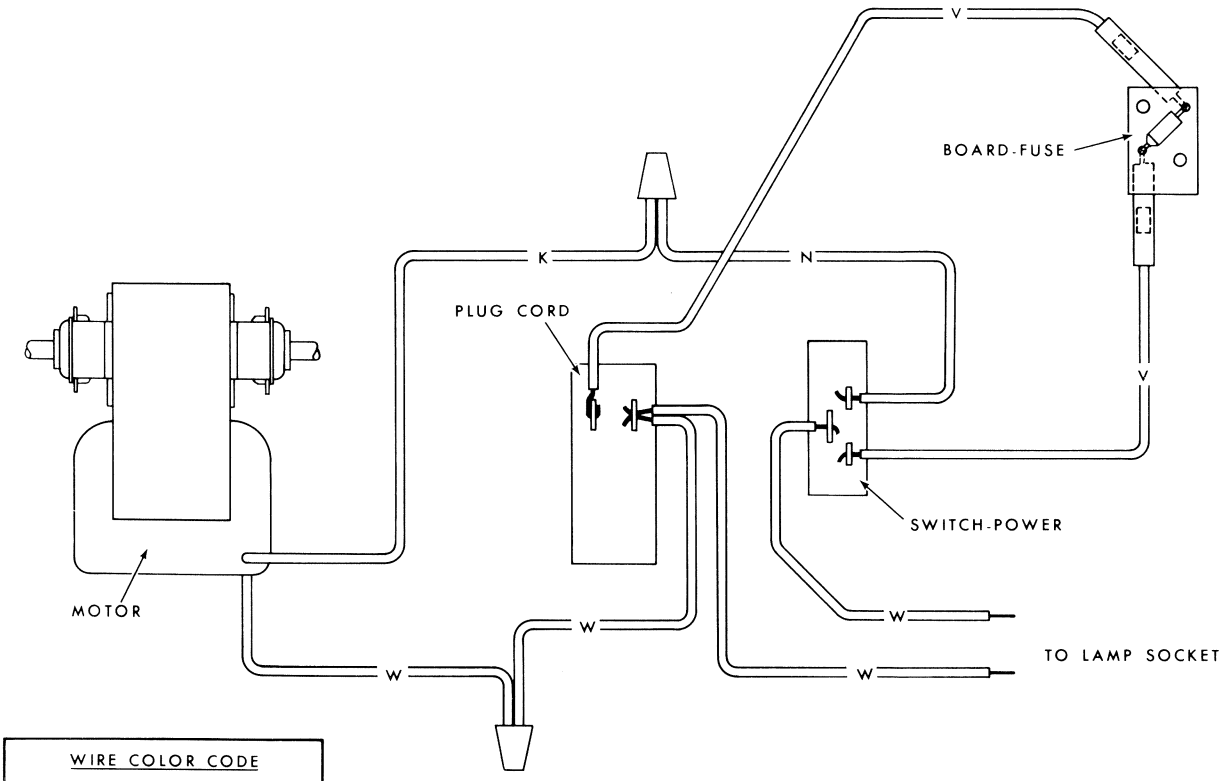
LUBRICATION	AMOUNT	LUBRICANT
Bearings of main drive motor when motor has been removed for other repairs	2 drops	763001
Bearing of clutch shaft	2 drops	"
All worms and gears	Light coat	763002
Nylon cam surfaces	Light coat	"
Fan and fan shaft (see 3.6)	Pack cavity	"
Steel and cork fan washer (see 3.6)	Heavy coat	"
Pivot point of levers and cam levers	Generous	763003
Nylon bushing on drive lever	Medium	"
Dimples on index lever (underside)	Medium	"
Slot at end of shutter lever	Medium	"
Clutch assembly	Generous	"

Lubricate all points with a light coat. A little lubrication applied frequently is better than overlubrication. The serviceman should use his judgment and lubricate points as needed.

ELECTRICAL DIAGRAMS

KODAK CAROUSEL MODELS 600 and 600H PROJECTORS





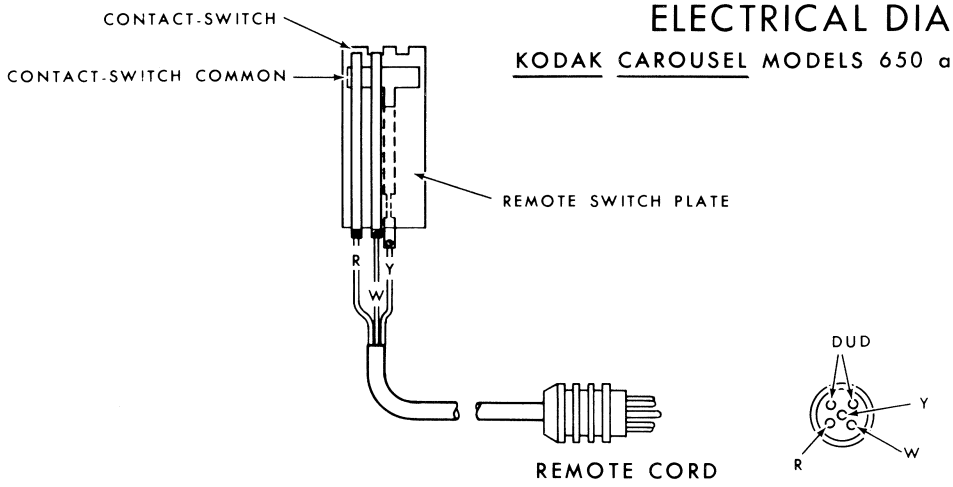
WIRE COLOR CODE

K - BLACK	G - GREEN
N - BROWN	B - BLUE
R - RED	V - VIOLET
O - ORANGE	A - GRAY
Y - YELLOW	W - WHITE

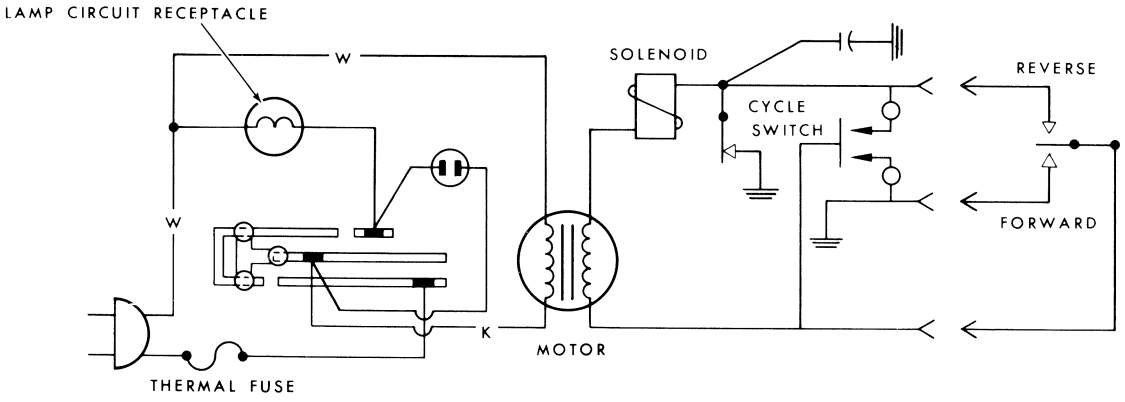
EARLY MODEL PROJECTORS MAY VARY FROM DIAGRAMS SHOWN

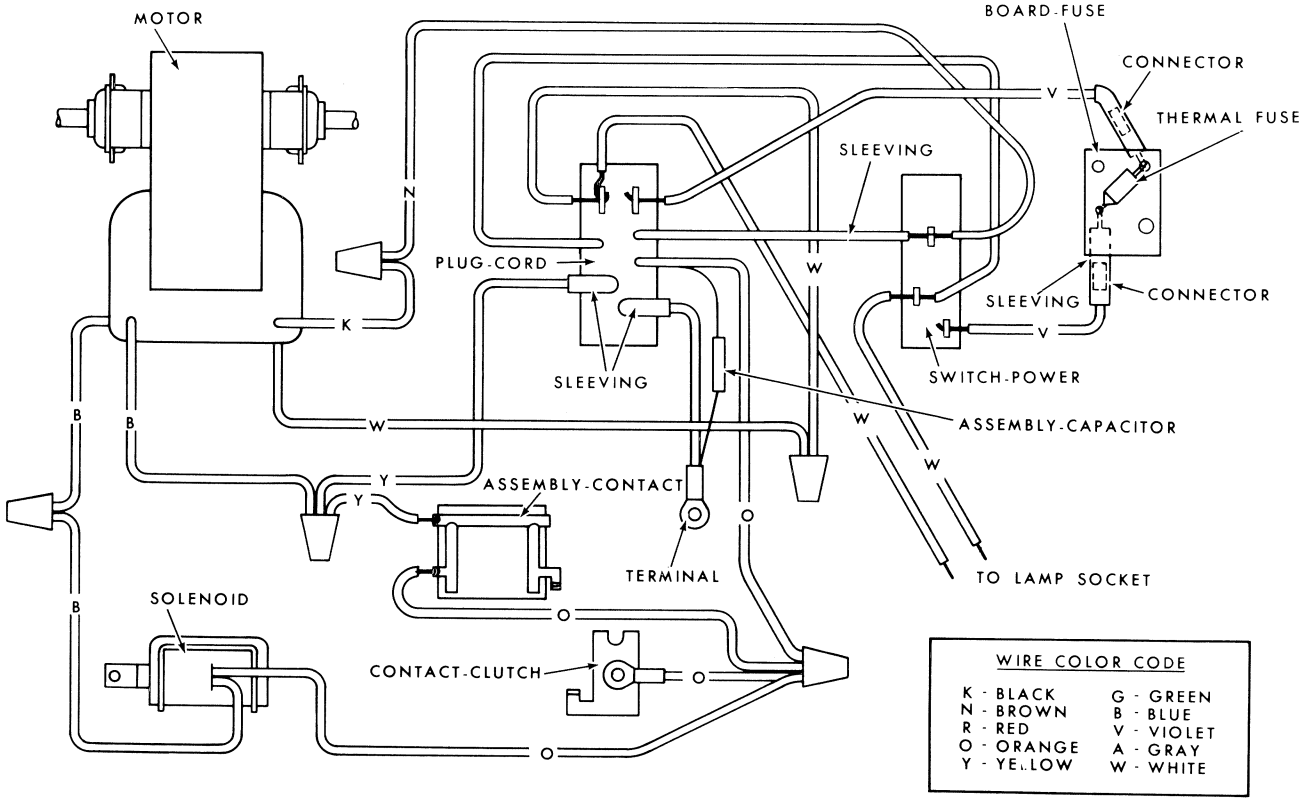
ELECTRICAL DIAGRAMS

KODAK CAROUSEL MODELS 650 and 650H PROJECTORS



REMOTE CORD





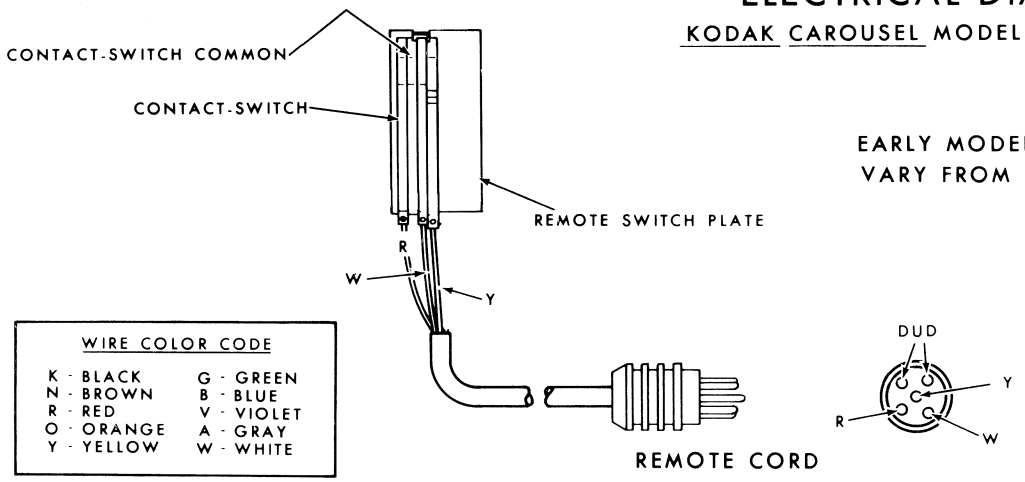
WIRE COLOR CODE	
K - BLACK	G - GREEN
N - BROWN	B - BLUE
R - RED	V - VIOLET
O - ORANGE	A - GRAY
Y - YELLOW	W - WHITE

EARLY MODEL PROJECTORS MAY VARY FROM DIAGRAMS SHOWN

ELECTRICAL DIAGRAMS

KODAK CAROUSEL MODEL 700 PROJECTOR

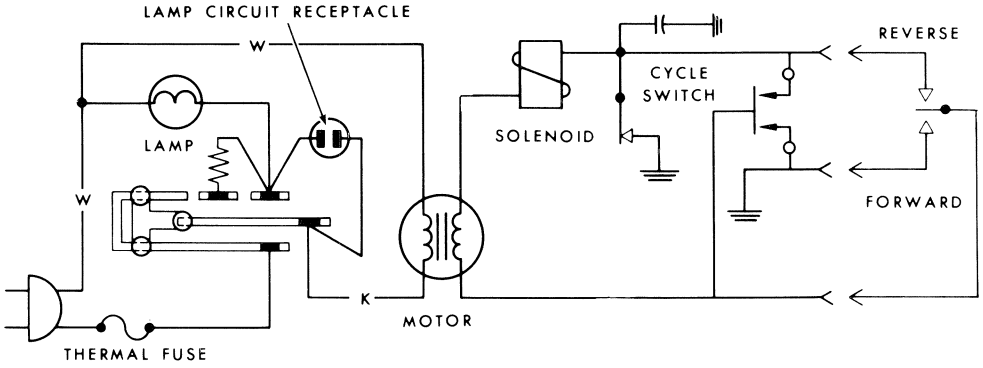
EARLY MODEL PROJECTORS MAY VARY FROM DIAGRAMS SHOWN

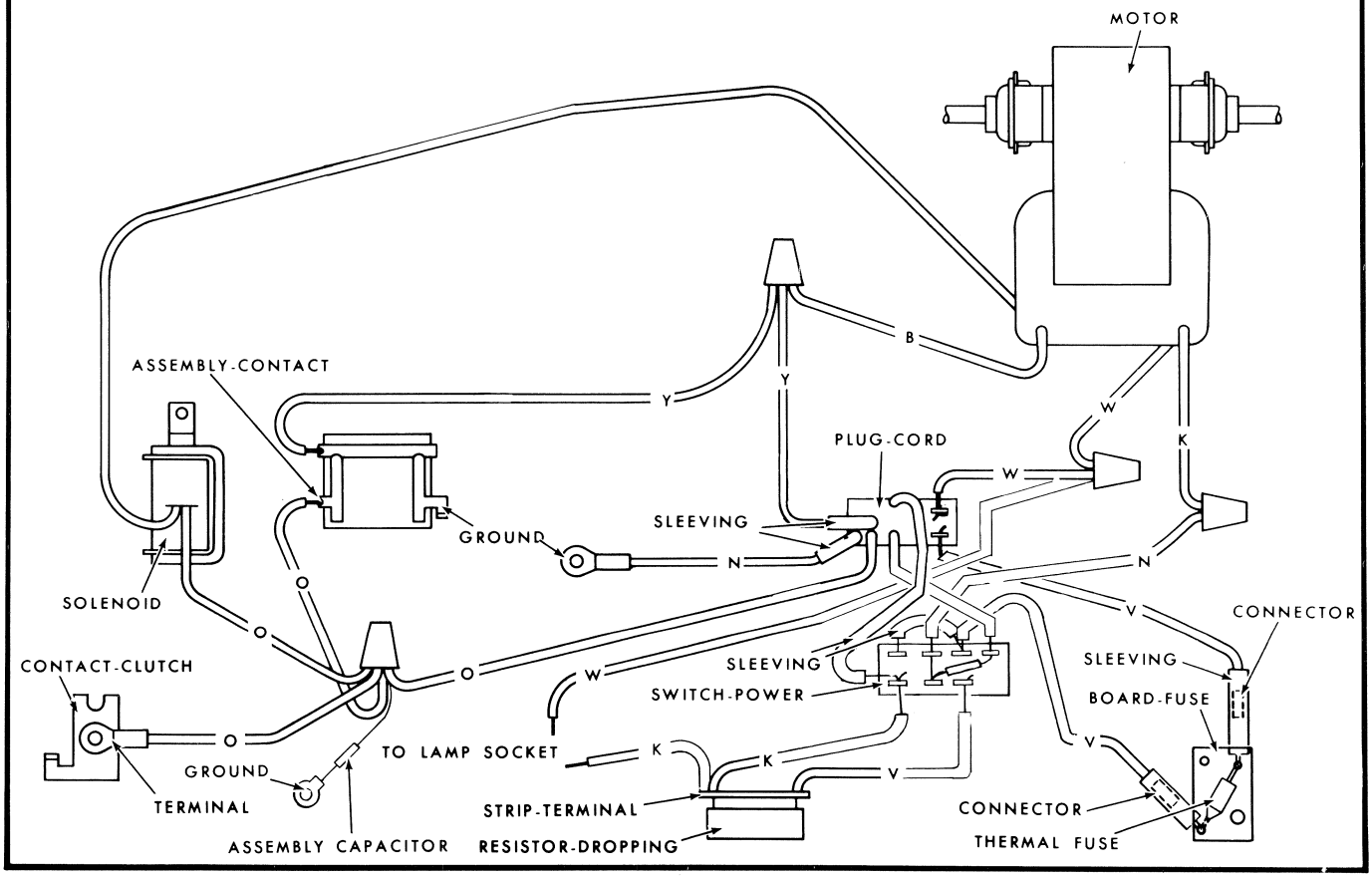


WIRE COLOR CODE

K - BLACK	G - GREEN
N - BROWN	B - BLUE
R - RED	V - VIOLET
O - ORANGE	A - GRAY
Y - YELLOW	W - WHITE

REMOTE CORD

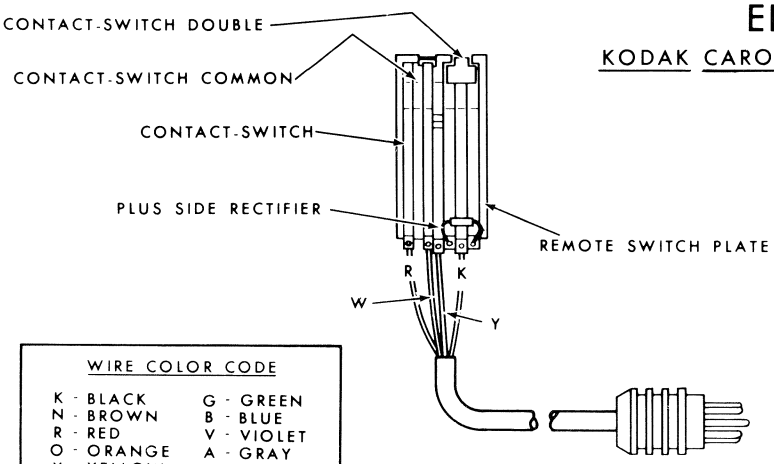




ELECTRICAL DIAGRAMS

KODAK CAROUSEL MODELS 750 and 750H PROJECTORS

EARLY MODEL PROJECTORS MAY VARY FROM DIAGRAMS SHOWN



WIRE COLOR CODE

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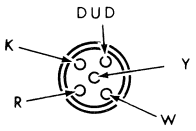
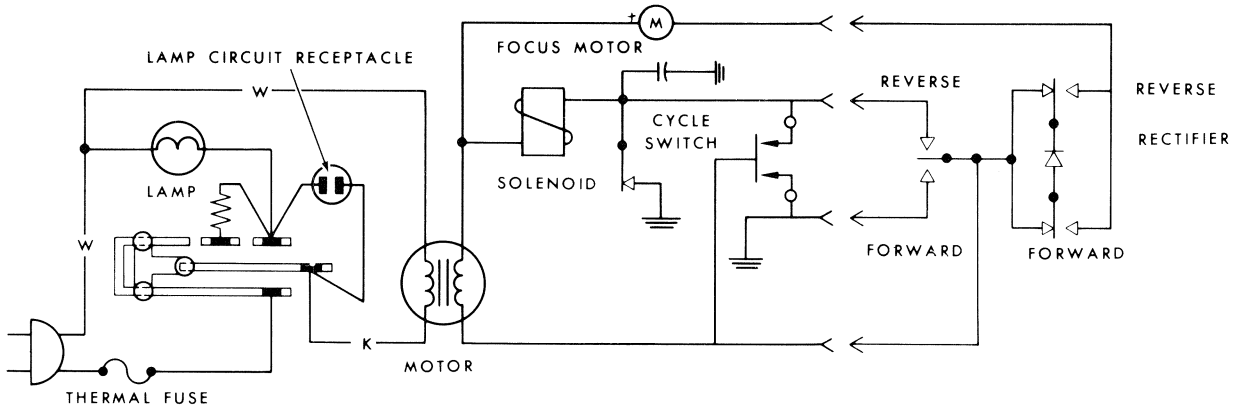
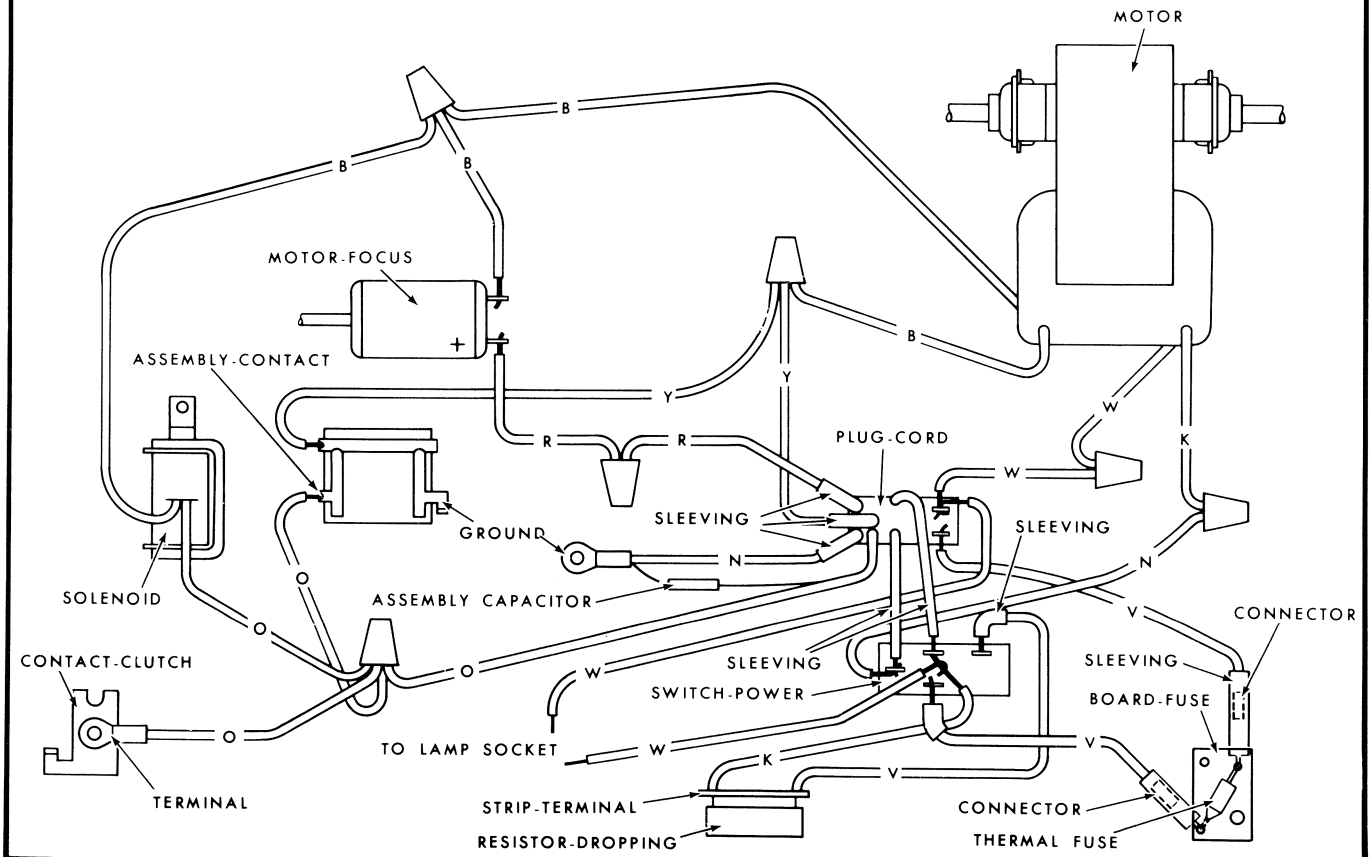
R	RED	V	VIOLET
O	ORANGE	A	GRAY
Y	YELLOW	W	WHITE



REMOTE CORD

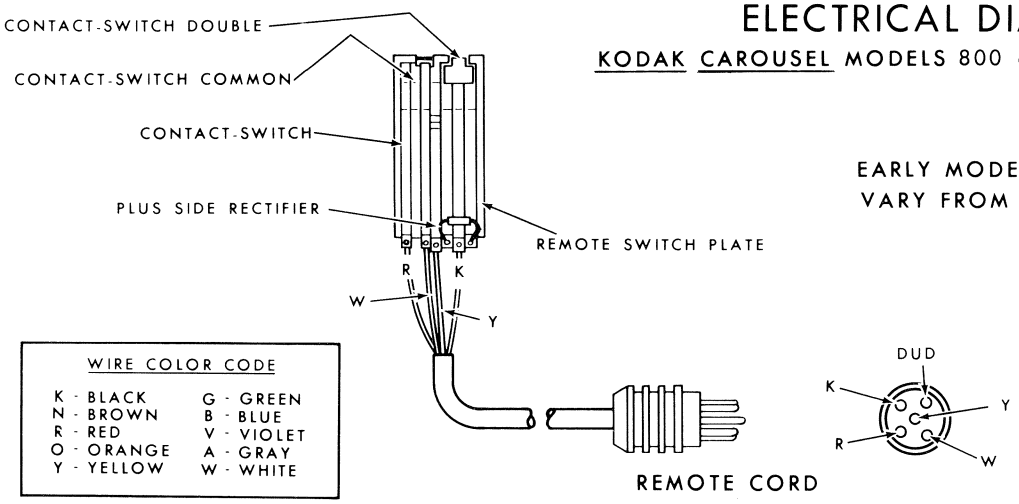




ELECTRICAL DIAGRAMS

KODAK CAROUSEL MODELS 800 and 800H PROJECTORS

EARLY MODEL PROJECTORS MAY VARY FROM DIAGRAMS SHOWN



WIRE COLOR CODE

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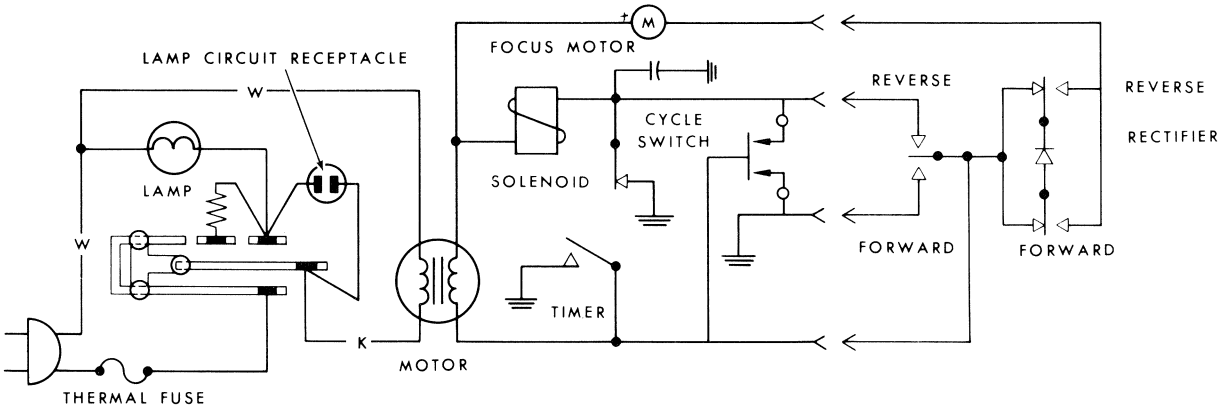
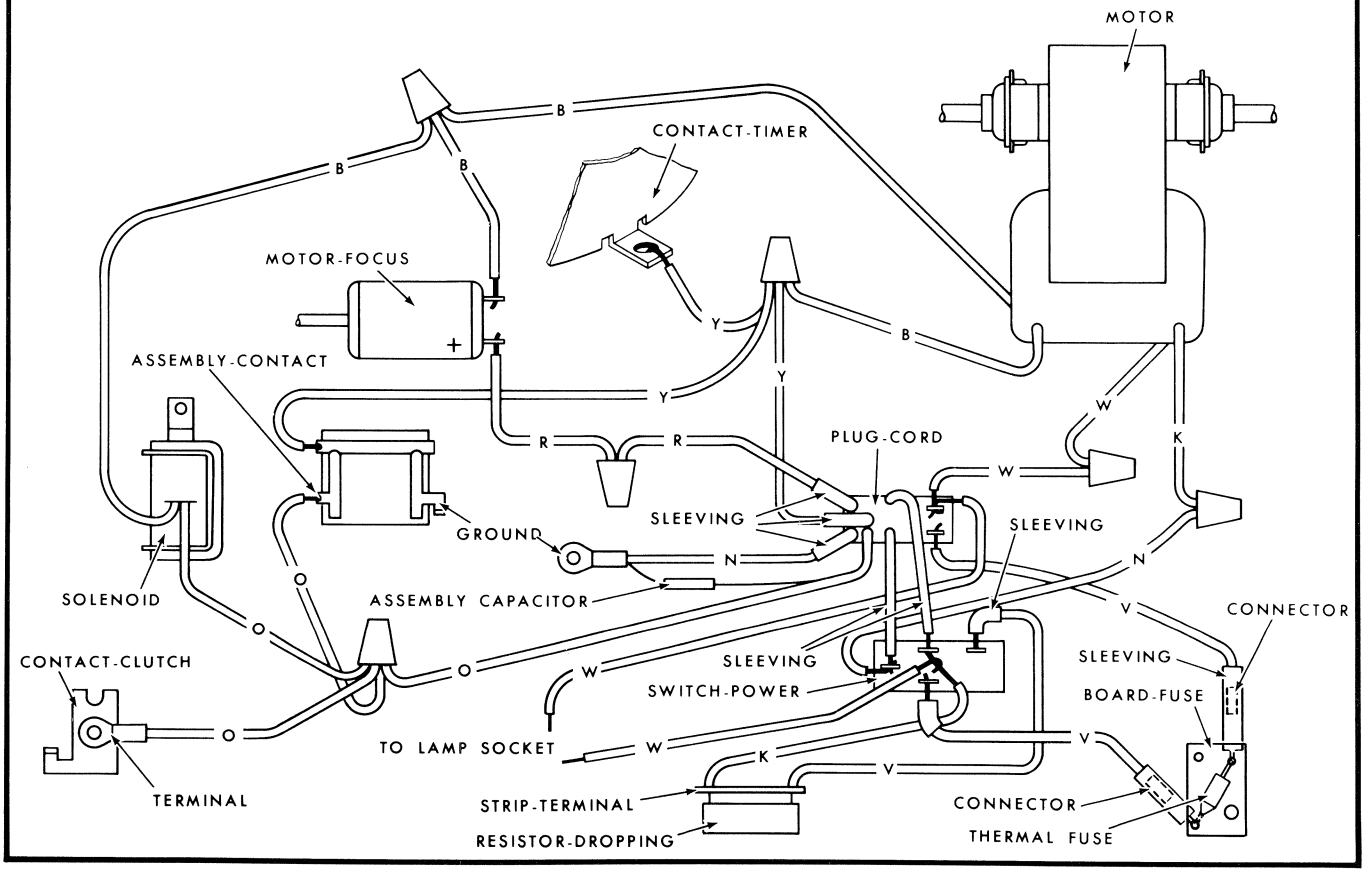
R	RED	V	VIOLET
O	ORANGE	A	GRAY
Y	YELLOW	W	WHITE





FEBRUARY 1974

Parts List No. 775410

KODAK CAROUSEL Slide Projector, Models 760, 760H, 850, 850H, 860, and 860H
KODAK CAROUSEL Projector Case, Model B

This parts list supercedes Parts List No. 775031, and Parts List Supplement No. 775031-1

Order parts from / *Eastman Kodak Company, Central Parts Service*
800 Lee Road, Rochester, New York 14650
Order by PART NUMBER

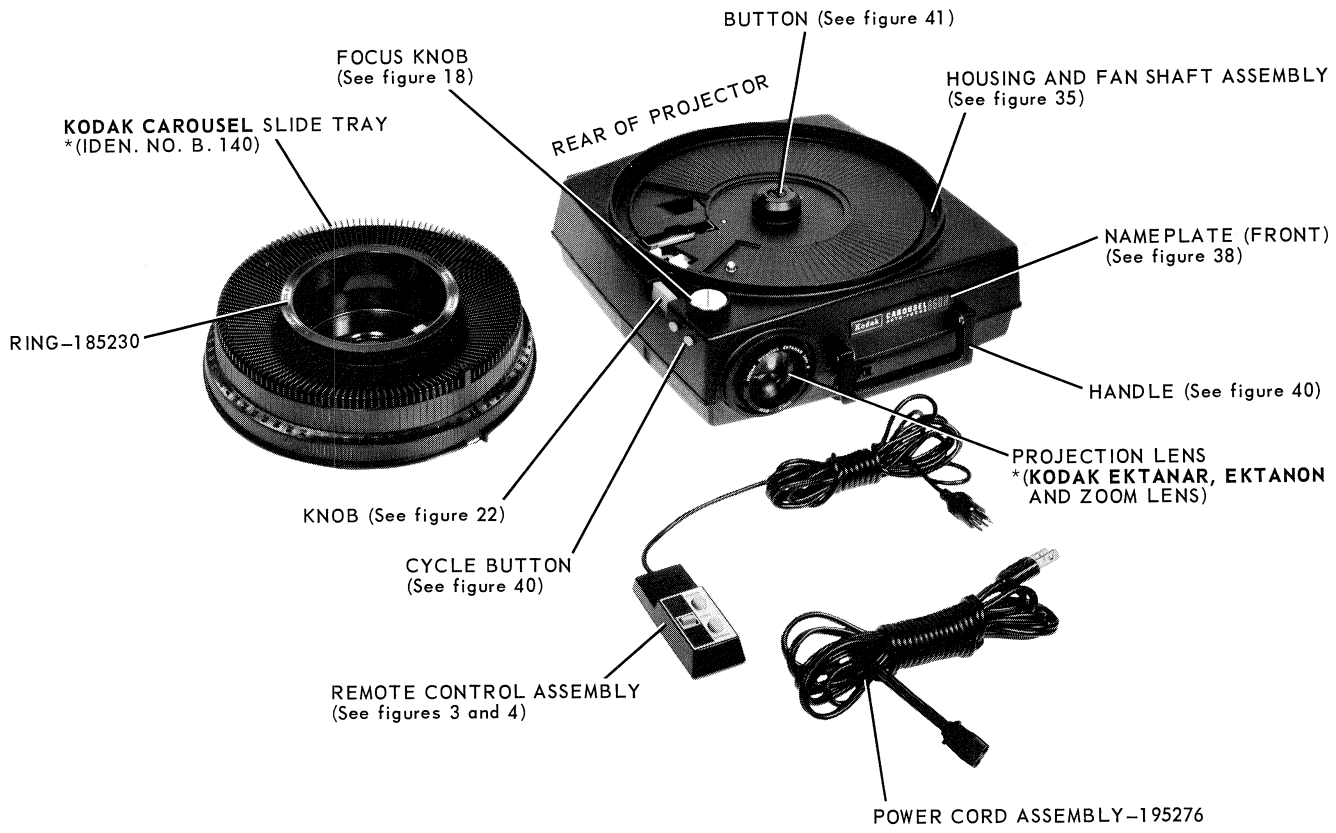


FIGURE 1 *Listed in KODAK Price Catalog

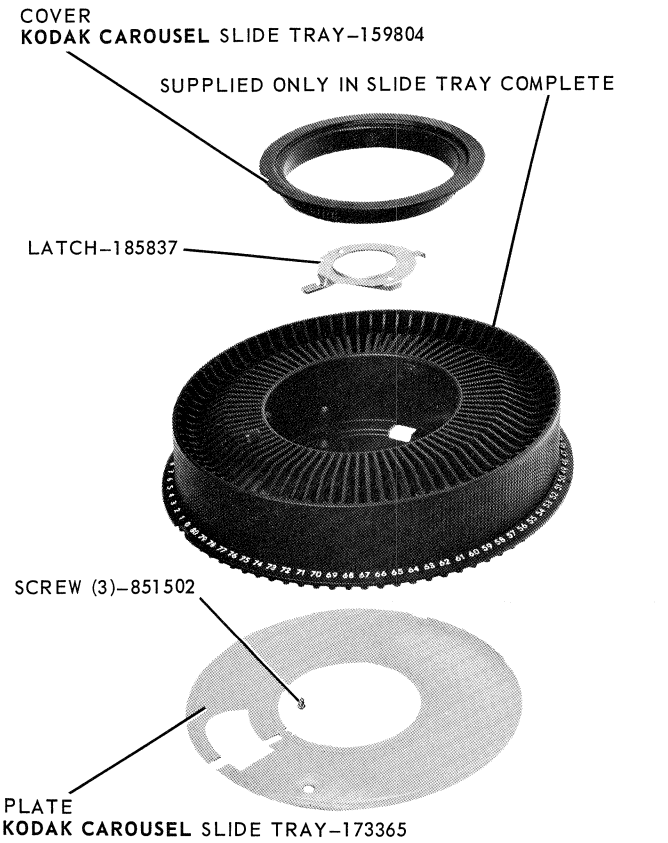


FIGURE 2 *KODAK CAROUSEL* SLIDE TRAY (Iden. No. 581) Listed in KODAK Price Catalog

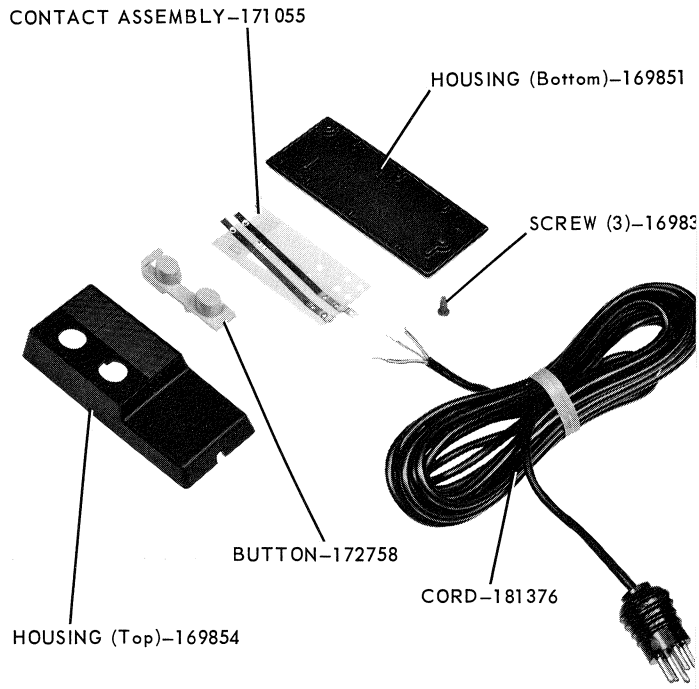


FIGURE 3 REMOTE CONTROL ASSEMBLY–171054 MODELS 760, 760H, 850, AND 850H

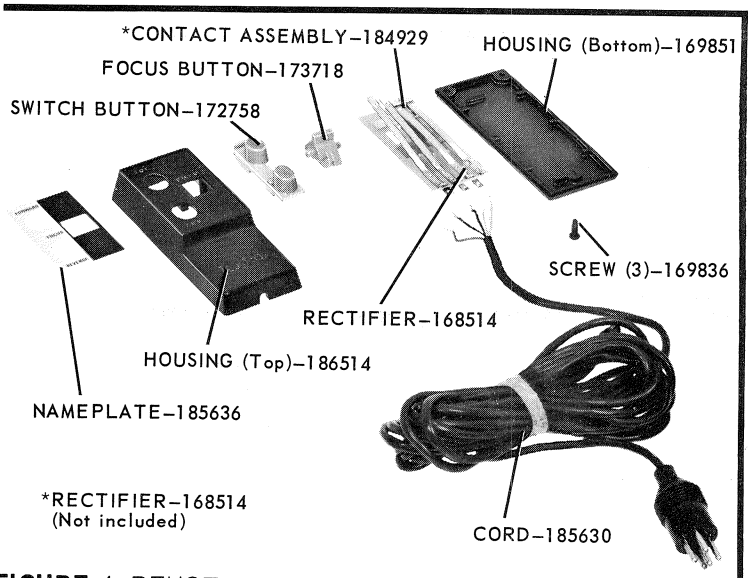


FIGURE 4 REMOTE CONTROL ASSEMBLY–184927
MODELS 860 AND 860H

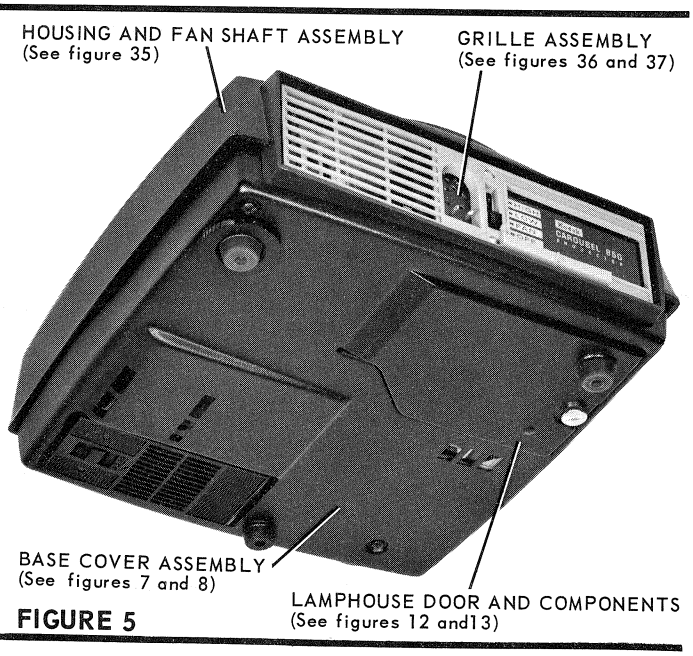


FIGURE 5

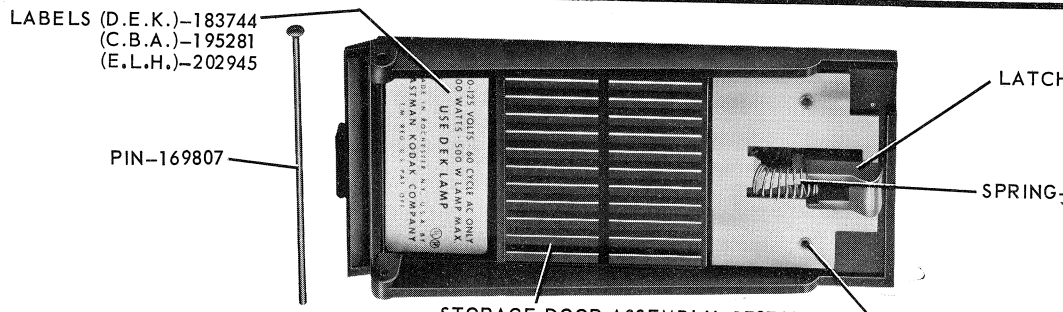
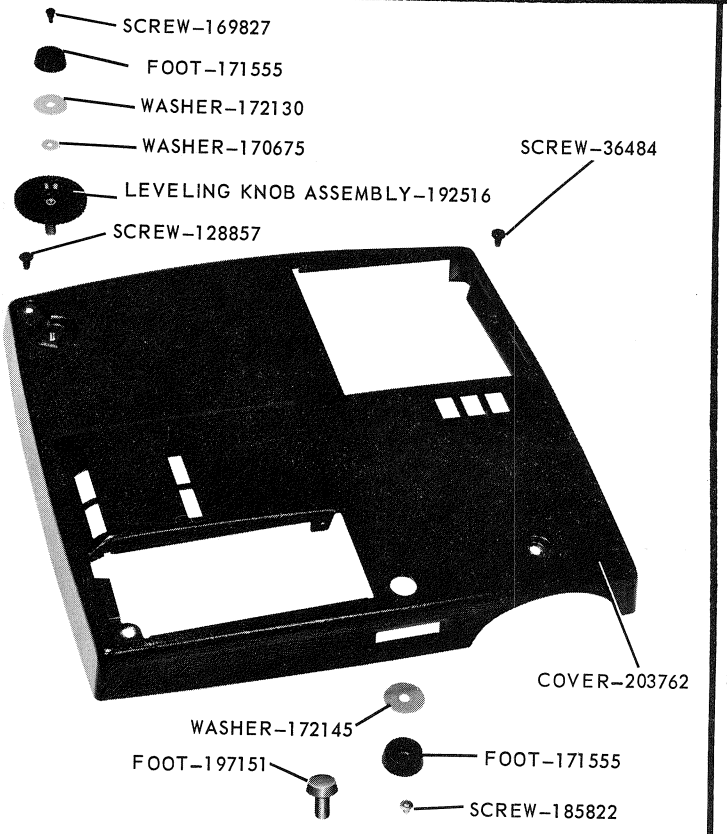


FIGURE 6



GURE 7 MODELS 760, 850 AND 860 ONLY

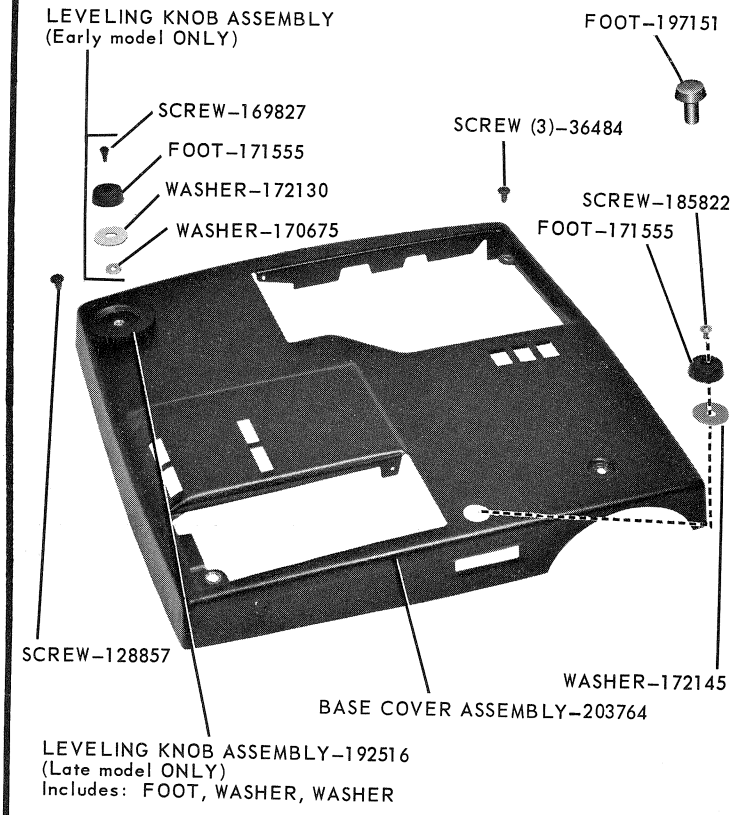


FIGURE 8 MODELS 760H, 850H, AND 860H

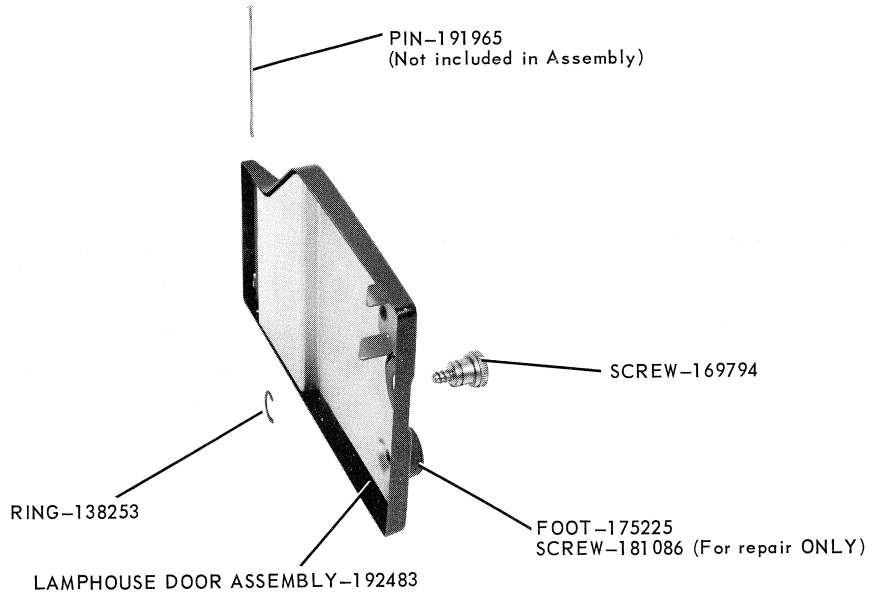
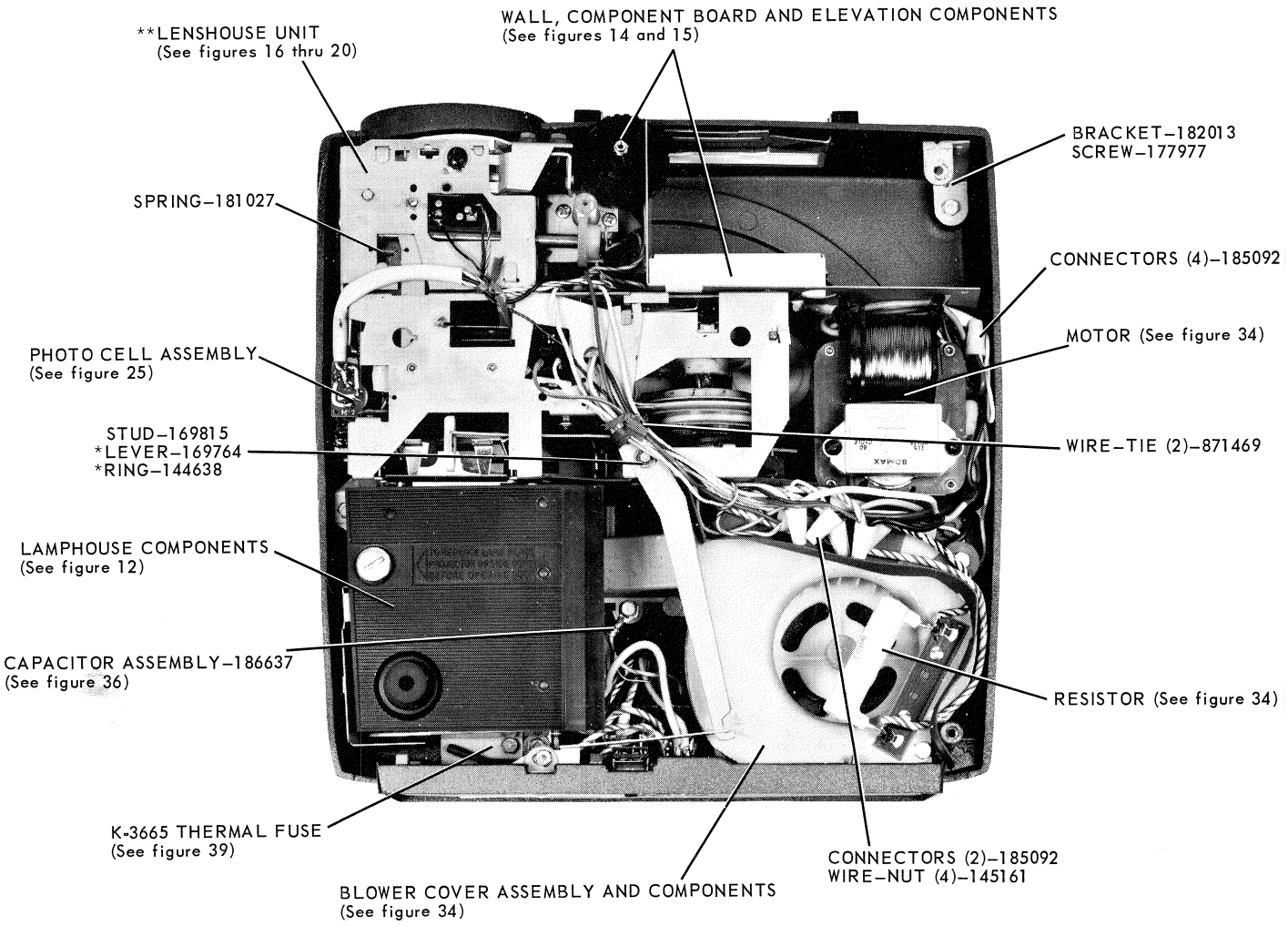
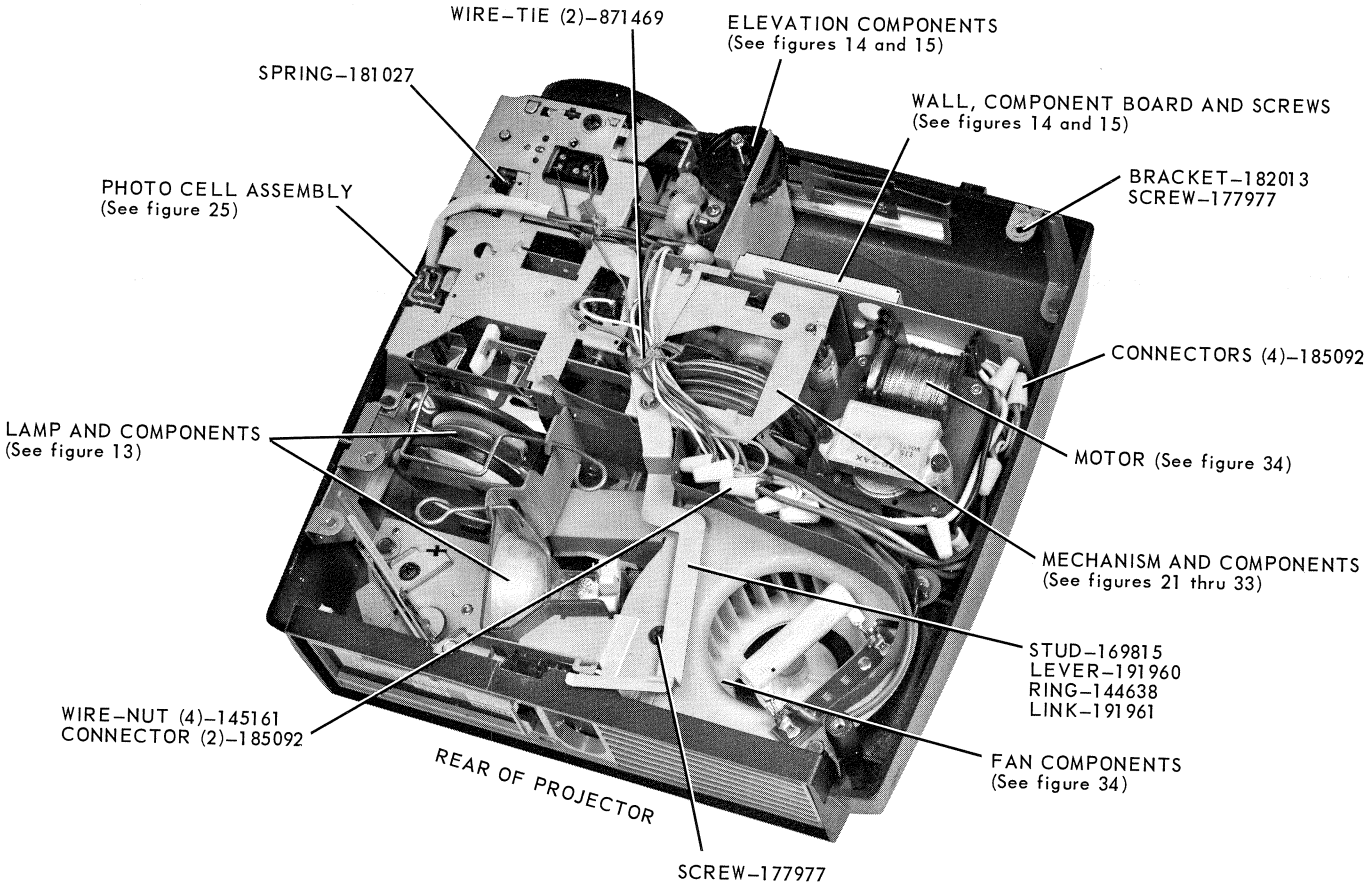


FIGURE 9 LAMPHOUSE DOOR ASSEMBLY–192483



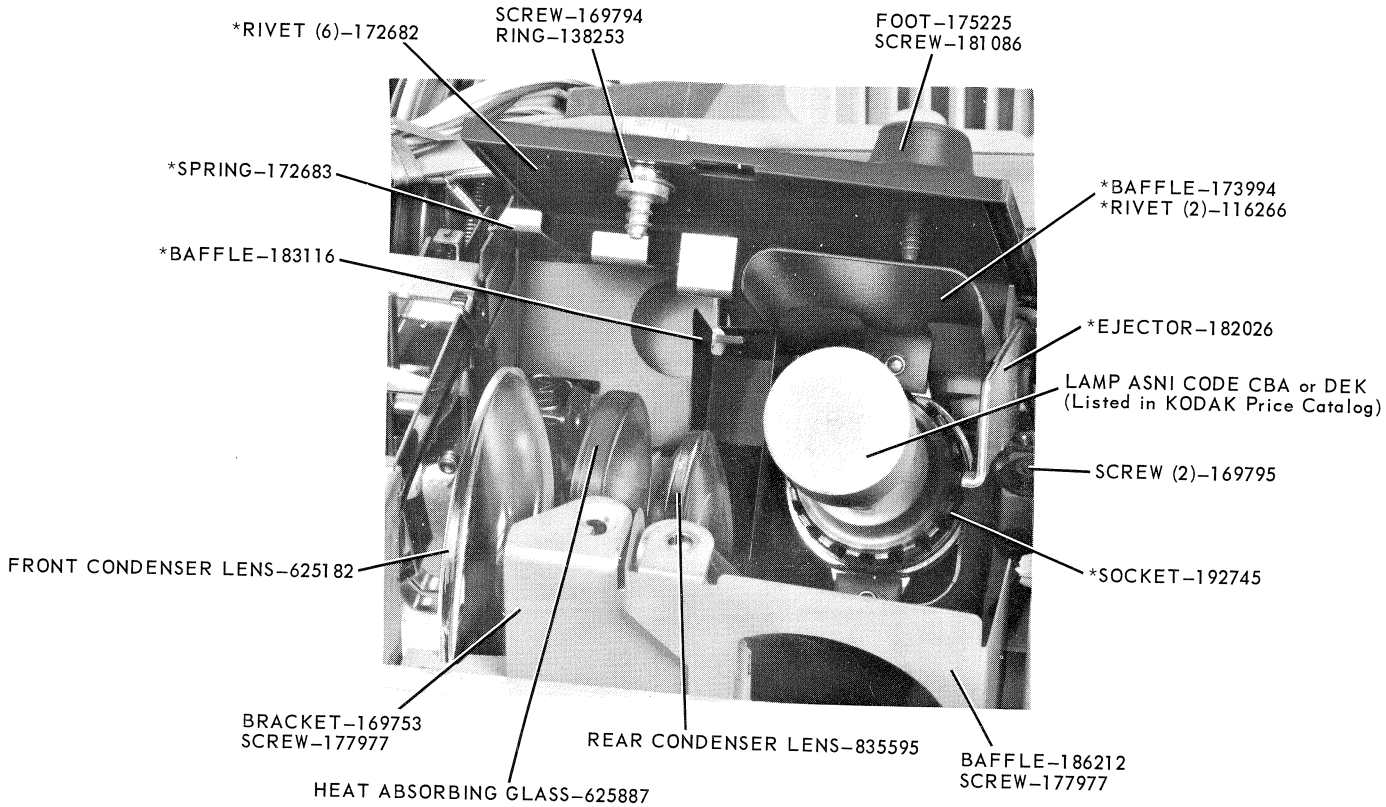
*EXCEPT–Remote solenoid and timing components
**EXCEPT–Remote solenoid

FIGURE 10 MODELS *760, **850, AND 860



IGURE 11 MODELS *760H, **850H, AND 860H

*EXCEPT–Remote solenoid and timing components
**EXCEPT–Remote solenoid



**GURE 12 *LAMPHOUSE DOOR ASSEMBLY–180920
MODELS 760, 850 AND 860 ONLY**

*PARTS INCLUDED IN LAMPHOUSE DOOR ASSEMBLY

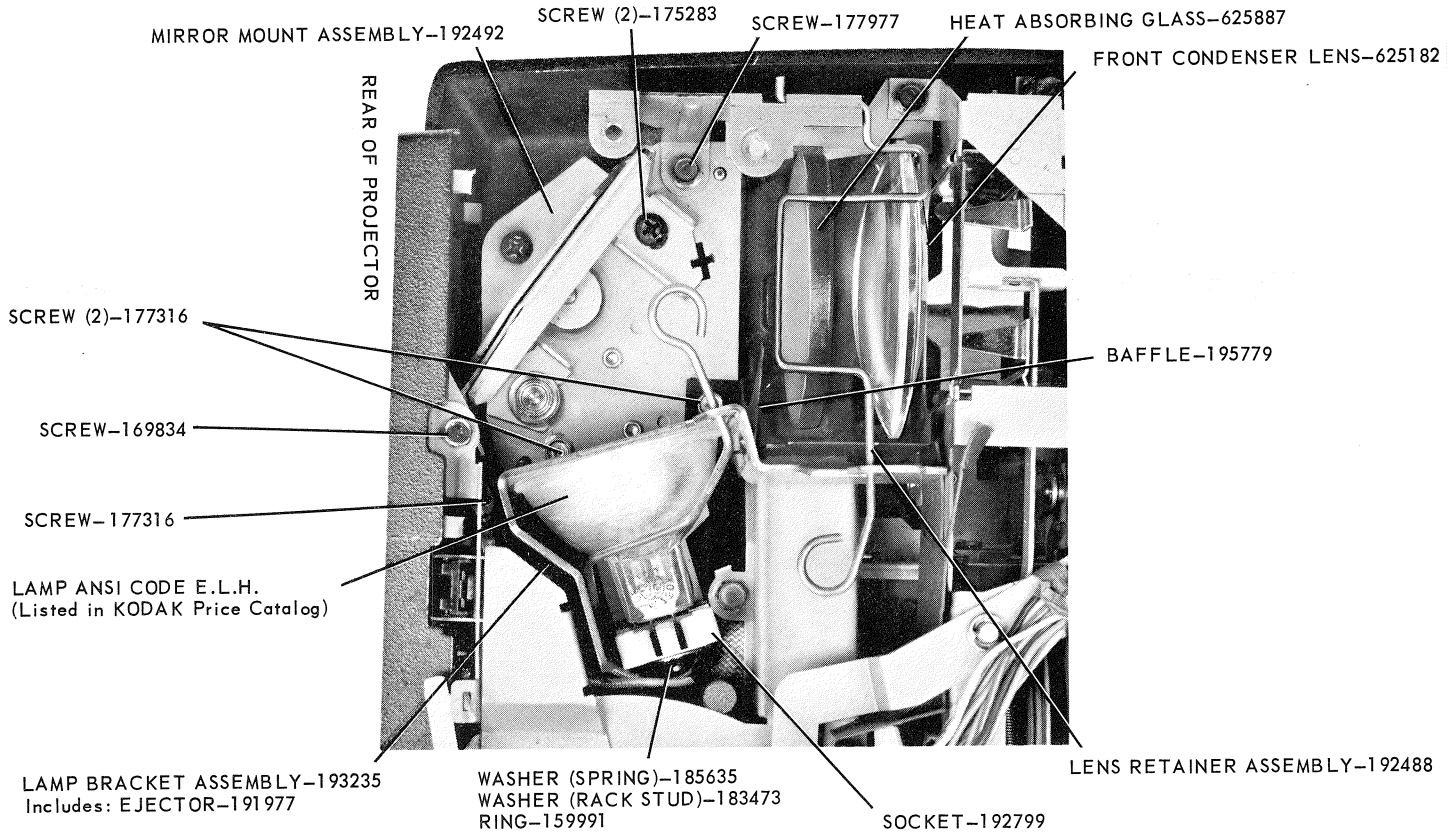


FIGURE 13

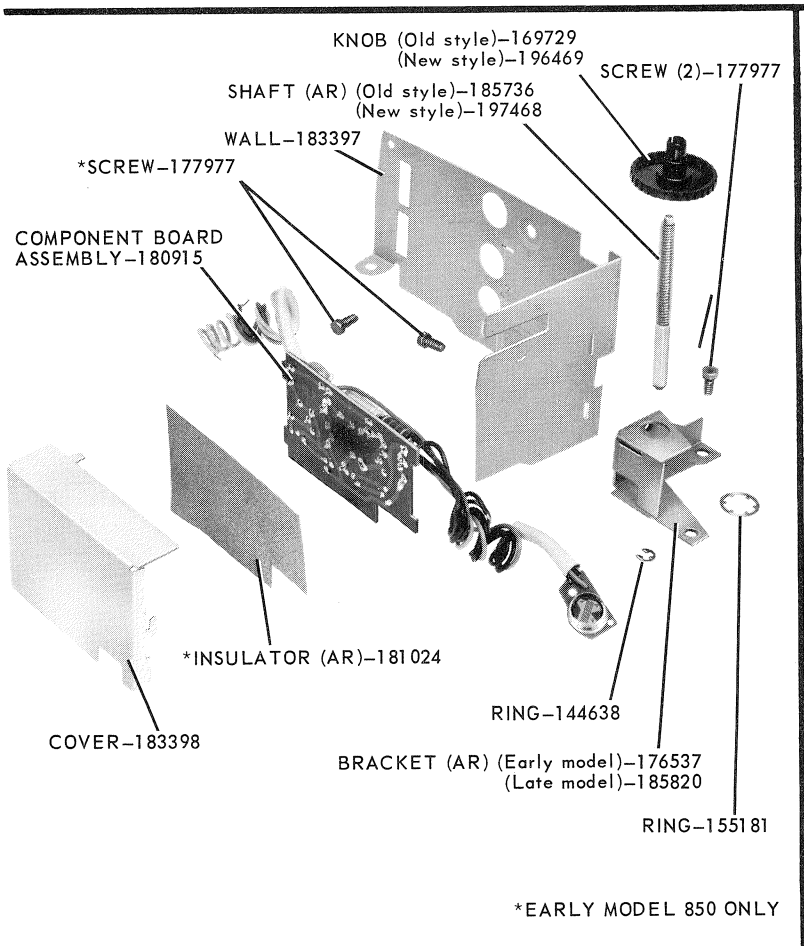


FIGURE 14 MODELS 760, 760H, 850 AND 850H ONLY

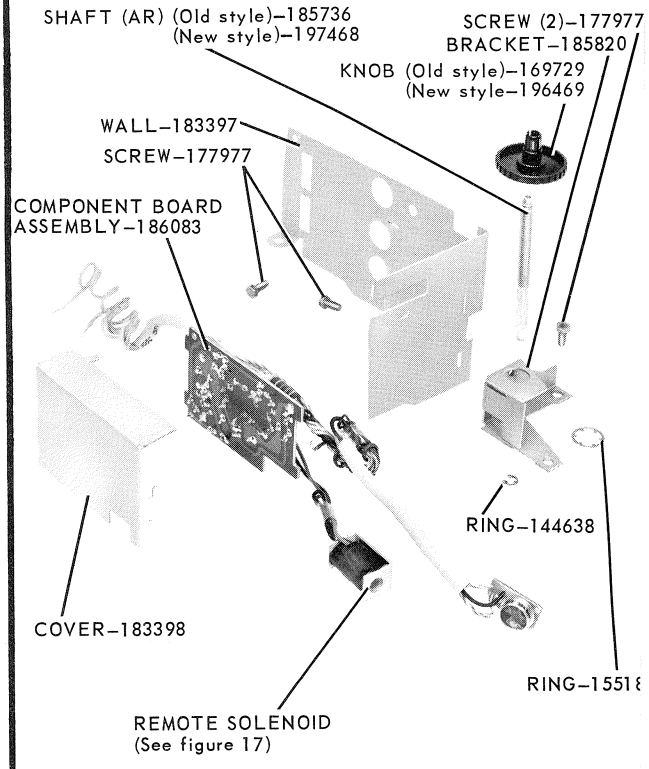


FIGURE 15 MODELS 860 AND 860H ONLY

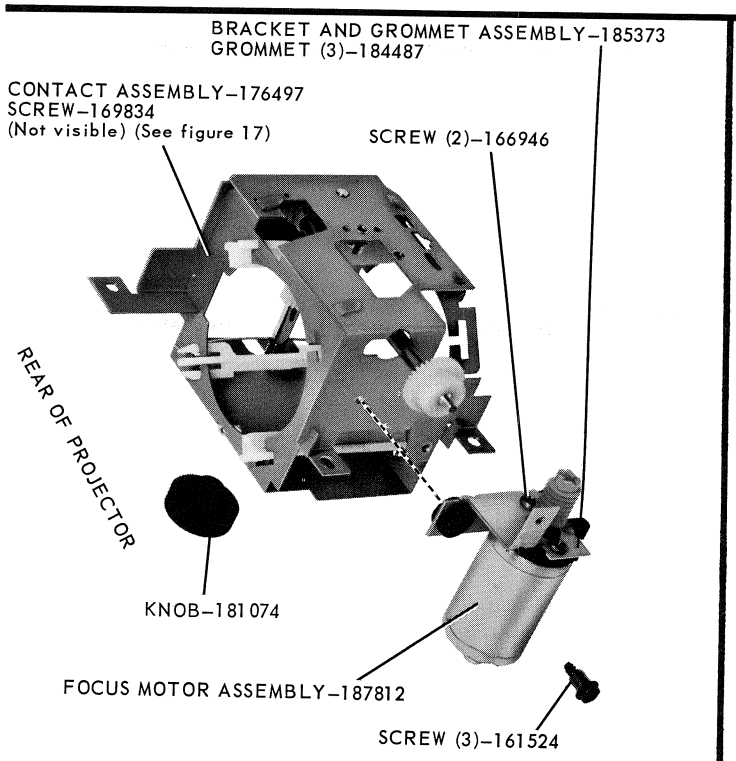


FIGURE 16 MODELS 760, 760H, 850 and 850H ONLY

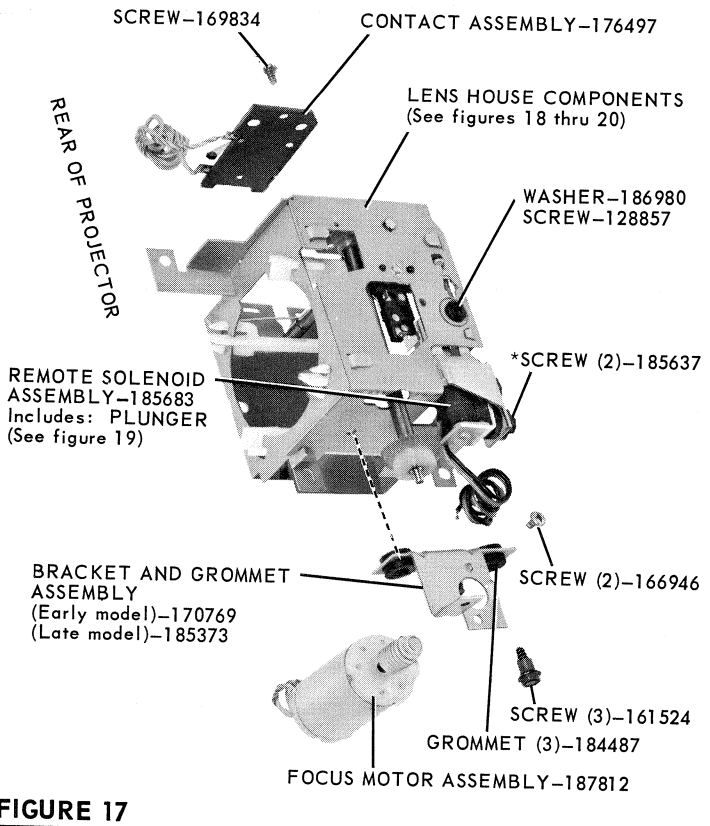
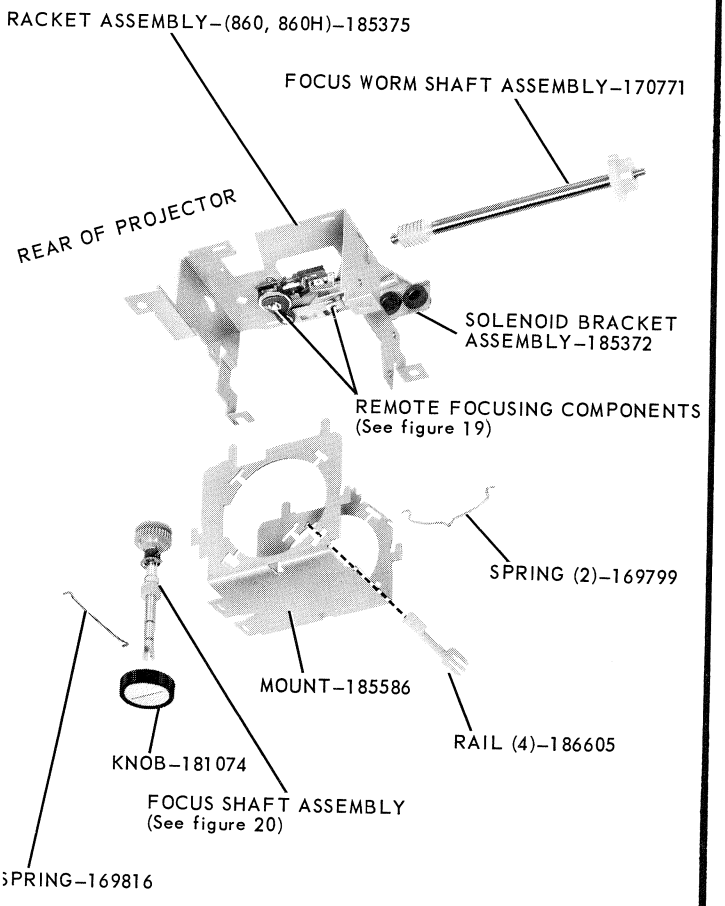


FIGURE 17



GURE 18

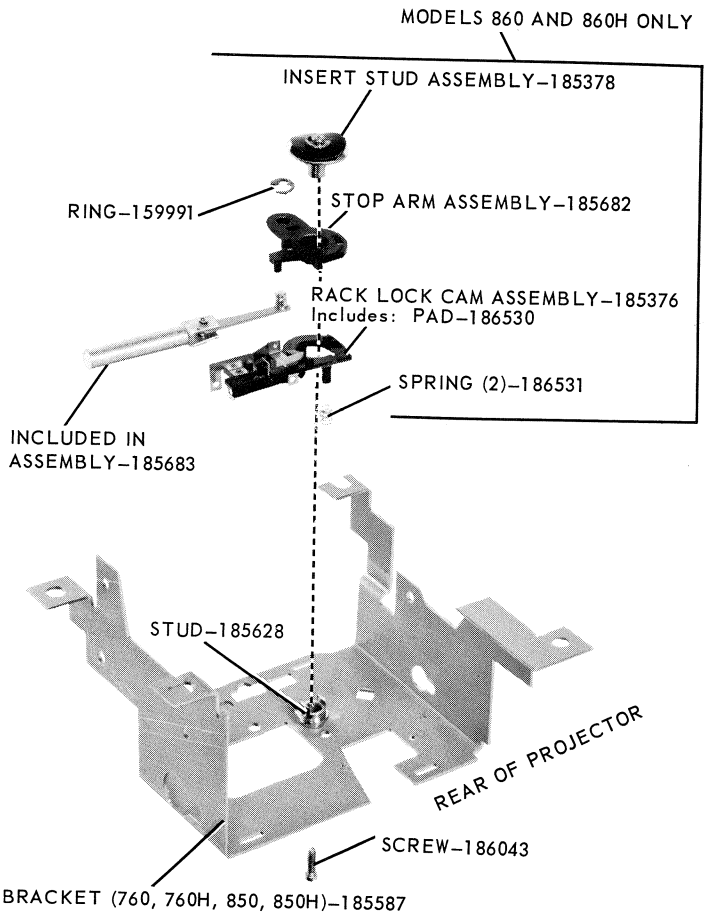


FIGURE 19

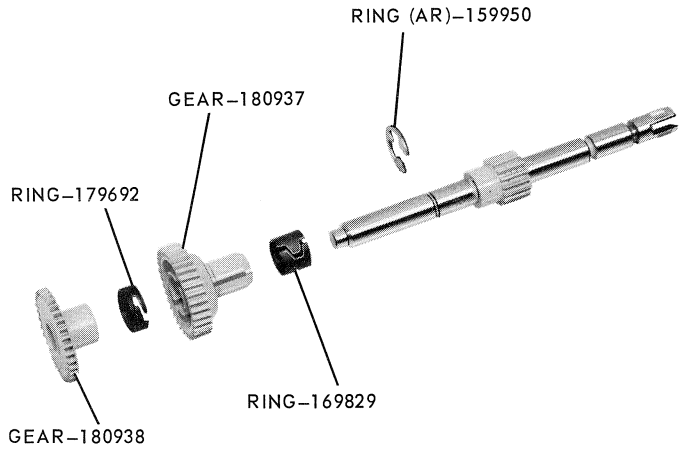


FIGURE 20 FOCUS SHAFT ASSEMBLY–180917

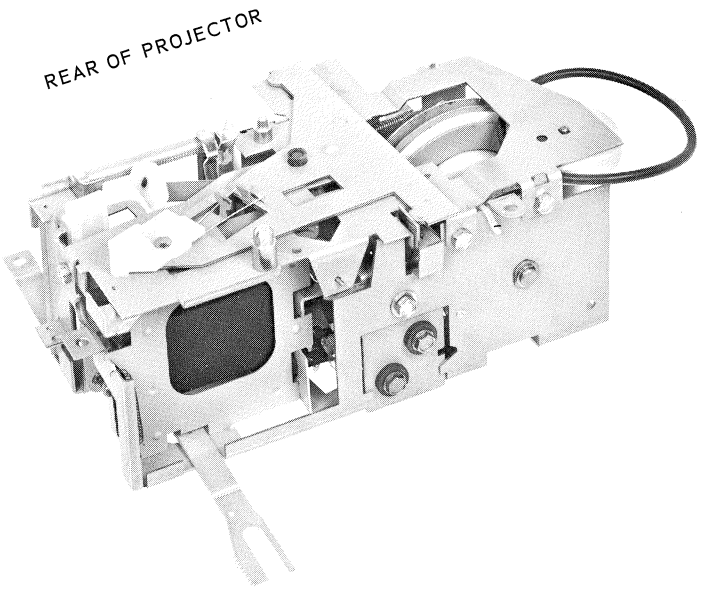


FIGURE 21 MECHANISM ASSEMBLY
(760)–190275 (850 and 860)–185370
(760H)–192771 (850H and 860H)–192495

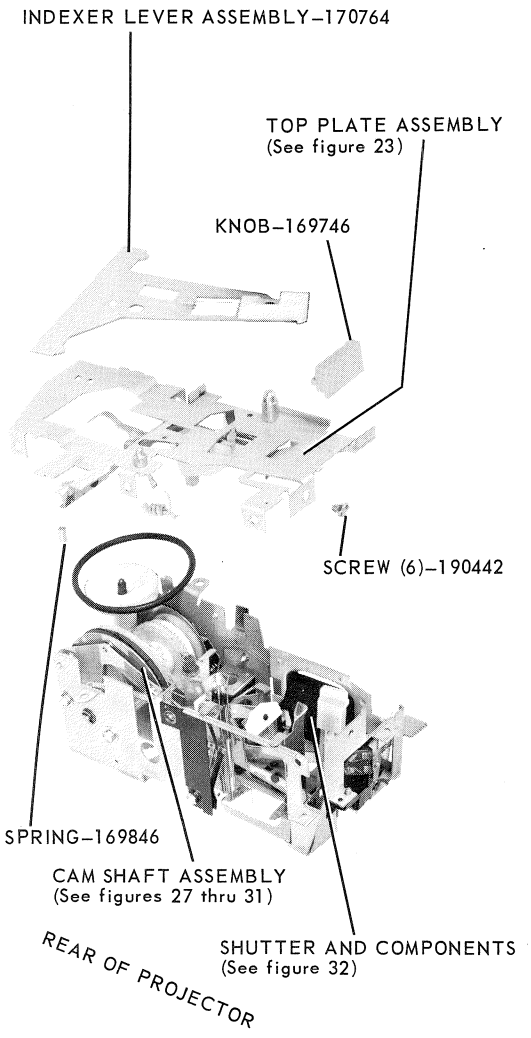


FIGURE 22

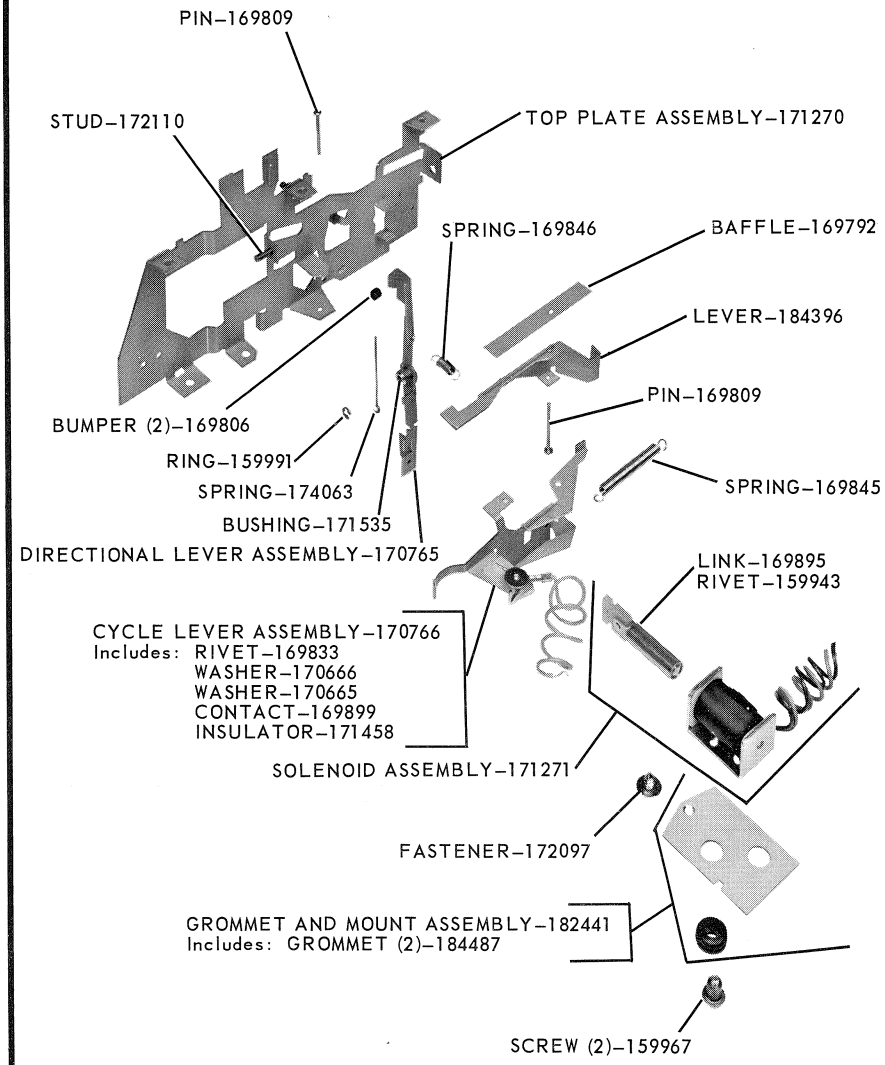


FIGURE 23

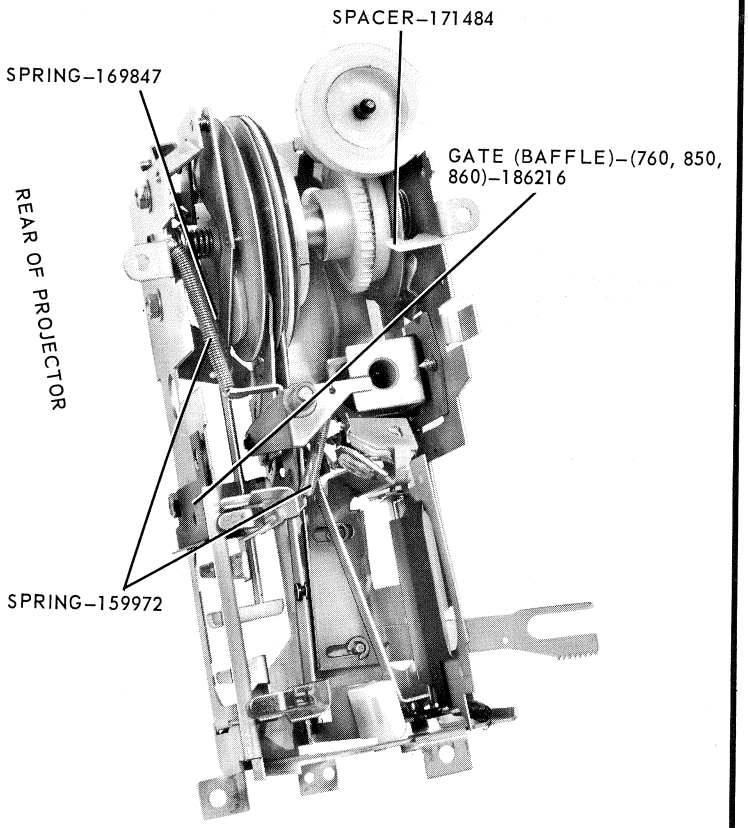


FIGURE 24

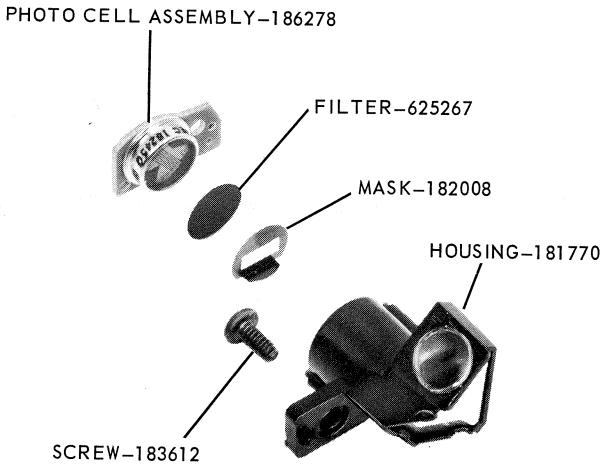
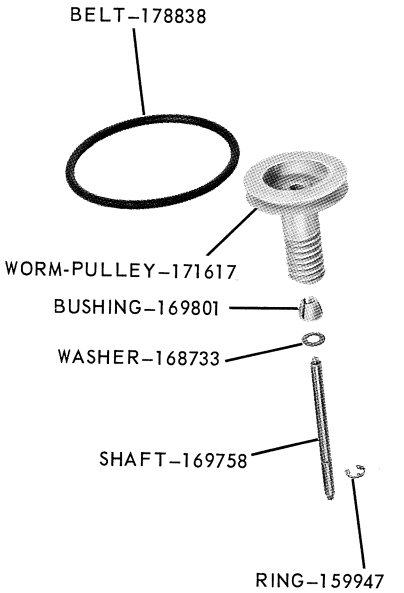
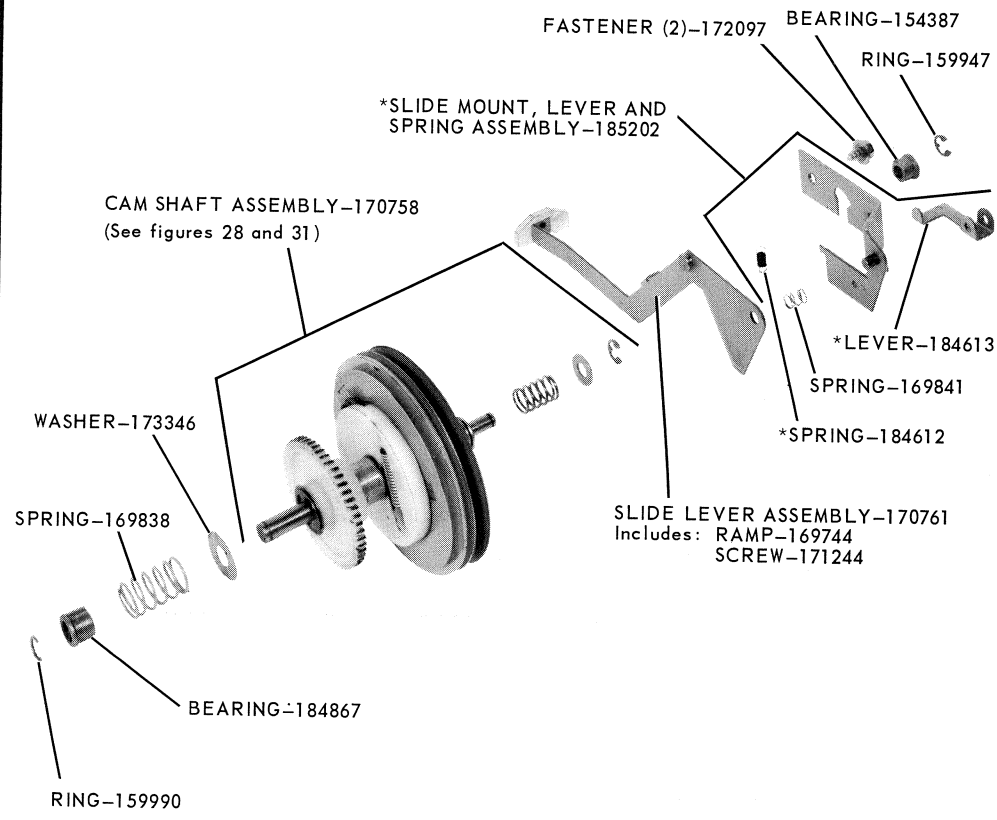


FIGURE 25



IGURE 26



*Parts included in Slide Mount Lever and Spring Assembly

FIGURE 27 MODELS 760 and 760H ONLY

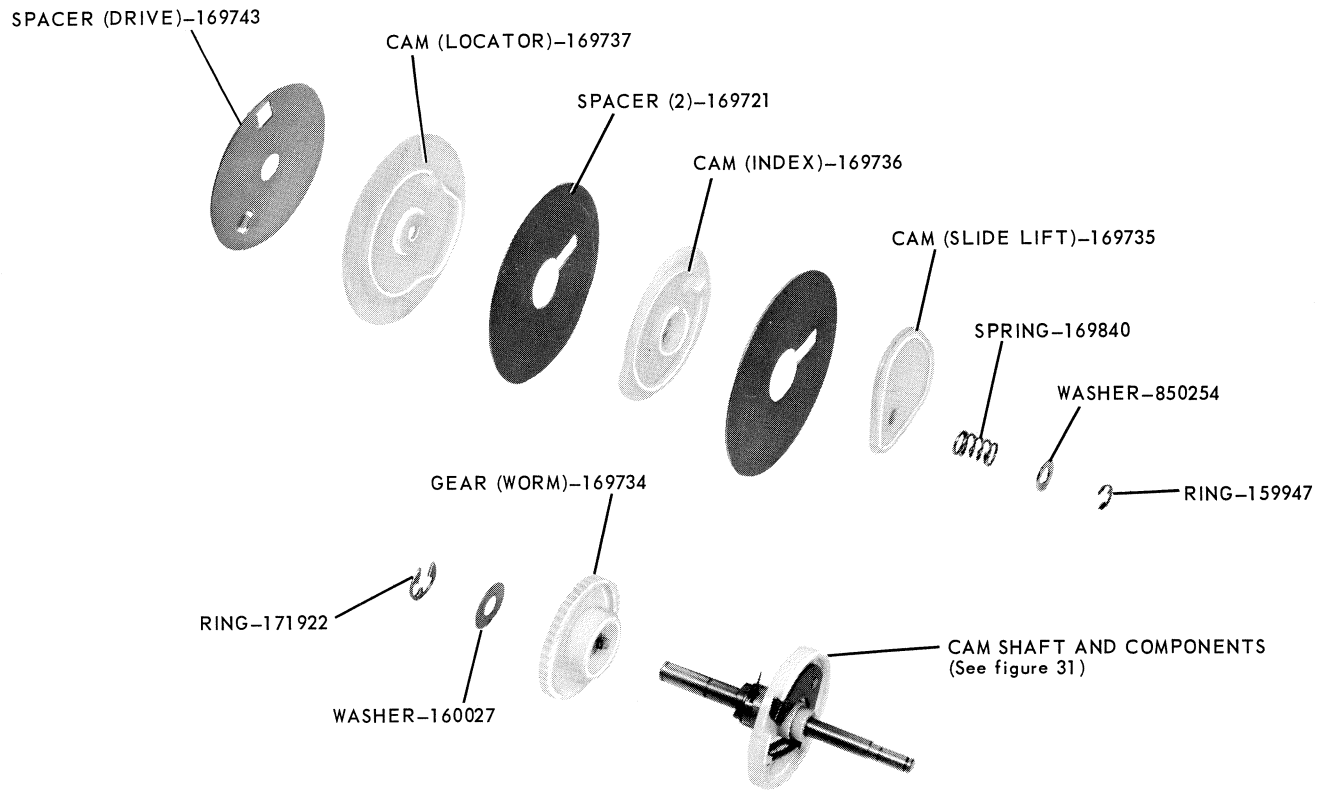


FIGURE 28 CAM SHAFT ASSEMBLY–170758

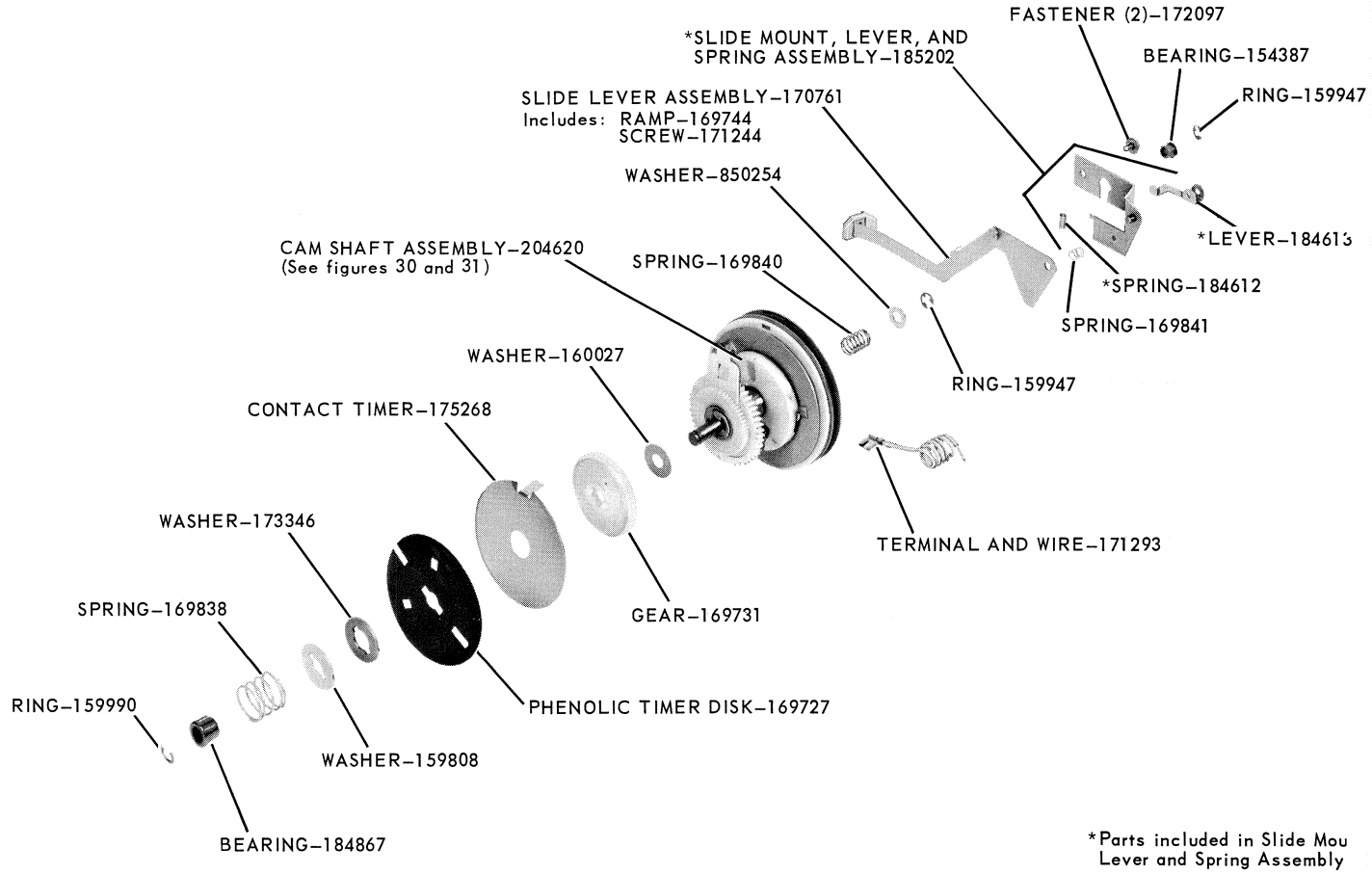


FIGURE 29

MODELS 850, 850H, 860
and 860H ONLY

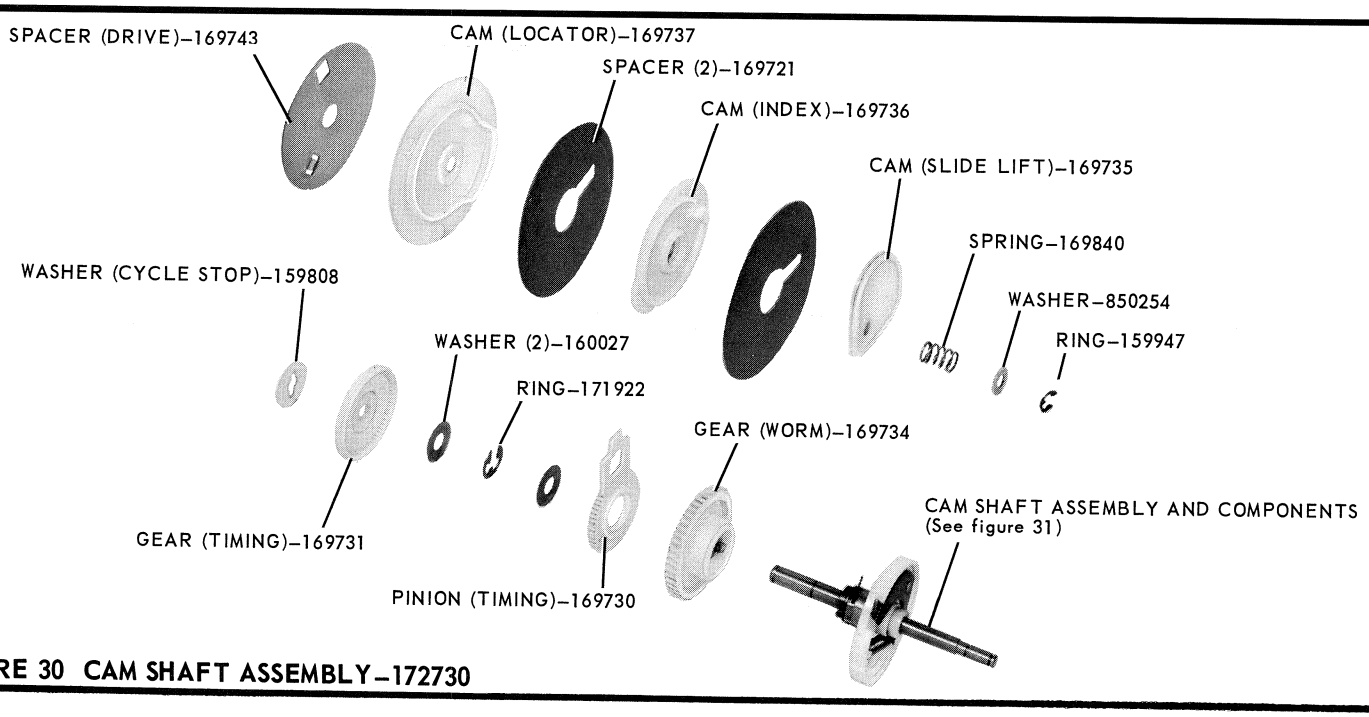


FIGURE 30 CAM SHAFT ASSEMBLY–172730

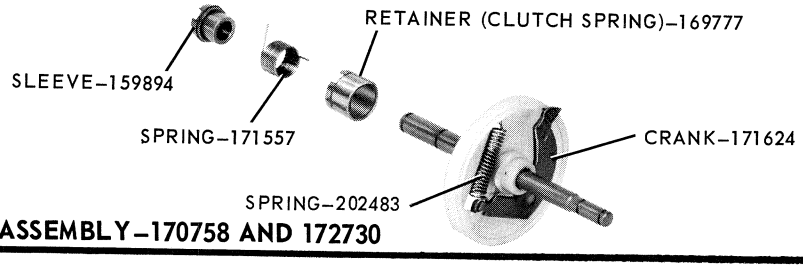
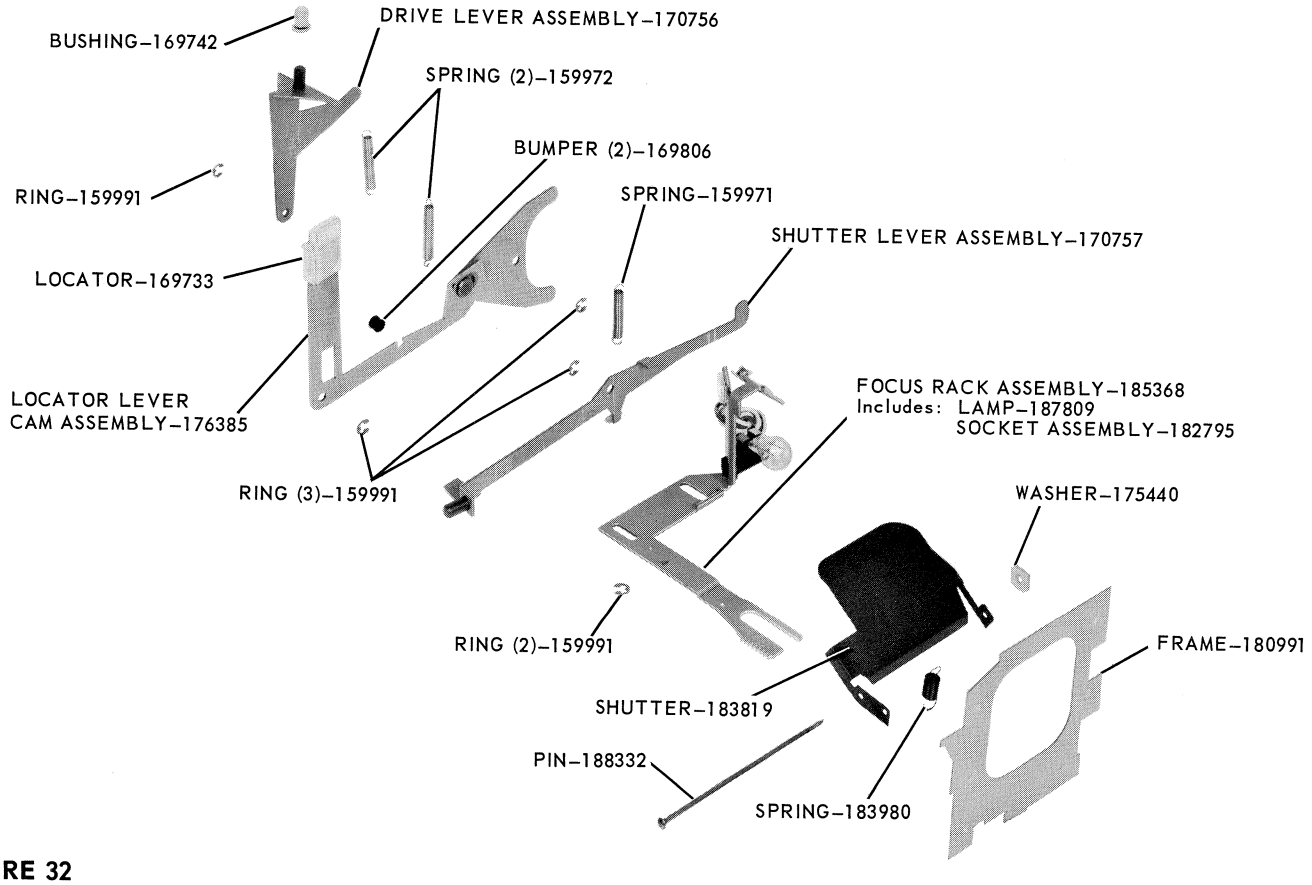
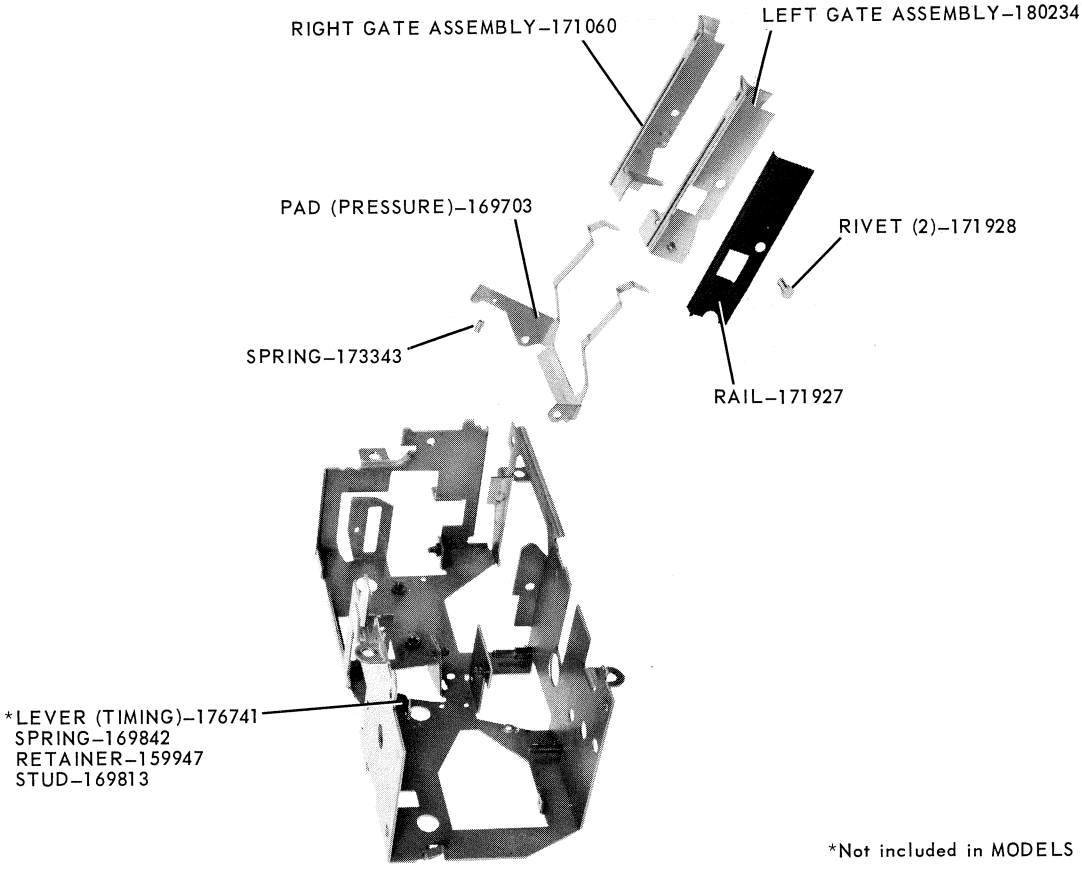


FIGURE 31 CAM SHAFT ASSEMBLY–170758 AND 172730



IGURE 32



*Not included in MODELS 760 and 760H

FIGURE 33

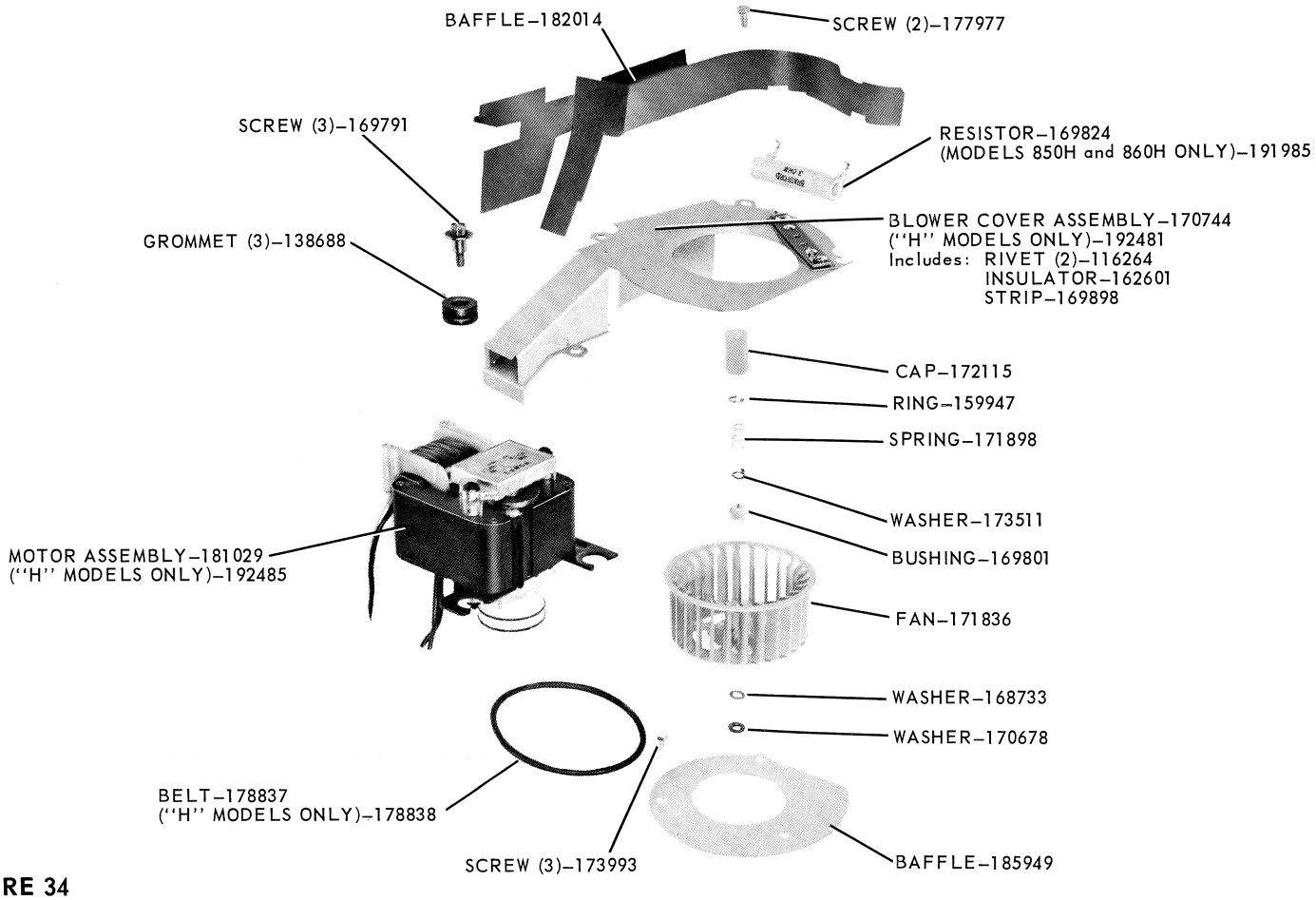


FIGURE 34

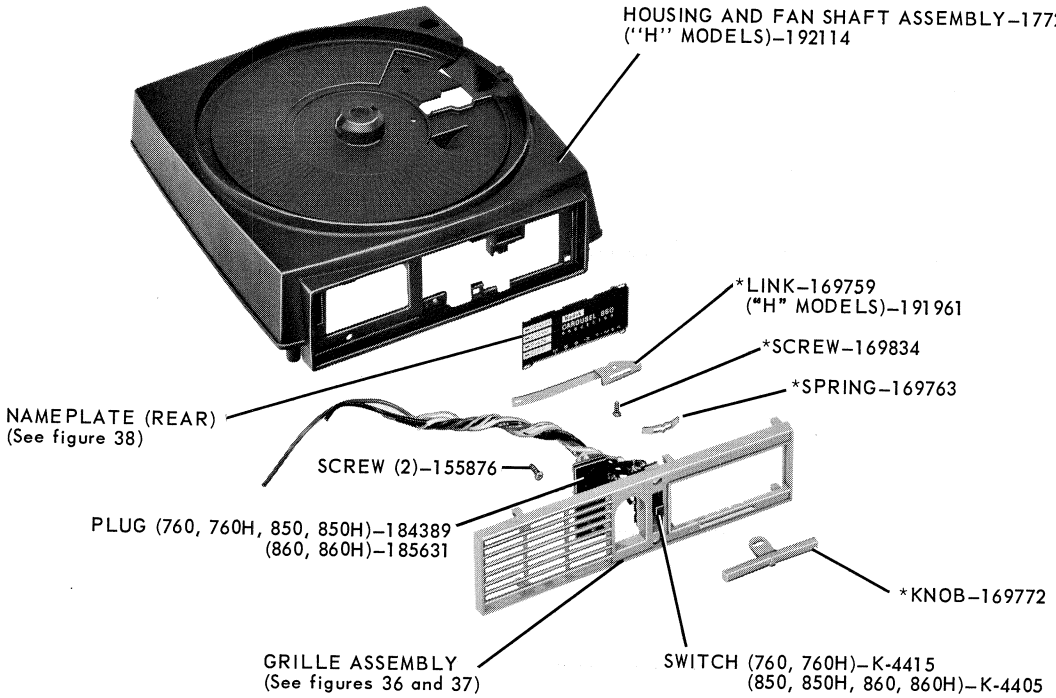


FIGURE 35

*MODELS 850, 850H, 860, and 860H ONLY

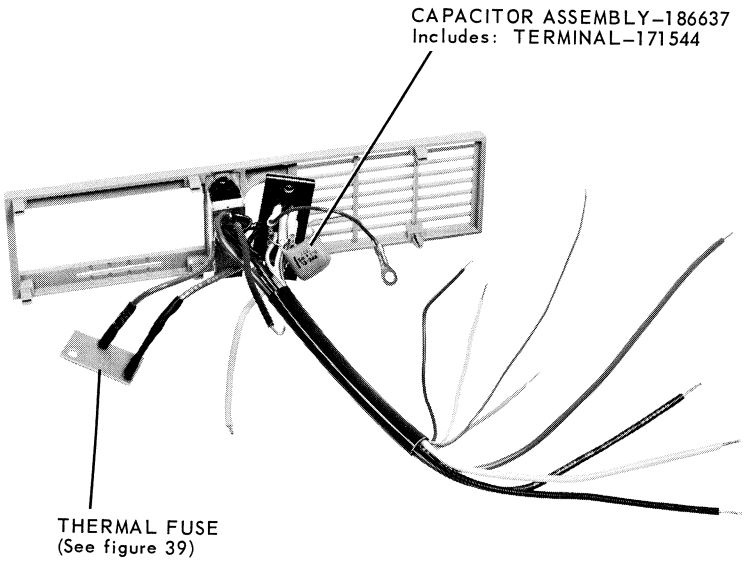


**FIGURE 36 GRILLE ASSEMBLY (760)–187010
(850)–187014
(860)–187016**

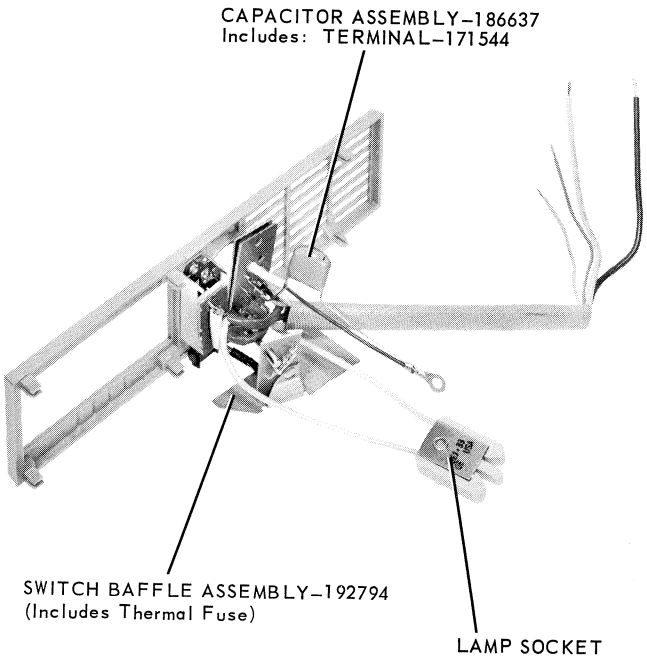


**FIGURE 37 GRILLE ASSEMBLY (760H)–192762
(850H)–192486
(860H)–192783**

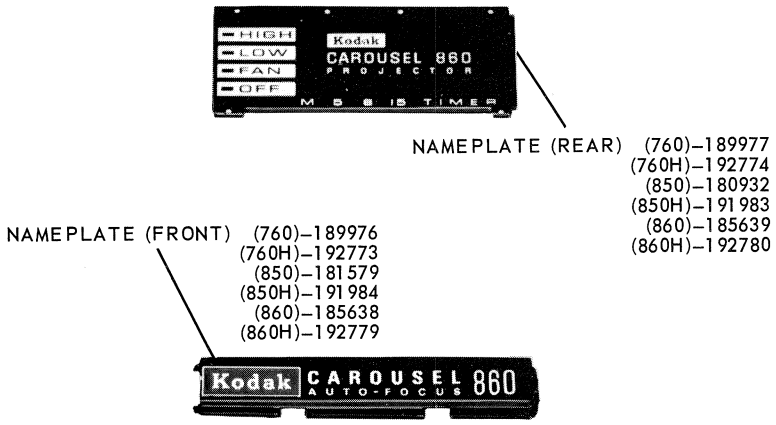


FIGURE 38

FIGURE 39 K–3665 THERMAL FUSE

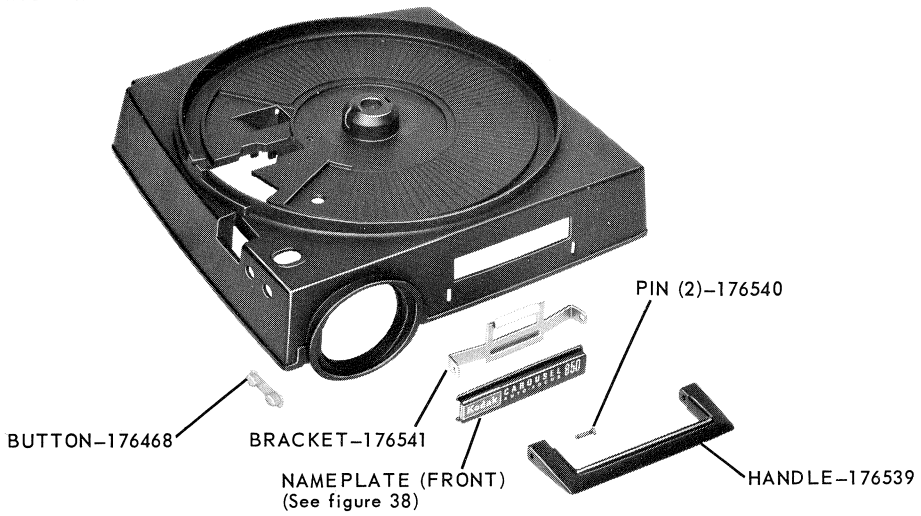


FIGURE 40

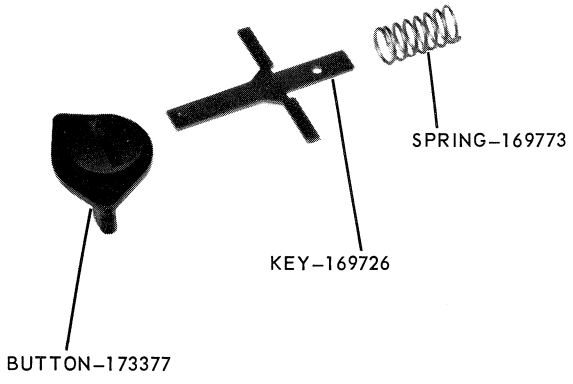


FIGURE 41

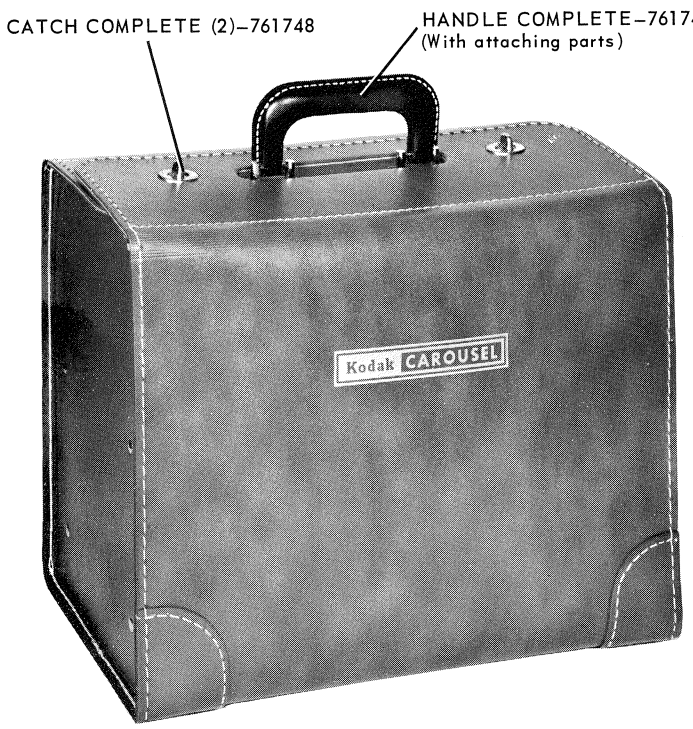
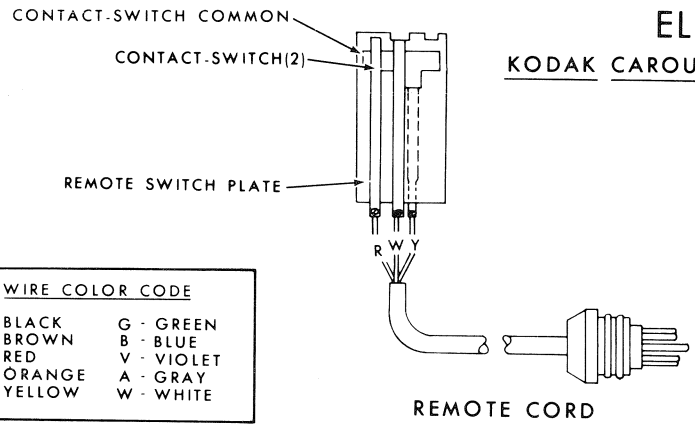


FIGURE 42 *KODAK CAROUSEL* PROJECTOR CASE, MODEL B Listed in KODAK Price Catalog

ELECTRICAL DIAGRAMS

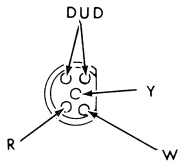
KODAK CAROUSEL MODELS 760 and 760H PROJECTORS

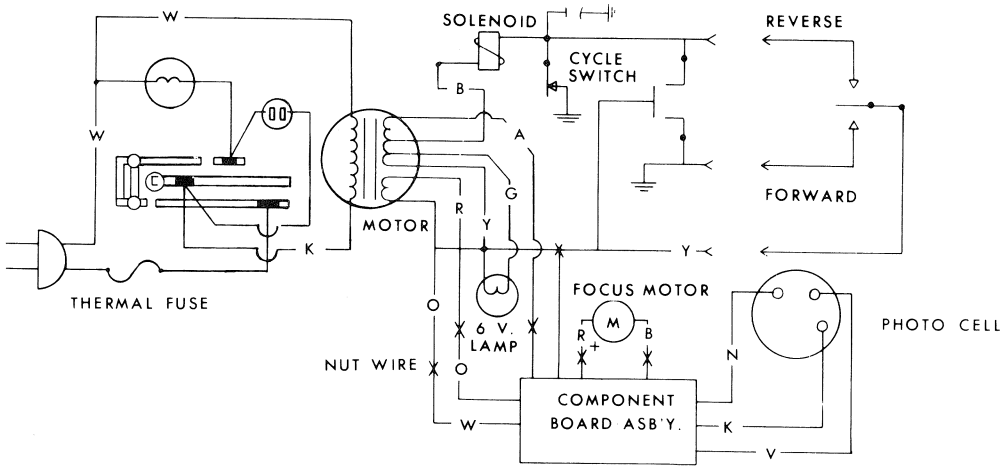
EARLY MODEL PROJECTORS MAY VARY FROM DIAGRAMS SHOWN

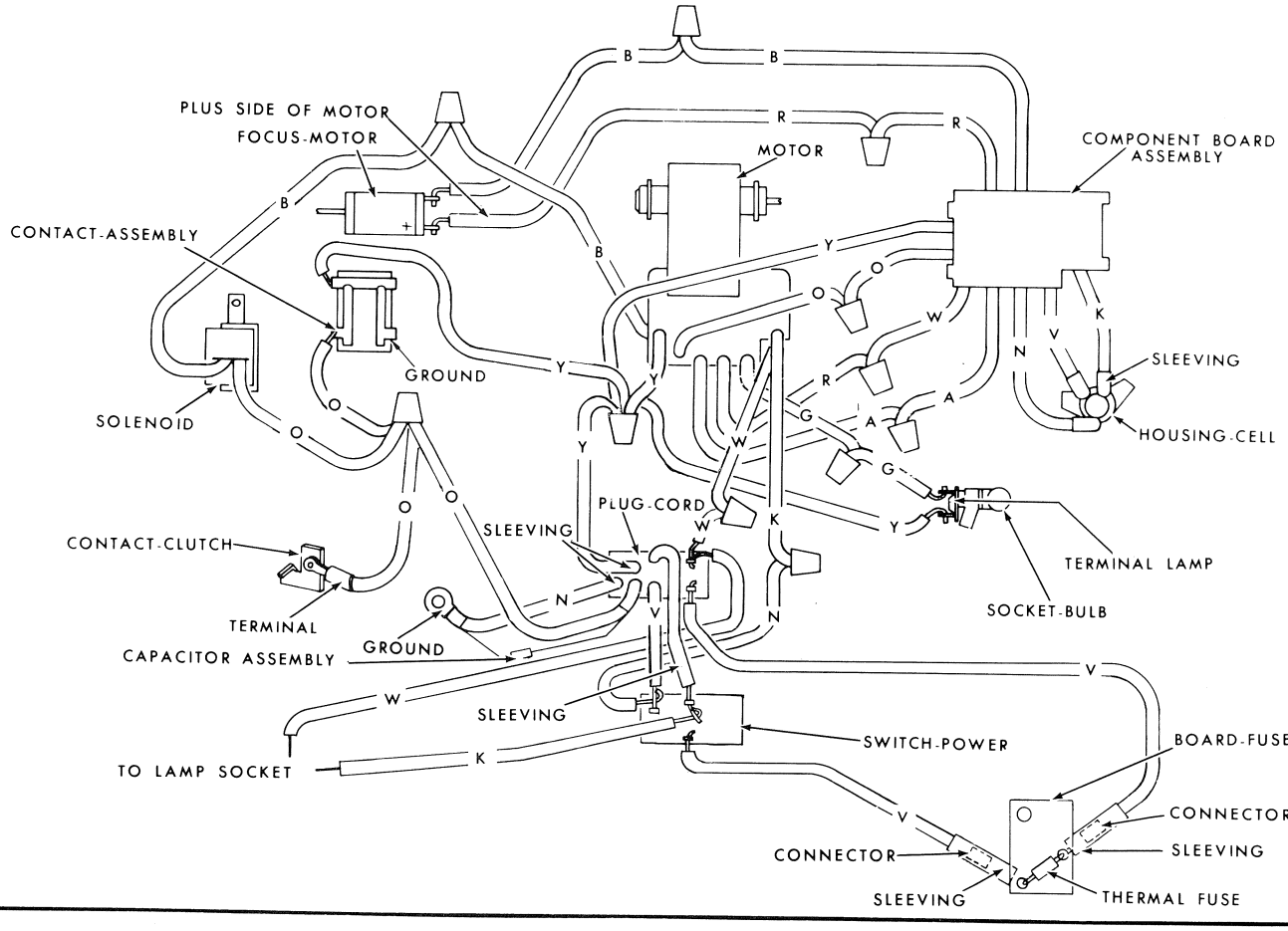


WIRE COLOR CODE

K - BLACK		G - GREEN	
N - BROWN		B - BLUE	
R - RED		V - VIOLET	
O - ORANGE		A - GRAY	
Y - YELLOW		W - WHITE	



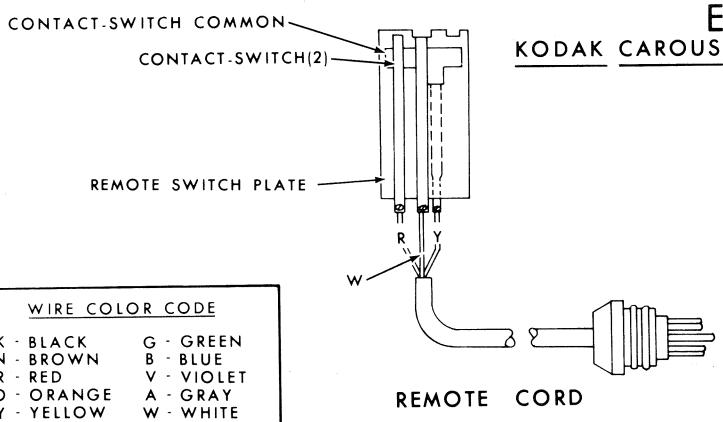




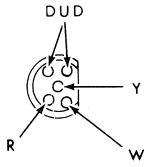
ELECTRICAL DIAGRAMS

KODAK CAROUSEL MODELS 850 and 850H PROJECTORS

EARLY MODEL PROJECTORS MAY VARY FROM DIAGRAMS SHOWN

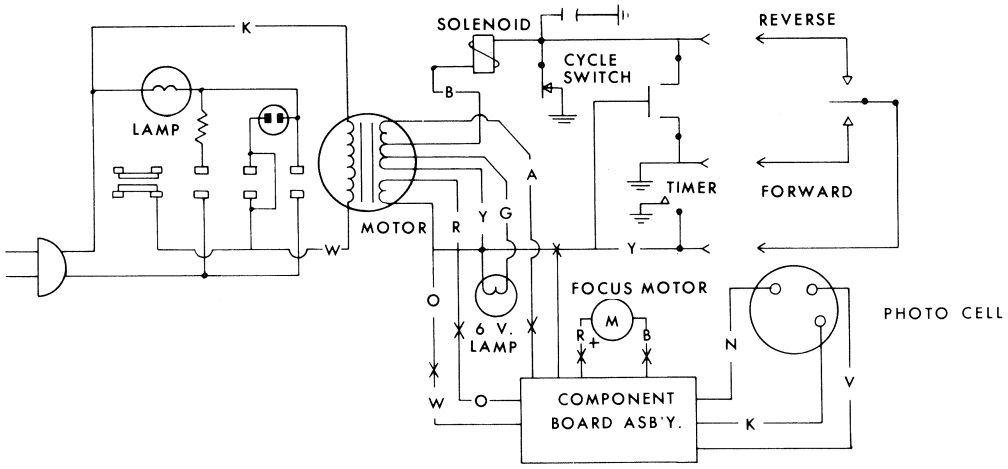


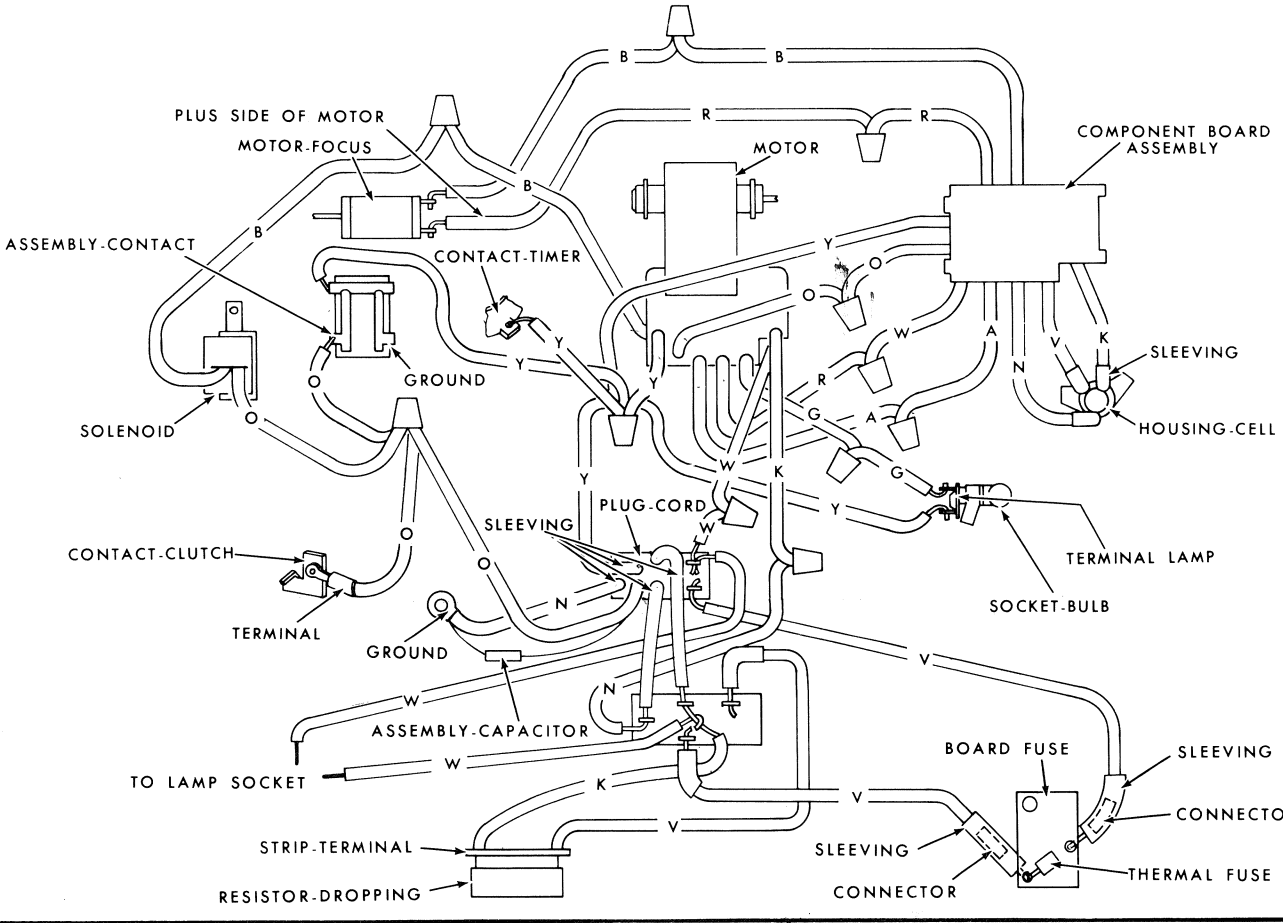
REMOTE CORD



WIRE COLOR CODE

K - BLACK	G - GREEN
N - BROWN	B - BLUE
R - RED	V - VIOLET
O - ORANGE	A - GRAY
Y - YELLOW	W - WHITE

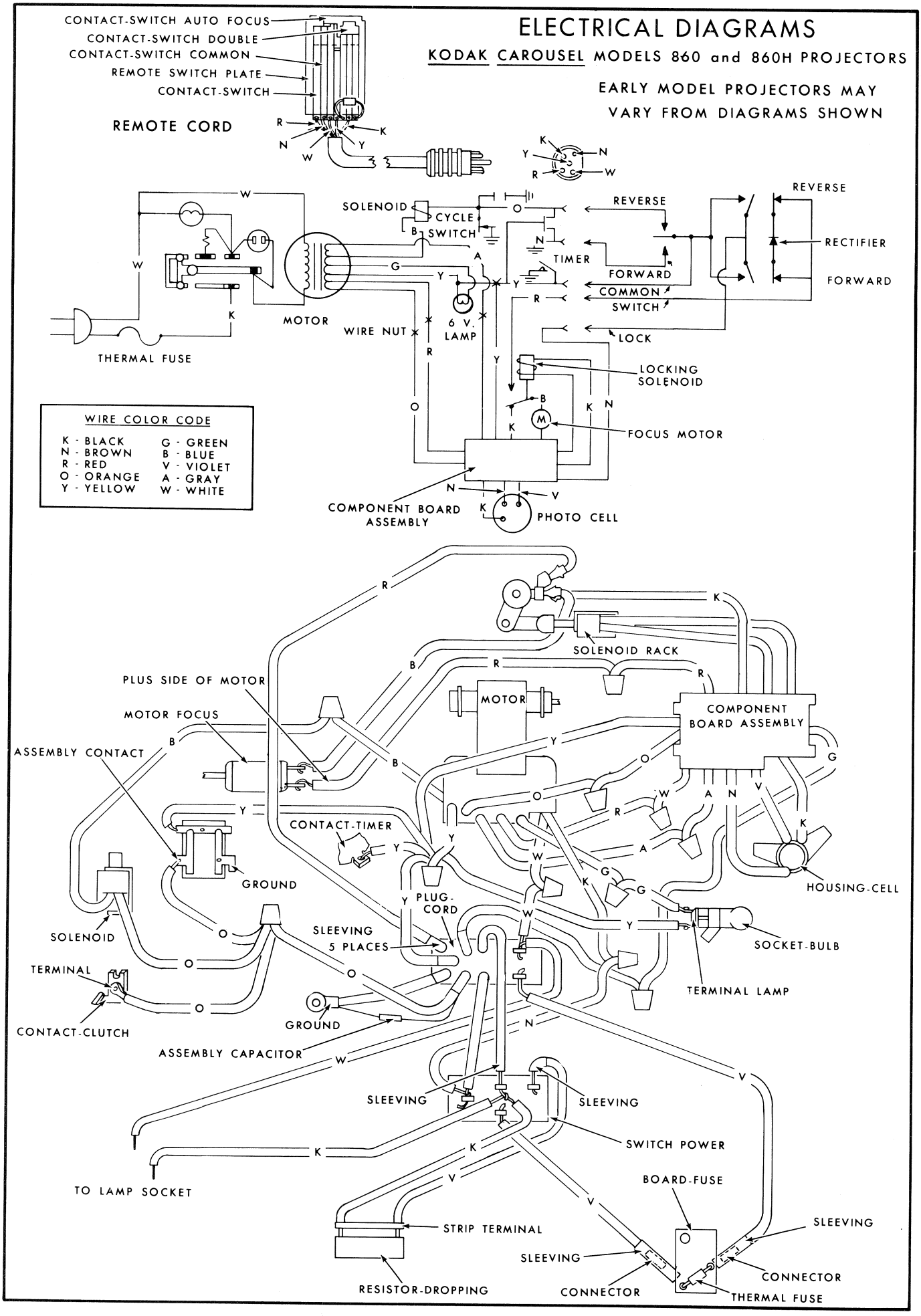




ELECTRICAL DIAGRAMS

KODAK CAROUSEL MODELS 860 and 860H PROJECTORS

EARLY MODEL PROJECTORS MAY VARY FROM DIAGRAMS SHOWN



Part No.	MODELS 760	760H	850	850H	860	860H	Part Name	Fig.
	X	X	X	X	X	X	*KODAK Projection EKTANON Lens - 7-inch, f/3.5 Rack focusing	1
	X	X	X	X	X	X	*KODAK Projection EKTANAR Lens - 5-inch, f/3.5 Rack focusing	1
	X	X	X	X	X	X	*KODAK Projection Zoom Lens - 4-inch to 6-inch, f/3.5, Rack focusing	1
	X	X	X	X	X	X	*KODAK Projection EKTANAR Lens - 4-inch, f/3.5 Rack focusing	1
	X	X	X	X	X	X	*KODAK Projection EKTANAR Lens - 5-inch, f/2.8 Rack focusing	1
	X	X	X	X	X	X	*KODAK Projection EKTANAR Lens - 3-inch, f/3.5, Rack focusing	1
	X	X	X	X	X	X	*KODAK CAROUSEL Slide Tray, B 140, ID. No. 581	1,2
	X	X	X	X	X	X	*Lamp ANSI Code DEK, 500W, 120V or 125V (Specify Voltage)	12
	X	X	X	X	X	X	*Lamp ANSI Code CBA, 500W, 120V or 125V (Specify Voltage)	12
		X		X		X	*Lamp ANSI Code ELH, 300W, 120V	13
K-3665	X		X		X		Thermal Fuse	10,37,39
K-4405			X	X	X	X	Power Switch Kit	35
K-4415	X	X					Power Switch Kit	35
36484	X	X	X	X	X	X	Screw - Tap., Type B, No. 8 X 1/4	7,8
116264	X	X	X	X	X	X	Rivet - Blower cover	34
116266	X		X		X		Rivet - Lamp socket	12
128857	X	X	X	X	X	X	Screw - Base cover, Remote solenoid (860 and 860H)	7,8,17
138253	X	X	X	X	X	X	Ring - Retaining, Truarc No. 5103-37 or equiv	9,12
138688	X	X	X	X	X	X	Grommet - Drive motor	34
144638	X	X	X	X	X	X	Ring - Retaining, ext., Truarc No. 5133-15 or equiv.	10,11,14,15
145161	X	X	X				WIRE-NUT	10,11
154387	X	X	X	X	X	X	Bearing - Cam shaft, rear	27,29
155181	X	X	X	X	X	X	Ring - Retaining, ext., Truarc No. 5105-37 or equiv.	14,15
155876	X	X	X	X	X	X	Screw - Tap., Type F, min hd. 6-32 x 3/8	35
159804	X		X		X		Cover - Slide tray	2
159808			X	X	X	X	Washer - Cycle stop	29,30
159894	X	X	X	X	X	X	Sleeve - Cam	31
159943	X	X	X	X	X	X	Rivet - Solenoid link	23
159947	X	X	X	X	X	X	Ring - Retaining, ext., Truarc No. 5133-18 or equiv	26,28,29,33,34
159950	X	X	X	X	X	X	Ring - Retaining, ext., Truarc No. X5133-21 or equiv (A.R.)	20
159967	X	X	X	X	X	X	Screw - Solenoid mounting	23
159971	X	X	X	X	X	X	Spring - Pressure pad	32
159972	X	X	X	X	X	X	Spring - Driver lever	24,32
159979	X	X	X	X	X	X	Spring	33
159990	X	X	X	X	X	X	Ring - Retaining, ext., Truarc No. 3103-25 or equiv.	27,29
159991	X	X	X	X	X	X	Ring - Retaining, Truarc No. 5133-12	13,19,23,32
160027	X	X	X	X	X	X	Washer - Cam shaft	28,29,30
161524	X	X	X	X	X	X	Screw - Focus motor bracket	16,17
162601			X	X	X	X	Insulator - Resistor	34
166946	X	X	X	X	X	X	Screw - Tap., Type B, pad hd., No. 5 x 3/16	16,17
168514					X	X	Rectifier - Remote control	4
168733	X	X	X	X	X	X	Washer - Worm shaft, fan	26,34
169703	X	X	X	X	X	X	Pad - Pressure	33
169721	X	X	X	X	X	X	Spacer - Cam	28,30
169726	X	X	X	X	X	X	Key - Spindle	41
169727			X	X	X	X	Disc - Timer, phenolic	29
169729	X	X	X	X	X	X	Knob - Elevating	14,15
169730			X	X	X	X	Pinion - Timing (cam)	30
169731			X	X	X	X	Gear - Timing	29,30
169733	X	X	X	X	X	X	Locator - Locator lever	32

*Listed in KODAK Price Catalog

Part No.	MODELS 760	760H	850	850H	860	860H	Part Name	Fig.
169734	X	X	X	X	X	X	Gear - Worm (cam)	28,30
169735	X	X	X	X	X	X	Cam - Slide lift (cam)	28,30
169736	X	X	X	X	X	X	Cam - Index (cam)	28,30
169737	X	X	X	X	X	X	Cam - Locator (cam)	28,30
169742	X	X	X	X	X	X	Bushing - Drive post	32
169743	X	X	X	X	X	X	Spacer - Drive (cam)	28,30
169744	X	X	X	X	X	X	Ramp - Slide lever	27,29
169746	X	X	X	X	X	X	Knob - Select	22
169753	X		X		X		Bracket - Condenser lens	12
169758	X	X	X	X	X	X	Shaft - Worm	26
169759			X		X		Link - Timing lever	35
169763			X	X	X	X	Spring - Timer knob	35
169764			X		X		Lever - Timer	10
169767	X	X	X	X	X	X	Latch - Storage door	6
169772			X	X	X	X	Knob - Timer	35
169773	X	X	X	X	X	X	Spring - Spindle key	41
169777	X	X	X	X	X	X	Retainer - Clutch spring	31
169791	X	X	X	X	X	X	Screw - Drive motor grommet	34
169792	X	X	X	X	X	X	Baffle - Shutter	23
169794	X	X	X	X	X	X	Screw - Lamphouse door, lock	9,12
169795	X		X		X		Screw - Lamphouse door	12
169799	X	X	X	X	X	X	Spring - Lens rail	18
169801	X	X	X	X	X	X	Bushing - Fan	26,34
169806	X	X	X	X	X	X	Bumper - Rubber	23,32
169807	X	X	X	X	X	X	Pin - Storage door hinge	6
169809	X	X	X	X	X	X	Pin - Half cycle lever	23
169813			X	X	X	X	Stud - Timer switch	32
169815			X	X	X	X	Stud - Timer lever	10,11
169816	X	X	X	X	X	X	Spring - Focus shaft	18
169824			X	X	X	X	Resistor - 3 ohm, 15-20 watts, High temperature	34
169827	X	X	X	X	X	X	Screw - Leveling foot	7,8
169829	X	X	X	X	X	X	Ring - Compression, Timmerman No. C3157-20-4 or equiv	20
169833	X	X	X	X	X	X	Rivet - Cycle lever	23
169834			X	X	X	X	Screw - Tap., Type B, hex hd, No. 6 x 1/4	13,16,17,35
169836	X	X	X	X	X	X	Screw - Tap., Type B, min hd, No. 4 x 5/6	3,4
169838			X	X	X	X	Spring - Cam drive shaft	27,29
169840	X	X	X	X	X	X	Spring - Cam shaft	28,29,30
169841	X	X	X	X	X	X	Spring - Slide lever stud	27,29
169842			X	X	X	X	Spring - Timer lever	33
169843	X	X	X	X	X	X	Spring - Storage door latch	6
169845	X	X	X	X	X	X	Spring - Select lever	23
169846	X	X	X	X	X	X	Spring - Directional lever	22,23
169847	X	X	X	X	X	X	Spring - Slide lever	24
169851	X	X	X	X	X	X	Housing - Bottom (remote)	3,4
169854	X	X	X	X	X	X	Housing - Top (remote)	3
169895	X	X	X	X	X	X	Link - Solenoid	23
169898			X	X	X	X	Strip - Terminal	34
169899	X	X	X	X	X	X	Contact - Cycle lever	23
170665	X	X	X	X	X	X	Washer - Cycle lever	23
170666	X	X	X	X	X	X	Washer - Cycle lever	23
170675	X	X	X	X	X	X	Washer - Leveling knob	7,8
170678	X	X	X	X	X	X	Washer - Fan (cork)	34
170744	X		X		X		Blower Cover Assembly	34
170746	X		X		X		Storage Door Assembly	6
170753	X	X	X	X	X	X	Left Gate Assembly	33
170756	X	X	X	X	X	X	Driver Lever Assembly	32

Part No.	MODELS 760	760H	850	850H	860	860H	Part Name	Fig.
170757	X	X	X	X	X	X	Shutter Lever Assembly	32
170758	X	X					Cam Shaft Assembly	27,31
170761	X	X	X	X	X	X	Slide Lever Assembly	27,29
170764	X	X	X	X	X	X	Indexer Lever Assembly	22
170765	X	X	X	X	X	X	Directional Lever Assembly	23
170766	X	X	X	X	X	X	Cycle Lever Assembly	23
170769			X		X		Bracket and Grommet Assembly	17
170771	X	X	X	X	X	X	Focus Worm Shaft Assembly	18
171054	X	X	X	X			Remote Control Assembly	3
171055	X	X	X	X			Contact Assembly - Remote cord	3
171060	X	X	X	X	X	X	Right Gate Assembly	33
171244	X	X	X	X	X	X	Screw - For repair only	27,29
171270	X	X	X	X	X	X	Top Mechanism Plate Assembly	23
171271	X	X	X	X	X	X	Solenoid Assembly	23
171293			X	X	X	X	Terminal and Wire - Contact timer	29
171458	X	X	X	X	X	X	Insulator - Cycle lever	23
171484			X	X	X	X	Spacer - Timer contact	24
171535	X	X	X	X	X	X	Bushing - Directional lever	23
171544	X	X	X	X	X	X	Terminal - Capacitor	10,36,37
171555	X	X	X	X	X	X	Foot - Elevating knob, lamphouse door	7,8
171557	X	X	X	X	X	X	Spring - Clutch	31
171617	X	X	X	X	X	X	Worm - Pulley	26
171624	X	X	X	X	X	X	Crank - Cam	31
171836	X	X	X	X	X	X	Fan	34
171898	X	X	X	X	X	X	Spring - Fan shaft	34
171922	X	X	X	X	X	X	Ring - Cam	28,30
171927	X	X	X	X	X	X	Rail - Slide lever	33
171928	X	X	X	X	X	X	Rivet - Gate	33
172097	X	X	X	X	X	X	Fastener - Tap., Type BP, hex hd., with washer, No. 8 x 6/16	23,27,29
172110	X	X	X	X	X	X	Stud - Top plate	23
172115	X	X	X	X	X	X	Cap - Fan	34
172130	X	X	X	X	X	X	Washer - Leveling foot (Early Model only)	7,8
172145	X	X	X	X	X	X	Washer - Elevating foot (Early Model only)	7,8
172682	X		X		X		Rivet - Doors	6,12
172683	X		X		X		Spring - Condenser lenses	12
172758	X	X	X	X	X	X	Button - Remote cord	3,4
173343	X	X	X	X	X	X	Spring - Pressure pad	33
173346			X	X	X	X	Washer - Timer (AR)	27,29
173365	X		X		X		Plate - Slide tray	2
173377	X	X	X	X	X	X	Button - Tray removal	41
173511	X	X	X	X	X	X	Washer - Fan bushing	34
173718					X	X	Button - Focus	4
173993	X	X	X	X	X	X	Screw	34
173994	X	X	X	X	X	X	Baffle - Lamp	2
174063	X	X	X	X	X	X	Spring - Directional lever	23
175225	X	X	X	X	X	X	Foot - Leveling	7,8,9,12
175268			X	X	X	X	Contact - Timer	29
175283		X		X		X	Screw - Housing	13
175440	X	X	X	X	X	X	Washer - Shutter	32
176385	X	X	X	X	X	X	Locator Lever Cam Assembly	32
176468	X	X	X	X	X	X	Button - Cycle	38
176497	X	X	X	X	X	X	Contact Assembly - Switch	16,17
176537			X				Bracket - Elevating (AR)	14
176539	X	X	X	X	X	X	Handle	38
176540	X	X	X	X	X	X	Pin - Handle mounting	38

Part No.	MODELS 760	760H	850	850H	860	860H	Part Name	Fig.
176541	X	X	X	X	X	X	Bracket - Handle	38
176741			X	X	X	X	Lever - Timer	33
177227	X		X		X		Housing and Fan Shaft Assembly	35
177316		X		X		X	Screw - Switch baffle	13
177977	X	X	X	X	X	X	Screw - Tap., upset hex hd., 8-32 x 3/8	10,11,12,13,14,15,34
178837	X		X		X		Belt - Fan	34
178838	X	X	X	X	X	X	Belt - Mechanism, fan on "H" Models	24,34
179692	X	X	X	X	X	X	Ring - Rack clutch	20
180160	X	X	X	X	X	X	Lever	33
180234	X	X	X	X	X	X	Left Gate Assembly	33
180915	X	X	X				Photocell and Component Board Assembly	14
180917	X	X	X	X	X	X	Focus Shaft Assembly (Complete)	20
180920	X		X		X		Lamphouse Door Assembly	12
180932			X				Nameplate - Rear	38
180937	X	X	X	X	X	X	Gear - Focus clutch	20
180938	X	X	X	X	X	X	Gear - Rack clutch	20
180991	X	X	X	X	X	X	Frame - Light	32
181024			X				Insulator - Component Board (A.R.)	14
181027	X	X	X	X	X	X	Spring - Rack	10,11
181029	X		X		X		Motor Assembly	34
181074	X	X	X	X	X	X	Knob - Focus	16,18
181086	X	X	X	X	X	X	Screw - Foot, lamphouse door	9,12
181376	X	X	X	X			Cord - Remote	3
181579			X				Nameplate - Front	38
181770	X	X	X	X	X	X	Housing - Cell assembly	25
182008	X	X	X	X	X	X	Mask - Filter	25
182013	X	X	X	X	X	X	Bracket - Base cover	10,11
182014	X	X	X	X	X	X	Baffle - Bottom, air	34
182026	X		X		X		Ejector - Lamp	12
182441	X	X	X	X	X	X	Grommet and Mount Assembly	23
182795	X		X		X		Socket Assembly (Auto-Focus rack)	32
183108	X	X	X	X	X	X	Spring	33
183116	X		X		X		Baffle - Stray light	12
183397	X	X	X	X	X	X	Wall	14,15
183398	X	X	X	X	X	X	Cover - Component board	14,15
183473		X		X		X	Washer - Rack stud	13
183612	X	X	X	X	X	X	Screw - Cell housing	25
183744	X		X		X		Label - Storage door	6
183819	X	X	X	X	X	X	Shutter	32
183980	X	X	X	X	X	X	Spring	32
184389	X	X	X	X			Plug - Cord	35
184396	X	X	X	X	X	X	Lever - Select	23
184487	X	X	X	X	X	X	Grommet - Solenoid	16,17,23
184612	X	X	X	X	X	X	Spring - Slide lever	27,29
184613	X	X	X	X	X	X	Lever - Cam detent	27,29
184867	X	X	X	X	X	X	Bearing - Mechanism Assembly	27,29
184927					X	X	Remote Control Assembly	4
184929					X	X	Contact Assembly - Remote cord	4
185092	X	X	X	X	X	X	Connector - Wire	10,11
185202	X	X	X	X	X	X	Slide Lever Mount Assembly	27,29
185230	X	X	X	X	X	X	Ring - Slide tray	1
185368	X	X	X	X	X	X	Focus Rack Assembly	32
185370			X		X		Mechanism Assembly	21
185372					X	X	Solenoid Bracket Assembly	18
185373	X	X	X	X	X	X	Bracket and Grommet Assembly	16,17
185375					X	X	Bracket Assembly	18

Part No.	MODELS 760	760H	850	850H	860	860H	Part Name	Fig.
185376					X	X	Rack Lock Cam Assembly	19
185378					X	X	Insert Stud Assembly	19
185586	X	X	X	X	X	X	Lens Mount	18
185587	X	X	X	X			Bracket - Lens mount	18
185628				X	X		Stud	19
185630					X	X	Cord - Auto, remote	4
185631					X	X	Plug - Cord	35
185635		X		X		X	Springwasher - Lamp stud	13
185636					X	X	Nameplate - Remote	4
185637					X	X	Screw - Remote solenoid	17
185638					X		Nameplate - Front	38
185639					X		Nameplate - Rear	38
185682					X	X	Stop Arm Rack Assembly	19
185683					X	X	Remote Solenoid Assembly	17,19
185736	X	X	X	X	X	X	Shaft - Elevating (AR)	14,15
185820	X	X	X	X	X	X	Bracket - Elevating	14,15
185822	X	X	X	X	X	X	Screw - Elevating foot	7,8
185837	X		X		X		Latch - Slide tray	2
185949	X	X	X	X	X	X	Baffle - Blower	34
186043					X	X	Screw - Insert, stud	19
186083					X	X	Photocell and Component Board Assembly	15
186212	X		X		X		Baffle - Heat	12
186216	X		X		X		Baffle - Gate	24
186278	X	X	X	X	X	X	Photocell Assembly	25
186514					X	X	Housing - Remote cord (top)	4
186530					X	X	Pad - Rack lock	19
186531					X	X	Spring - Rack lock	19
186532					X	X	Spring - Rack lock	19
186605	X	X	X	X	X	X	Rail - Lens	18
186637	X	X	X	X	X	X	Capacitor Assembly	10,36,37
186980					X	X	Washer - Solenoid bracket	17
187010	X						Grille Assembly	36
187014			X				Grille Assembly	36
187016					X		Grille Assembly	36
187809	X	X	X	X	X	X	Lamp - Focus rack	32
187812	X	X	X	X	X	X	Focus Motor Assembly	16,17
188332	X	X	X	X	X	X	Pin - Shutter	32
189976	X						Nameplate - Front	38
189977	X						Nameplate - Rear	38
190275	X						Mechanism Assembly	21
190442	X	X	X	X	X	X	Screw	22
191960				X		X	Lever - Timer	11
191961				X		X	Link - Timer	11
191965		X		X		X	Pin - Lamphouse door	9
191977		X		X		X	Ejector - Lamp	13
191983				X			Nameplate - Rear	38
191984				X			Nameplate - Front	38
191985				X		X	Resistor - Dropping	34
192114		X		X		X	Housing and Fan Shaft Assembly	35
192448		X		X		X	Lens Retainer Assembly	13
192481				X		X	Blower Cover Assembly	34
192482		X		X		X	Storage Door Assembly	6
192483		X		X		X	Lamphouse Door Assembly	9
192485		X		X		X	Motor Assembly	34
192486				X			Grille Assembly	36
192487		X		X		X	Mirror and Bracket Assembly	13

Part No.	MODELS 760	760H	850	850H	860	860H	Part Name	Fig.
192495				X		X	Mechanism Assembly	21
192516		X		X		X	Leveling Knob Assembly	7,8
192745	X		X		X		Socket - Lamp	12
192762		X					Grille Assembly	36
192771		X					Mechanism Assembly	21
192773		X					Nameplate - Front	38
192774		X					Nameplate - Rear	38
192779						X	Nameplate - Front	38
192780						X	Nameplate - Rear	38
192783						X	Grille Assembly	36
192794		X		X		X	Switch Baffle Assembly	37
193217		X		X		X	Socket - Lamp	13
193235		X		X		X	Lamp Bracket and Mirror Assembly	13
195276	X	X	X	X	X	X	Power Cord Assembly	1
195281	X		X		X		Label - Lamp	6
195779		X		X		X	Baffle - Stray light	13
196469	X	X	X	X	X	X	Knob - Elevation	14,15
197151	X	X	X	X	X	X	Foot - Projector	7,8
197468	X	X	X	X	X	X	Shaft - Elevating (AR)	14,15
202483	X	X	X	X	X	X	Spring - Crank	31
202945		X		X		X	Label - Lamp	6
203762	X		X		X		Base Cover Assembly	7
203764		X		X		X	Base Cover Assembly	8
204620			X	X	X	X	Cam Shaft Assembly	29,30
625182	X	X	X	X	X	X	Front Condenser Lens	12,13
625267	X	X	X	X	X	X	Filter - WRATTEN	25
625887	X	X	X	X	X	X	Glass - Heat absorbing	12,13
761747	X	X	X	X	X	X	Handle - Complete	42
761748	X	X	X	X	X	X	Catch - Complete	42
835595	X		X		X		Lens - Rear	12
850254	X	X	X	X	X	X	Washer - Cam shaft	28,29,30
851502	X		X		X		Screw - Slide tray	2
871469	X	X	X	X	X	X	Wire - Tie	10,11

Order by PART NUMBER, NAME, and EQUIPMENT MODEL.

SEPTEMBER 1971

775051

Servicing the

KODAK CAROUSEL PROJECTORS

Models 760, 760H, 850, 850H, 860 and 860H

EASTMAN KODAK COMPANY • CUSTOMER EQUIPMENT SERVICES DIVISION

SERVICE ENGINEERING DEPARTMENT

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TABLE OF CONTENTS

		PAGE
1.	GENERAL INFORMATION	
1.1	ELECTRICAL SPECIFICATIONS	5
1.2	OPTICAL SYSTEM	5
1.3	SLIDE TRAY	5
1.4	SELECT BUTTON	6
1.5	AUTOMATIC TIMER	6
1.6	REMOTE CONTROL CORD	6
1.7	THERMAL FUSE	6
1.8	CAPACITOR	6
2.	SEQUENCE OF OPERATION	
2.1	FULL CYCLE, FORWARD	7
2.2	HALF-CYCLE	7
2.3	REVERSING	8
2.4	AUTO-FOCUS	9
2.5	MODELS 860 AND 860H REMOTE FOCUS	12
3.	DISASSEMBLY	
3.1	REMOVAL OF BASE COVER	13
3.2	REMOVAL AND REPLACEMENT OF THERMAL FUSE ASSEMBLY	13
3.3	REMOVAL OF LAMP AND MIRROR MOUNT BRACKET (MODELS 760H, 850H AND 860H)	14
3.4	REMOVAL AND REPLACEMENT OF LAMPHOUSE DOOR ASSEMBLY (MODELS 760, 850 AND 860)	14
3.5	REMOVAL OF MAIN DRIVE MOTOR	15
3.6	FAN REPLACEMENT AND/OR FAN BELT REPLACEMENT	15
3.7	REMOVAL OF GRILLE ASSEMBLY	16
3.8	REMOVAL OF MECHANISM ASSEMBLY AND LENS MOUNT ASSEMBLY	17
3.9	DISASSEMBLY OF LENS MOUNT ASSEMBLY	18
3.10	DISASSEMBLY OF MECHANISM ASSEMBLY	18
3.11	DISASSEMBLY OF CAM SHAFT	19
3.12	AUTOMATIC TIMER	19
3.13	WORM PULLEY REPLACEMENT AND/OR MECHANISM BELT REPLACEMENT	20
3.14	REMOVAL OF SLIDE LEVER RAMP	20
3.15	DISASSEMBLY OF REMOTE CONTROL	21
3.16	REMOVAL OF CARRYING HANDLE AND FRONT NAMEPLATE	21
3.17	REMOVAL OF COMPONENT BOARD ASSEMBLY	21
3.18	REMOVAL OF REMOTE FOCUSING SOLENOID IN MODELS 860 AND 860H	21
3.19	REMOVAL OF REMOTE FOCUSING SWITCH IN MODELS 860 AND 860H	22
3.20	REMOVAL AND INSTALLATION OF PHOTOCELL ASSEMBLY	23
3.21	REMOVAL OF LEVELING FOOT ASSEMBLY	24

PAGE

4. ADJUSTMENTS

4.1 CYCLE SOLENOID 25
4.2 LOCATOR LEVER 25
4.3 SLIDE LEVER 26
4.4 STRAY OR BACKGROUND LIGHT 26
4.5 NULL ADJUSTMENT 26
4.6 CELL ALIGNMENT 27
4.7 TARGET SLIDE ADJUSTMENT 28
4.8 SWITCH ADJUSTMENT FOR AUTO-FOCUS MODE OF 860 AND 860H MODELS 29
4.9 SWITCH AND SOLENOID ADJUSTMENTS FOR REMOTE FOCUS MODE OF 860 AND 860H MODELS 29
4.10 GATE ALIGNMENT 30
4.11 MIRROR ALIGNMENT 32

5. TROUBLESHOOTING

6. TOOLS, LUBRICANTS, CEMENTS

6.1 SPECIAL SERVICE TOOLS 39
6.2 CEMENT 39
6.3 LUBRICANTS 39
6.4 LUBRICATION 39

WIRING DIAGRAMS 40-42

1. GENERAL INFORMATION

1.1 ELECTRICAL SPECIFICATIONS

1.1.1 OPERATING VOLTAGE
105-125 volts, 60 Hz

1.1.2 PROJECTION LAMPS
For 760, 850 and 860 Models
500-watt horizontal burning, ANSI Code DEK lamp.
115-120 volt.
For 760H, 850H and 860H Models
300-watt horizontal burning, ANSI Code ELH lamp, 115-120 volts.

1.1.3 DROPPING RESISTOR
Extends lamp life when power switch is in "Low" position.

3 ohms (850 and 860 Models)
5 ohms (850H and 860H Models)

1.1.4 DIELECTRIC STRENGTH TEST

A dielectric strength test should be performed on the projector and meet the following requirements:

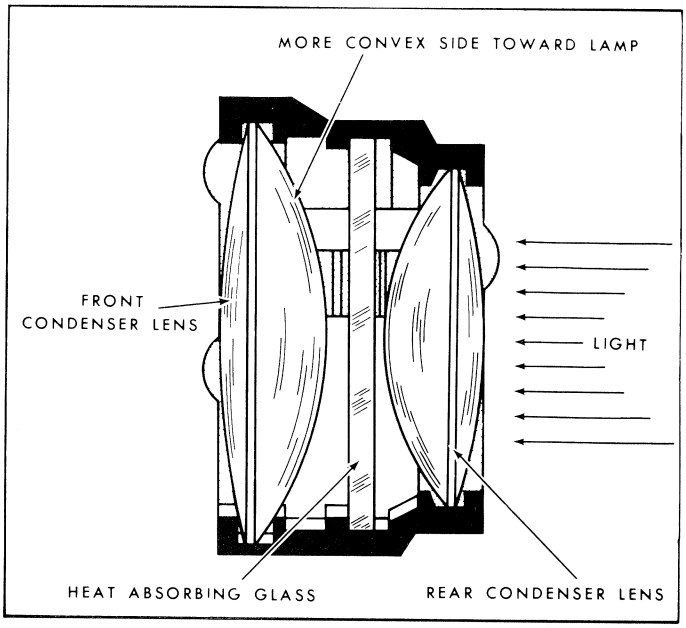
Leakage current must not exceed 2.5 milliamperes with 900 volts, 60 Hz, applied for one minute between the shorted prongs of the power plug and the frame with the power switch in the lamp or high position.

1.2 OPTICAL SYSTEM

1.2.1 The current line of *KODAK* Projection *EKTANAR* and *EKTANON* Lenses may be used with all models.

1.2.2 The condenser system in the 760, 850 and 860 models contains two condenser lenses and a heat-absorbing glass. Install as indicated in sketch.

1.2.3 The condenser system in the 760H, 850H and 860H models contains the front condenser lens and the heat-absorbing glass. Install as indicated in the sketch for the front condenser and the heat glass only.



1.3 SLIDE TRAY

1.3.1 The slide tray is high quality molding with one index position and either eighty or one hundred-forty slide positions (depending on the tray).

1.3.2 There are four models of the tray that may be used: the *KODAK CAROUSEL* Slide Tray, (black), *KODAK CAROUSEL* Universal Slide Tray (gray), the *KODAK CAROUSEL* 140 Slide Tray, and *KODAK CAROUSEL* Slide Tray for *KODAK CAROUSEL* S Projector (German-made).

1.3.3 Emergency release of the slide tray: Insert a coin in wide slot in center spindle. Turn coin left or right and lift tray from projector.

1.4 SELECT BUTTON

The select button is not designed to advance the tray, but when DEPRESSED ALL THE WAY AND HELD will advance the mechanism to HALF-CYCLE or SELECT position (see 2.2). When the select button is depressed, the tray is free to rotate to any position or to move to the indexed area for tray removal.

1.5 AUTOMATIC TIMER (850, 850H, 860 AND 860H)

Automatic operation is provided on these models. It is accomplished by setting the timer knob to 5, 8 or 15 seconds. The remote cord is not required for automatic operation, but may be used for either forward or reverse actuation to override the automatic operation. The built-in forward and reverse switch will also override the automatic operation.

1.6 REMOTE CONTROL CORD

1.6.1 Models 760, 760H, 850, and 850H include "FOR." button for forward operation and "REV." button for reverse operation.

Forward operation is controlled by momentary pressure all the way down on the "FOR." button, followed by immediate release.

Reverse operation requires a slightly longer hold all the way down on the "REV." button, followed by immediate release.

If pressure and release on the reverse button is quick, or if it is not pushed all the way down, the slide tray may be "tricked" into advancing instead of reversing.

1.6.2 Models 860 and 860H - In addition to the forward and reverse buttons described in 1.6.1 above, the remote control cord used on these models has a focus button for remotely adjusting focus in addition to the automatic focus feature of the projectors (2.5).

1.7 THERMAL FUSE

The thermal fuse is a safety device which protects the projector from overheating and possible damage caused by overheating within the projector housing.

There is no visible change in the appearance of the fuse when it burns out. The most obvious symptoms: projector will stop running or cannot be turned on.

1.8 CAPACITOR

The capacitor suppresses electrical noise which otherwise might be picked up by either an associated tape recorder or a public address system.

2. SEQUENCE OF OPERATION

2.1 FULL CYCLE, FORWARD (See foldout from Page 9.)

2.1.1 When projector is turned on, main drive motor runs continuously. Power is transferred to the fan by a belt and to the worm pulley by a second belt.

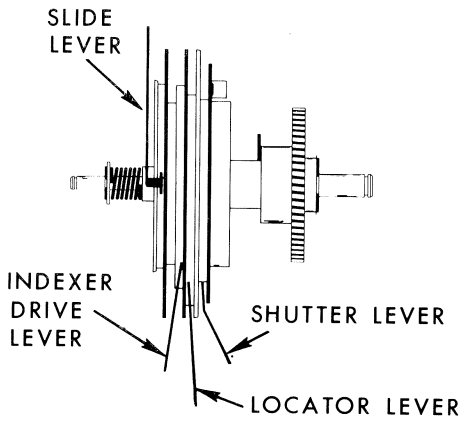
2.1.2 The worm pulley (10) rotates worm gear and clutch sleeve driver (11) continuously. The clutch spring (9) is held in relaxed position by clutch contact lever (4) which allows cam stack and shaft (8) to remain stationary.

2.1.3 A forward cycle is started when solenoid (5) momentarily pulls cycle lever (17) away from clutch spring (9). This action simultaneously breaks electrical contact to solenoid and allows clutch spring (9) to tighten on revolving clutch sleeve, starting cam shaft rotation. The cams move mechanism levers and one revolution accomplishes one cycle.

2.1.4 As shutter (13) closes, drive lever (6) and indexer (1) begin to move and slide lever (7) begins to eject slide from gate (16).

2.1.5 As slide lever ejects slide from gate, shutter lever (12) continues moving and, in turn, opens pressure pads (15).

2.1.6 When slide lever lifts slide completely into tray, locator (14) disengages tray lugs and indexer (1) continues its movement to rotate slide tray forward.



2.1.7 Indexer completes moving tray forward, then withdraws and locator moves to engage tray lugs which accurately aligns tray over gate.

2.1.8 As slide lever descends, slide drops by gravity into open gate. When slide lever hits bottom, pressure pads close, indexer returns to starting position and shutter (13) opens.

2.1.9 The clutch spring (9) contacts clutch contact lever (4), clutch begins to slip, and cam shaft (8) ceases to rotate.

2.2 HALF-CYCLE

2.2.1 The purpose of half-cycle or use of SELECT button is to:

a. Return slide from gate to tray for editing.
b. Allow tray to be rotated manually to any numbered slide position, or to "0" position for removal of tray from projector.
c. Allow slide opposite gate index to drop and be shown when button is released.

2.2.2 When SELECT button is pressed ALL THE WAY DOWN and HELD, the select lever (18) moves cycle lever (17) to disengage clutch spring (9). The clutch spring tightens on rotating clutch sleeve (11) and cam shaft (8) starts to rotate.

2.2.3 The drive lever (6) is pushed off its cam by select lever (18) blocking its movement.

2.2.4 All other levers operate as in first half of a full cycle forward. Shutter closes, slide lever pushes slide into tray and locator pulls out of contact with lugs of tray.

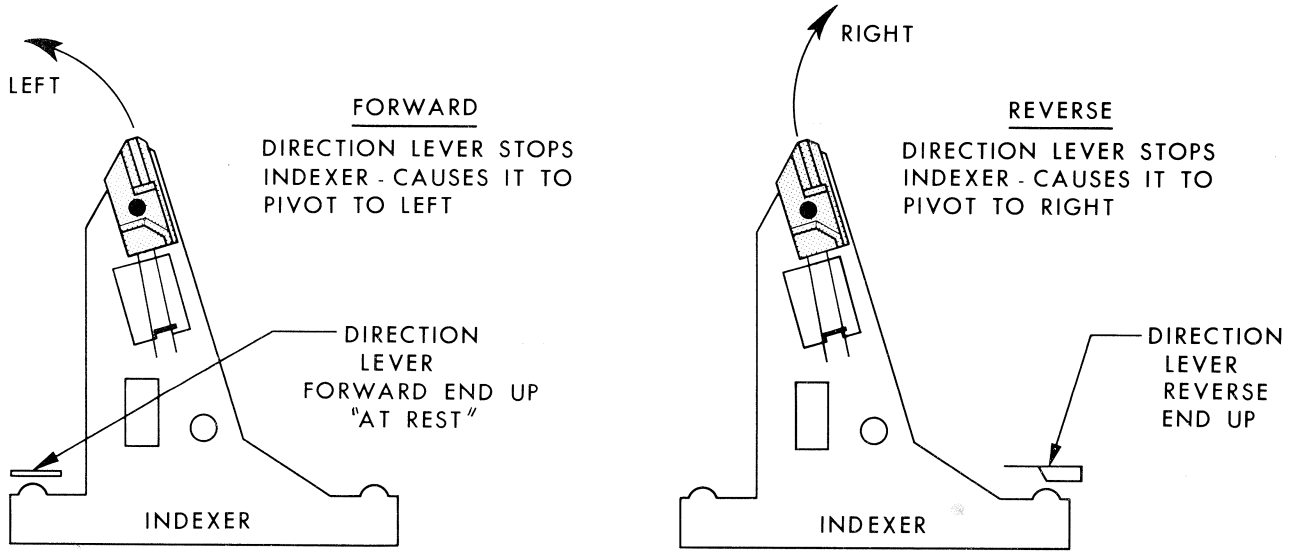
2.2.5 With SELECT button still depressed ALL THE WAY DOWN, the clutch spring is stopped by half-cycle arm (3) of cycle lever, approximately 180° from its starting position. The cam shaft stops rotating and all lever action stops at this point.

2.2.6 When SELECT button is released, the half-cycle arm of cycle lever releases clutch spring and remaining half-cycle is performed as in full cycle; locator positions tray, slide lever descends, pressure pads close and shutter opens.

2.3 REVERSING

2.3.1 Forward or reverse is determined by the position of direction lever (2). Normal or "at rest" position is forward operation.

2.3.2 When reverse button is pushed and held for a slightly longer time than required for forward operation, cycle lever (17) pivots "reverse" end of direction lever (2) up for a long enough time to trap indexer (1) as it moves. Indexer then pivots in opposite (or reverse) direction from forward operation. Cycle switch does not open solenoid circuit during reverse operation.



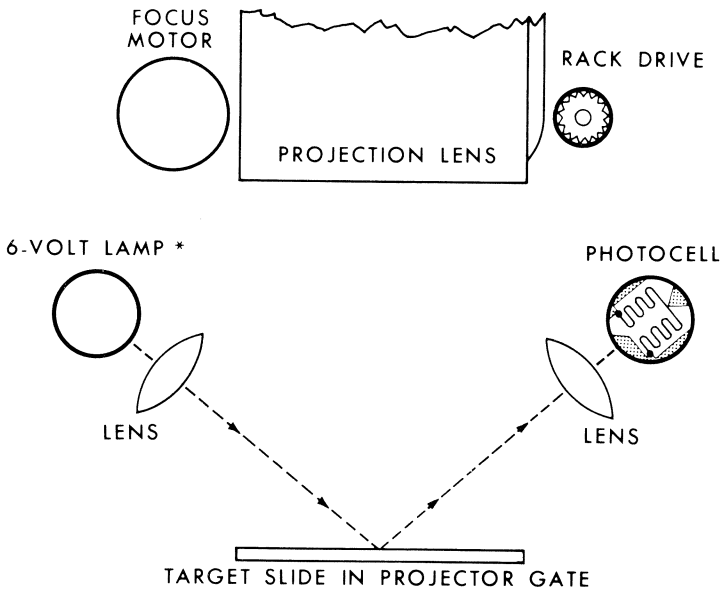
2.4 AUTO-FOCUS

The purpose of the auto-focus feature is to make sure that the front surface of each slide will be same distance from mounting rack of projection lens and, therefore, from lens itself. It will accomplish this whether or not image on screen is in focus, or even when there is no projection lens in projector.

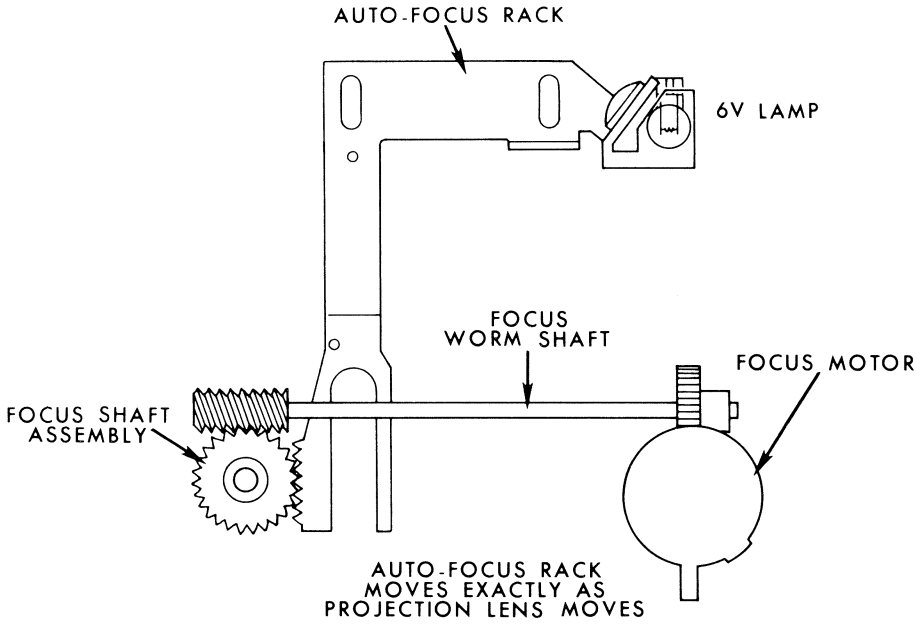
For normal operation, first slide is placed in gate and auto-focus mechanism allowed to position rack relative to the front surface of that slide. The operator then focuses image on screen by moving projection lens with the focus knob on projector, or on 860 and 860H models, with focus knob on projector or button on remote control. Thereafter, each succeeding slide's front surface will be at the same distance from rear of lens. If slides are similar (all glass or all cardboard-mounted, etc), each screen image will be brought into focus, automatically adjusted for reasonable warpage.

2.4.1 Auto-focusing is accomplished by directing the filament image of a 6-volt lamp through a lens and onto the center of a slide in the gate. This image is reflected from the slide through a collecting lens and onto the photocell. The projection lamp does not need to be turned on for the auto-focus to function.

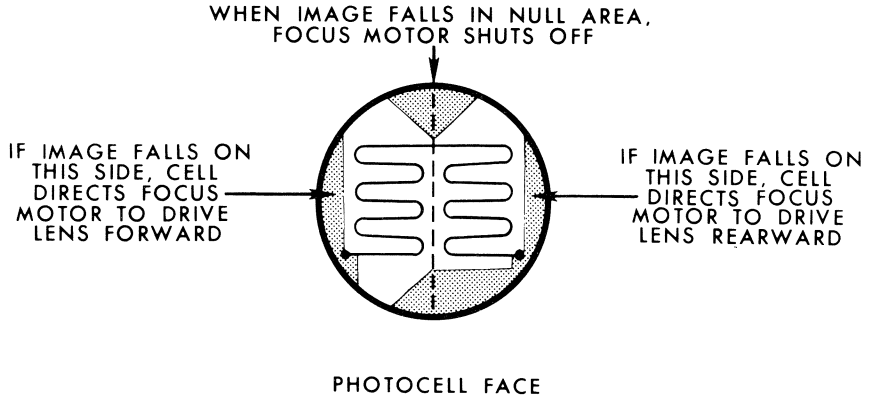
2.4.2 The auto-focus rack, with 6-volt lamp, will be driven forward or backward, depending on where light (filament image) strikes the photocell. As rack moves, the image will move toward center of cell. Movement of the auto-focus rack also moves the projection lens through the focus shaft assembly.



*Lamp is actually lower; a mirror brings it to position shown in sketch.

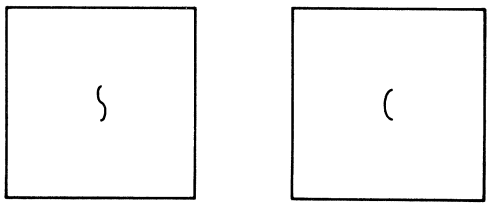


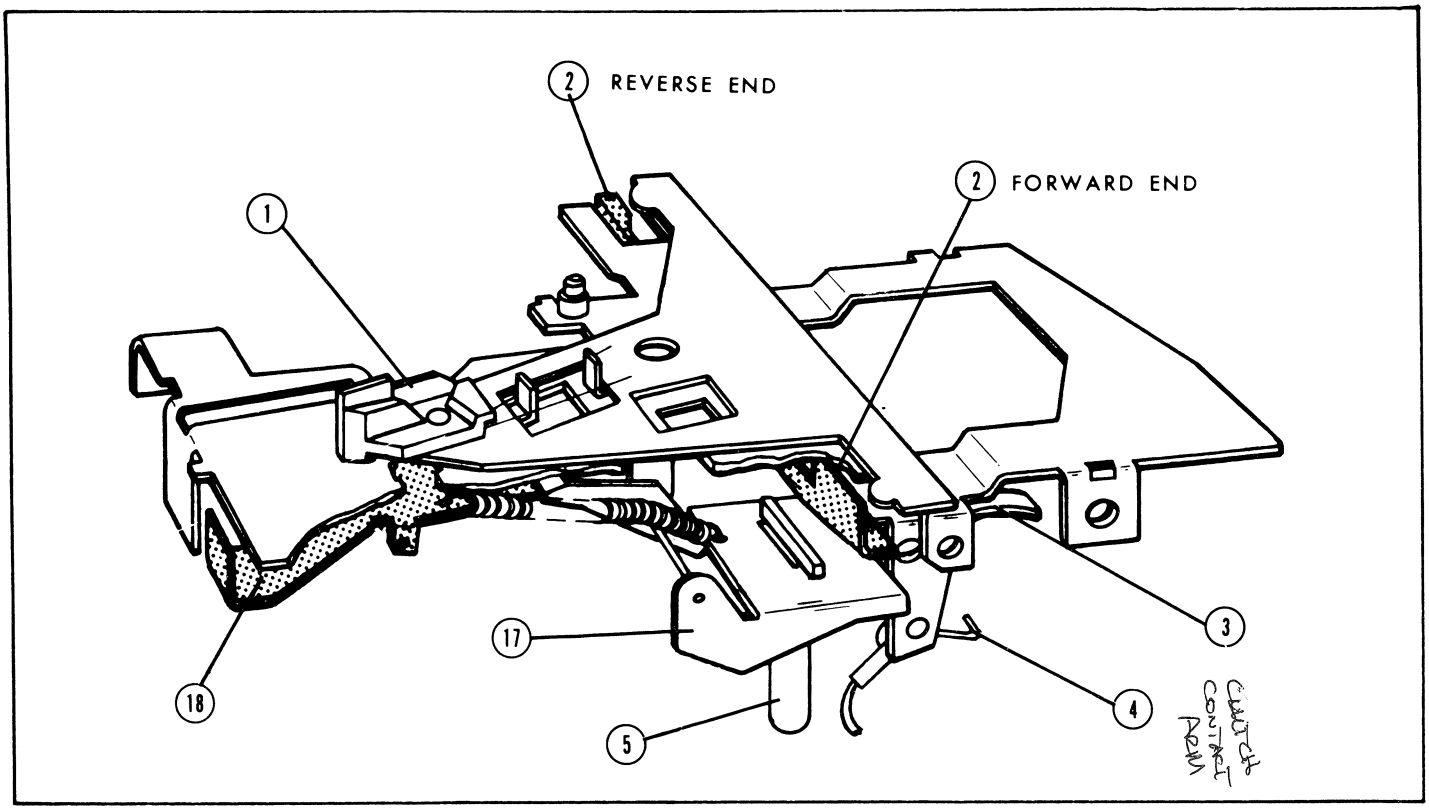
2.4.3 Auto-focus rack movement continues until the filament image falls within the center or null area of the photocell.

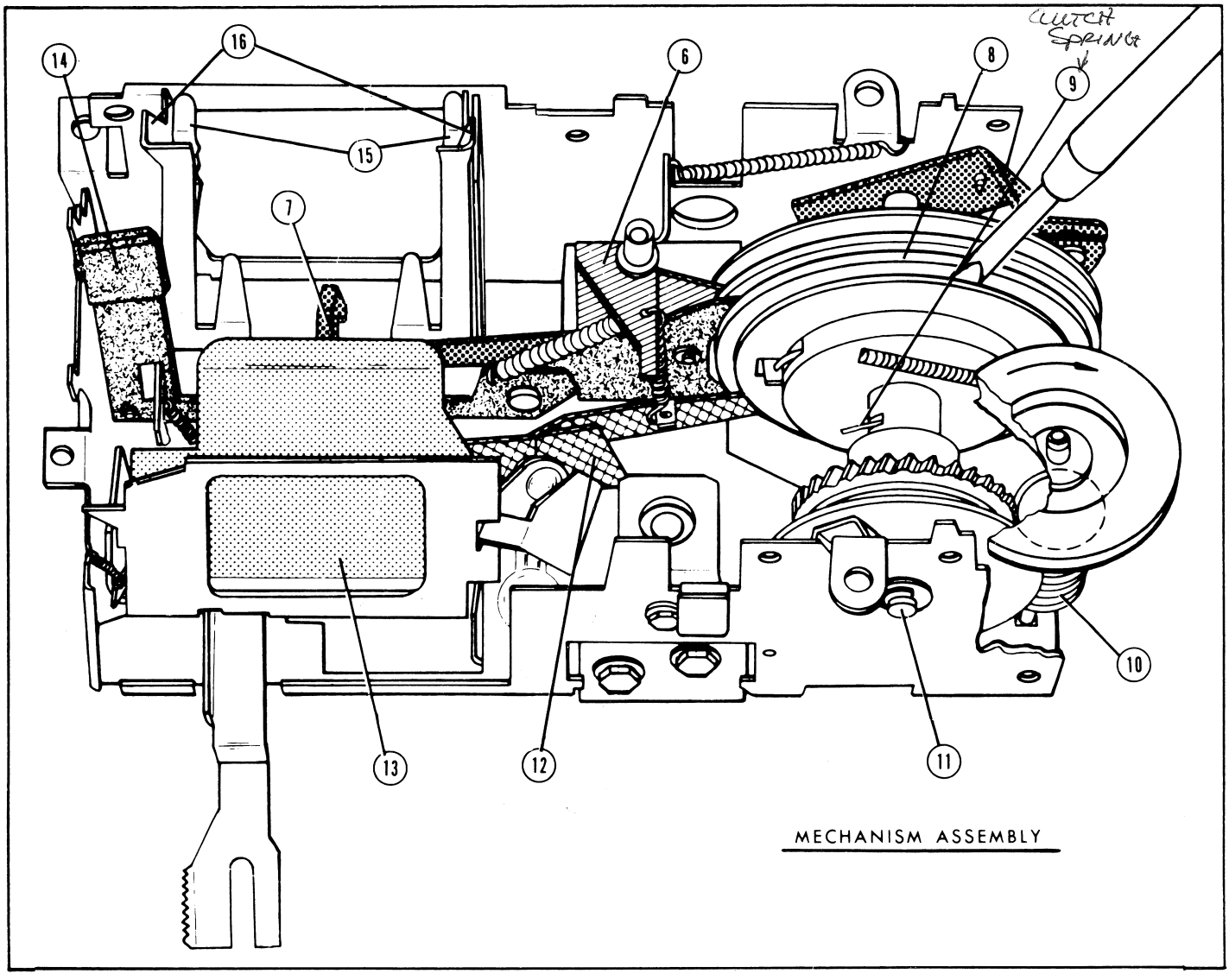


2.4.4 As image moves across cell, it also moves on surface of slide. For proper auto-focus operation, null position must occur when image on slide is within a rather limited area at center of slide. Adjustment therefore consists of positioning 6-volt lamp and/or cell so as to bring the image within tolerance on slide.

2.4.5 The filament image will appear as a flat "S" or a flat "C" on surface of slide when viewed from front with projection lens removed.

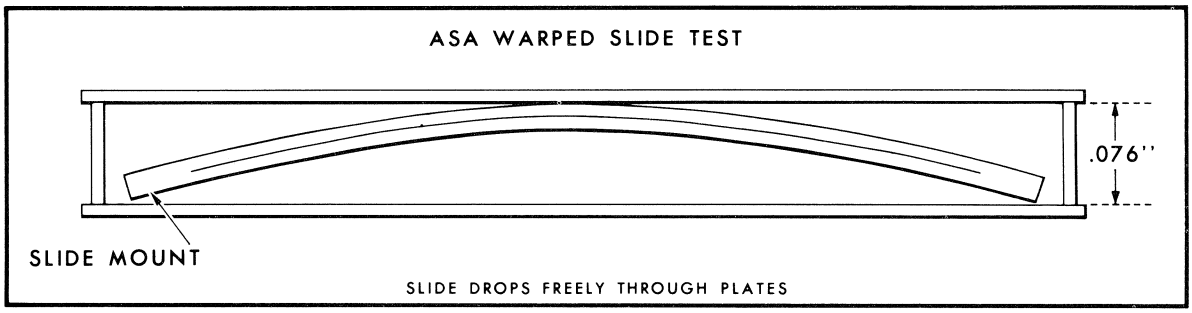






MECHANISM ASSEMBLY

2.4.6 In a properly adjusted projector, and after first slide has been focused on the screen, succeeding slides will be brought into focus provided they are not warped more than .076-inch. Slides warped more than .076-inch will cause the reflected filament's image to be beyond the face of the photocell.



2.4.7 Do not mix glass-mounted and cardboard-mounted slides. Reflection is off first surface light source strikes. Glass-mounted slides put reflection surface .030-inch ahead (thickness of one glass panel) of transparency surface of a cardboard-mounted slide.

If first slide is glass-mounted, only glass-mounted slides will be in focus in a mixed tray. If first slide is cardboard-mounted, only cardboard-mounted slides will be in focus in a mixed tray.

2.5 MODELS 860 AND 860H REMOTE FOCUS

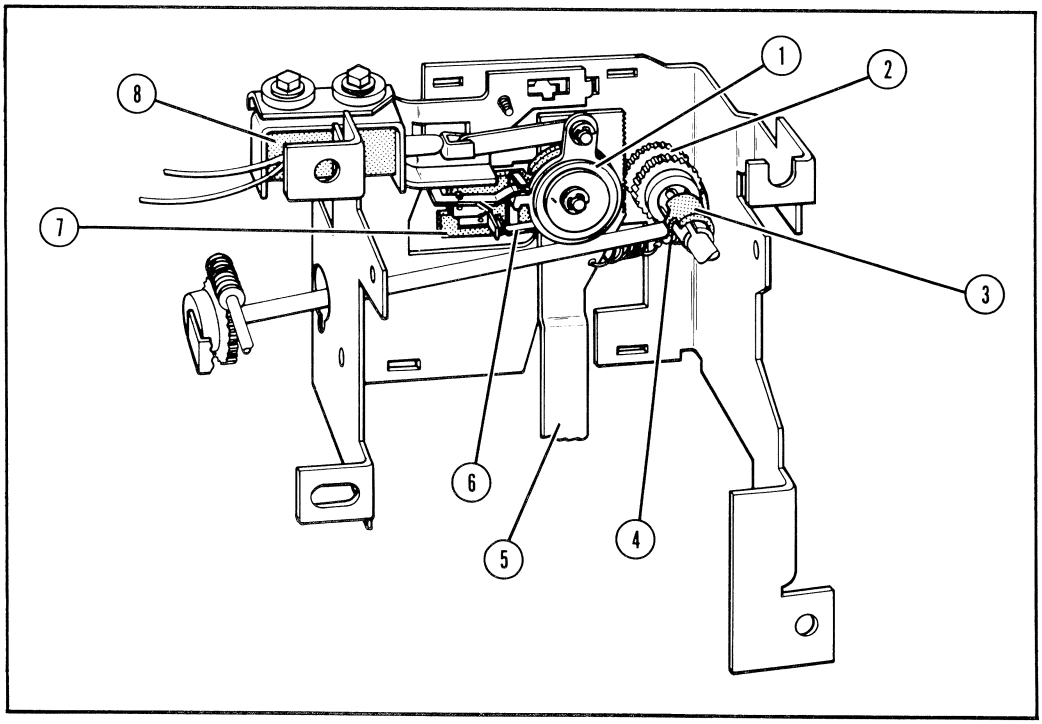
2.5.1 Remote focusing on 860 and 860H models is accomplished by the following sequence:

a. Actuating remote focus button backward or forward causes locking solenoid (8) to pull rack stop arm assembly (1) which clamps focus rack (5) between rack stop arm assembly and rack lock cam assembly (7).

b. Further travel of rack stop arm assembly actuates switch (6) which disconnects auto-focus control circuit and connects focus motor to remote switch circuit.

c. A light slip clutch (not shown) between two lower gears (2) permits focus motor to drive projection lens to any position for best focus on screen.

d. Releasing remote focus button restores automatic focus system. For manual focus, a firm clutch (3) slips when focus knob on projector is turned. The worm gear (4) on cross shaft prevents lower gears from turning.



3. DISASSEMBLY

3.1 REMOVAL OF BASE COVER

3.1.1 Turn projector upside down; remove one (1) Phillips head screw visible next to leveling foot. Note that this is a machine screw thread and must be replaced in the same location.

3.1.2 Remove remaining three (3) Phillips head tapping screws. One (1) is visible, No. 2 is hidden by the lamphouse door and No. 3 is hidden by cord compartment door.

3.1.3 Remove screw from center of rubber foot and washer on fully retracted elevation leg; guide base cover over elevating knob.

3.1.4 In reassembling base cover, make sure all electrical wires are dressed in their proper positions so they will not be pinched by cover.

3.1.5 Guide base cover over elevating knob.

3.1.6 Replace screws, rubber elevation foot and washer; run elevation up before tightening foot screw.

3.2 REMOVAL AND REPLACEMENT OF THERMAL FUSE ASSEMBLY

3.2.1 Models 760H, 850H and 860H:

3.2.2 Remove base cover (3.1).

3.2.3 Disengage spring clamp for condenser lenses and remove lenses.

3.2.4 Remove three (3) 1/4-inch hex head screws. One is directly in front of the lamp opening, the second is in the same piece of metal toward the front of the projector holding the black mask, and the third is toward the outer edge of the projector holding the lens clamp assembly.

NOTE: The two (2) hex head screws closest to the lamp are nickel-plated, while the one farthest away is not plated.

3.2.5 Guide the lamp and mirror mount assembly out of the projector, over the two (2) locating lugs in the housing.

3.2.6 Remove screw holding thermal fuse assembly to blower cover.

3.2.7 Guide fuse assembly out of slot in blower cover and from under edge of casting.

3.2.8 Unsolder two (2) leads to switch.

3.2.9 Install new thermal fuse assembly.

3.2.10 Reassemble in reverse order of disassembly.

3.2.11 Models 760, 850 and 860:

3.2.12 Remove base cover by removing five (5) Phillips head screws (3.1).

3.2.13 Remove the screw holding the burned-out fuse.

3.2.14 Lift out fuse and cut leads at sleeving. Remove sleeving and strip wire for 1/2-inch.

3.2.15 Cut leads on replacement fuse to approximately 3 inches. Strip wire for 1/2-inch. Join old leads to new leads with wire connectors (part No. 145161).

3.2.16 Install new thermal fuse; secure phenolic mounting board with hex head screw.

NOTE: Dress wires and connectors into space between lamphouse door hinge post and rear nameplate. Be sure everything is clear. Try lamphouse door and other moving parts for clearance.

3.2.17 Reassemble in reverse order of disassembly.

3.3 REMOVAL OF LAMP AND MIRROR MOUNT BRACKET (MODELS 760H, 850H AND 860H)

3.3.1 Remove base cover (3.1).

3.3.2 Remove condenser lens and heat-absorbing glass by disengaging the wire clamp from under the hook and swinging it out of the way. Lift the two (2) pieces of glass out of the projector.

3.3.3 Remove the lamp by similarly disengaging the wire clamp. As the wire clamp is swung out of the way, the lamp is disengaged from the socket and is lifted free.

CAUTION: Lamp must be cool before removal.

3.3.4 Remove the thermal fuse assembly from the blower cover (3.2).

3.3.5 Remove four (4) 1/4-inch hex head screws. One is directly in front of the lamp opening, the second is in the same piece of metal toward the front of the projector holding the black mask, the third is toward the outer edge of the projector holding the lens clamp assembly, and the fourth is toward the front of the projector at the mechanism housing.

NOTE: The two (2) hex head screws closest to the lamp are nickel-plated, while the one farthest away is not plated.

3.3.6 Guide the lamp and mirror mount assembly out of the projector, over the two (2) locating lugs in the housing.

3.3.7 Reassemble in reverse order. Mirror adjustment is covered under Section 4, Adjustments.

3.4 REMOVAL AND REPLACEMENT OF LAMPHOUSE DOOR ASSEMBLY (MODELS 760, 850 AND 860)

3.4.1 Remove base cover (3.1).

3.4.2 Open lamphouse door, remove three (3) glass lenses. Loosen 1/4-inch hex head screw at pivot of door between switch nameplate (rear) and lamphouse door assembly. Loosen 1/4-inch hex head screw at pivot point near front condenser lens position.

3.4.3 Guide door assembly out as far as wires will allow, disconnect wires and remove door.

3.4.4 Reassemble in reverse order. Lenses will fit only in their proper locations (see Illustration 1.2.3).

3.5 REMOVAL OF MAIN DRIVE MOTOR

3.5.1 Remove base cover (3.1).

3.5.2 Remove three (3) 1/4-inch hex head mounting screws.

3.5.3 Disengage fan belt and worm pulley belt as motor is lifted out of projector housing.

3.5.4 Electrically disconnect motor by removing all *WIRE-NUTS* securing motor wires.

3.5.5 To reassemble, worm pulley belt should be positioned first, then fan belt.

NOTE: Take care not to nick or cut belts as this will cause belts to tear.

3.6 FAN REPLACEMENT AND/OR FAN BELT REPLACEMENT

3.6.1 Remove base cover (3.1).

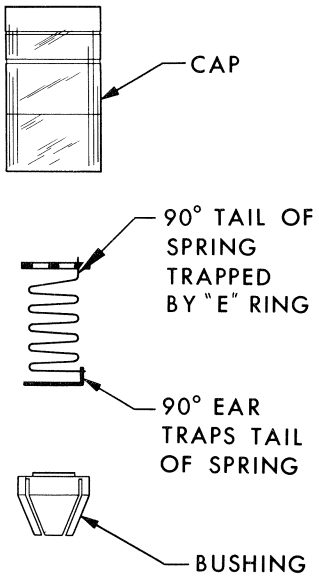
3.6.2 Remove timer lever. (Models 850, 850H, 860 and 860H)

a. Remove paper tie from wires secured to frame of mechanism assembly near cam shaft.
b. Remove "E" ring from brass pivot.
c. Lift timer lever off pivot, disengage from lug on end of timer contact arm and finally disengage from timer link.

3.6.3 Remove thermal fuse (3.2). (Models 760H, 850H and 860H)

3.6.4 Remove four (4) 1/4-inch hex head screws from blower housing cover, then remove paper baffle and cover. If anchor foot for plastic grille interferes, snap it back out of the way.

3.6.5 Remove plastic fan cap, "E" ring, spring, washer, fan bushing; next disengage fan belt and remove fan. This leaves a plain washer and a cork washer on fan shaft.



3.6.6 Loosen three (3) hex head mounting screws holding main drive motor, lift motor and remove belt.

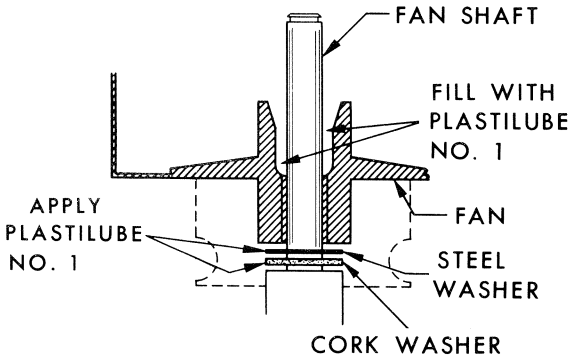
3.6.7 To reassemble, place belt over fan shaft; then lubricate shaft with Plastilube #1.

3.6.8 Place fan over shaft; then fill its cavity with Plastilube #1.

3.6.9 Reassemble remaining fan mounting parts.

3.6.10 Position belt on fan pulley, lift motor, stretch belt and position around motor pulley, reposition motor and tighten motor mounting screws.

NOTE: Fan belt must be placed on fan pulley first, then motor pulley. Otherwise, belt may be nicked or cut when stretched past upper blower baffle cover.



3.6.11 Replace blower housing cover, paper baffle, timer lever, redress wires with a wire tie and finally replace base cover.

3.7 REMOVAL OF GRILLE ASSEMBLY

3.7.1 Remove base cover, thermal fuse (Models 760H, 850H and 860H only), and blower housing cover (3.1, 3.2 and 3.6.4).

3.7.2 Remove 1/4-inch hex head screw from timer knob and timing lever link. Remove flat beryllium spring from under timing lever link.

3.7.3 In Models 760, 850 and 860 having fuse, remove 1/4-inch hex head screw from fuse board.

3.7.4 Unsolder leads from lamp socket and dropping resistor; remove *WIRE-NUTS* which connect grille leads to leads of other components.

3.7.5 The grille is held in position by six (6) bosses that snap into openings in projector housing. The grille may be removed by applying pressure to the bosses with a flat-blade screwdriver. Pull out on grille until two (2) Phillips head screws retaining plug receptacle are exposed. Remove screws and finish pulling grille from housing.

3.7.6 In replacing grille assembly, dress the sleeve so as to give as much room as possible toward junction with *WIRE-NUTS;* resolder lamp wires and be sure all wire is secured.

3.7.7 Replace fuse, timer assembly, blower housing cover and base cover.

3.8 REMOVAL OF MECHANISM ASSEMBLY AND LENS MOUNT ASSEMBLY

3.8.1 Remove focus knob by pulling straight off.

3.8.2 Turn projector upside down and remove base cover and blower housing (3.1 and 3.6.4), also remove thermal fuse assembly (3.2) on Models 760H, 850H and 860H; lamphouse door assembly need not be removed on Models 760, 850 and 860.

3.8.3 Remove main drive motor (3.5) without disconnecting its 110-volt leads.

NOTE: When replacing motor, belt from mechanism is driven by pulley closer to motor and belt from fan is driven by other pulley.

3.8.4 Disconnect low voltage system leading to mechanism assembly, focus motor, component board, and on 860 and 860H Models, remote focus switch.

3.8.5 Remove cord compartment wall and elevation assembly (four (4) 1/4-inch hex head screws), and swing out to side of housing on 860 and 860H Models; remove remote focus solenoid [two (2) 1/4-inch hex head screws].

3.8.6 Remove spring hooked between auto-focus rack and lens mount.

3.8.7 Remove six (6) 1/4-inch hex head screws holding lens mount and mechanism assemblies.

3.8.8 Grasp lens mount and mechanism assemblies with both hands and carefully lift out of housing. After removal from housing, very carefully separate assemblies.

NOTE: It is possible to operate mechanism assembly by hand, duplicating all the functions of the projector related to cycling.

3.8.9 In reassembling, nest lens mount and mechanism assemblies together, then locate both in housing. Make sure that the auto-focus rack properly engages the lower focus shaft gear.

3.8.10 Reassemble balance of components in reverse order of disassembly.

NOTE: Do not forget "Select" button and "Forward and Reverse" buttons. Position both before locating lens mount and mechanism assemblies.

3.9 DISASSEMBLY OF LENS MOUNT ASSEMBLY

3.9.1 Remove lens mount assembly (3.8).

3.9.2 Remove focus motor.
- a. Remove two (2) Phillips head screws which secure motor to motor bracket.
- b. When reassembling motor, position ear on end bell in recess in bracket and replace screws.

3.9.3 Remove lower lens barrel rails by grasping tines of rail with thumb and forefinger, squeeze together and push out.

3.9.4 Remove upper lens barrel rails by first removing two (2) lens rail springs, then remove rails as in 3.9.3.

3.9.5 Built-in forward and reverse switch may be removed by removing 1/4-inch hex head screw and disengaging tabs from slot.

3.9.6 Remove focus shaft by disengaging focus shaft spring and then tip and pull from square bearing hole.

3.9.7 Remove focus motor bracket [three (3) 1/4-inch hex head screws through rubber grommets] and then the focus worm shaft assembly.

3.9.8 Reassemble components of lens mount assembly in reverse order.

3.10 DISASSEMBLY OF MECHANISM ASSEMBLY

3.10.1 Remove mechanism assembly (3.8).

3.10.2 Remove six (6) 1/4-inch hex head screws and disconnect direction lever spring; then carefully lift off top plate assembly.

3.10.3 Remove one (1) 1/4-inch hex head screw and slide solenoid mount assembly out of mechanism assembly.

3.10.4 Cam shaft assembly. Remove two (2) bronze bearings from ends of cam shaft [one (1) "E" ring and one (1) "C" ring]. Remove spring between index lever and mechanism frame, disconnect spring between slide lever and mechanism frame, then remove timer contact spacer in Models 850, 850H, 860, and 860H.

3.10.5 Remove slide lever bracket [two (2) 1/4-inch hex head screws] and slide lever with its spring; then spread sides of mechanism assembly frame and lift out cam shaft.

3.11 DISASSEMBLY OF CAM SHAFT

3.11 REMOVE: Cam Shaft (see sec. 3.10).

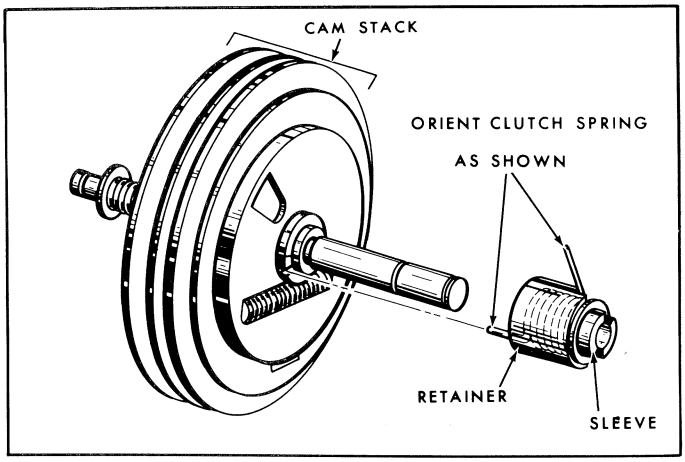
3.11.2 Remove components:

a. "E" ring, washer, worm gear, clutch spring retainer, clutch spring and sleeve.

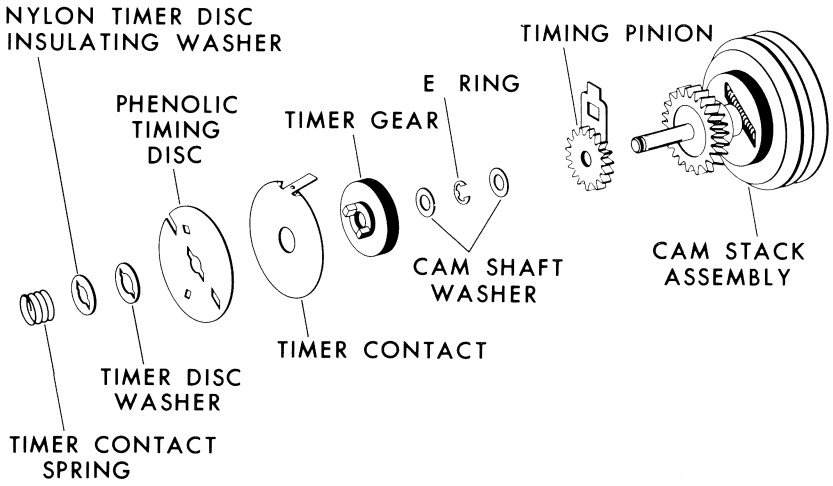
b. Replace any defective parts and lubricate clutch spring shaft and sleeve.

c. Reassemble in reverse order.

NOTE: Clutch spring must be assembled as shown for correct timing.



3.12 AUTOMATIC TIMER (MODELS 850, 850H 860 AND 860H)



The parts comprising the timer are mounted on the cam shaft as shown, but are not part of the cam shaft assembly. The phenolic timer disc may become torn or the timer contact disc tab broken; otherwise, no replacements are likely.

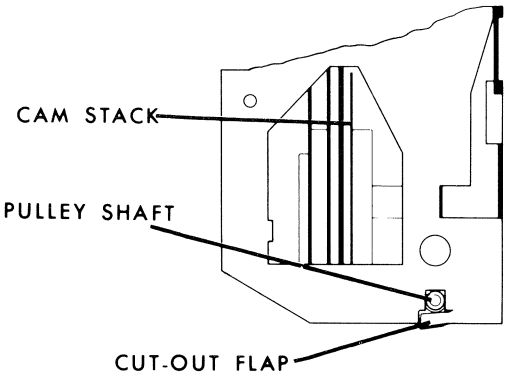
3.13 WORM PULLEY REPLACEMENT AND/OR MECHANISM BELT REPLACEMENT

3.13.1 Remove base cover (3.1) and main drive motor (3.5). Lift motor out and set aside without disconnecting wires.

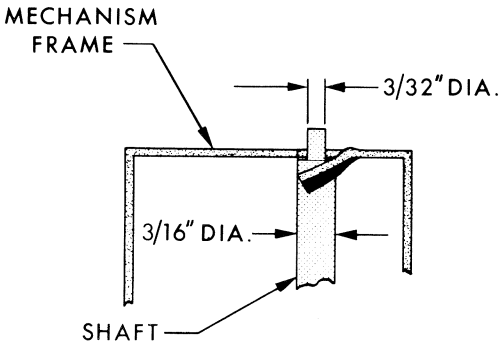
3.13.2 Bend flap of mechanism frame down to release shaft.

3.13.3 Lift out entire shaft and worm pulley. Replace worm pulley, lubricate shaft with light coat of Plastilube #1, replace mechanism belt and reassemble.

NOTE: Bend flap in mechanism frame slowly and easily so it will not break off.



3.13.4 When repositioning shaft, make sure that flap presses against 3/16-inch diameter with enough force to keep shaft from rotating. Worm pulley rotates on shaft.



3.14 REMOVAL OF SLIDE LEVER RAMP

3.14.1 Remove the retaining rivet by any suitable means (hand file, punch or small electric grinder.)

NOTE: In all instances, be sure not to bend the slide lever and keep the filings and grindings out of the mechanism.

3.14.2 When replacing the new ramp, insert the screw (part No. 171244), through the ramp and drive the screw into the metal. Be sure the screw is fully seated.

3.15 DISASSEMBLY OF REMOTE CONTROL

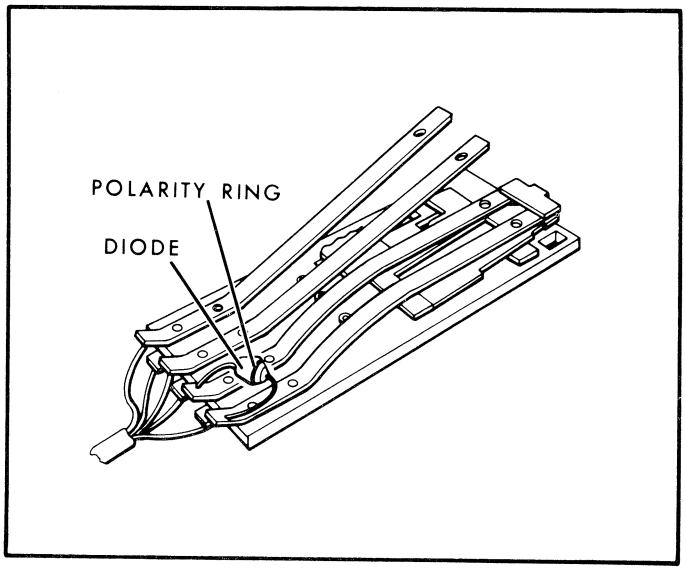
3.15.1 Remove three (3) Phillips head screws and lift half of switch housing.

3.15.2 Remove cycle button and focus lever (focus lever on Models 860 and 860H only).

3.15.3 Disengage remote cord from switch housing and lift out cord with contact assembly attached.

3.14.4 Diode may be removed in 860 and 860H Models by unsoldering leads.

NOTE: Observe polarity of diode when removing, and replace new diode in same direction.



3.16 REMOVAL OF CARRYING HANDLE AND FRONT NAMEPLATE

3.16.1 Remove base cover (3.1).

3.16.2 Remove compartment wall with elevating knob assembly by removing the four (4) 1/4-inch hex head screws.

3.16.3 Remove handle, handle bracket and nameplate by knocking out two (2) knurled pins in handle with a 1/16-inch punch.

3.16.4 Replace nameplate or handle as necessary. If bracket does not hold nameplate in tightly, bend fingers of bracket as required.

3.17 REMOVAL OF COMPONENT BOARD ASSEMBLY

3.17.1 Remove base cover (3.1).

3.17.2 Disconnect component board wiring and remove compartment wall (3.8.4 and 3.8.5).

3.17.3 Remove component board cover by forming two (2) tabs so they will pass through slots in compartment wall.

3.17.4 Form tab on cover so component board may be unlocked from cover.

3.17.5 Disconnect electrical leads *(WIRE-NUTS)* and remove cell (3.20).

3.18 REMOVAL OF REMOTE FOCUSING SOLENOID IN MODELS 860 AND 860H

3.18.1 Remove base cover (3.1).

3.18.2 Remove component board assembly (3.16). Cell does not have to be removed.

3.18.3 Unsolder the two (2) leads from component board to solenoid.

NOTE: Use minimum amount of heat to unsolder leads from circuit board; excess heat may damage board and other printed circuitry.

3.18.4 Remove solenoid by removing two (2) screws.

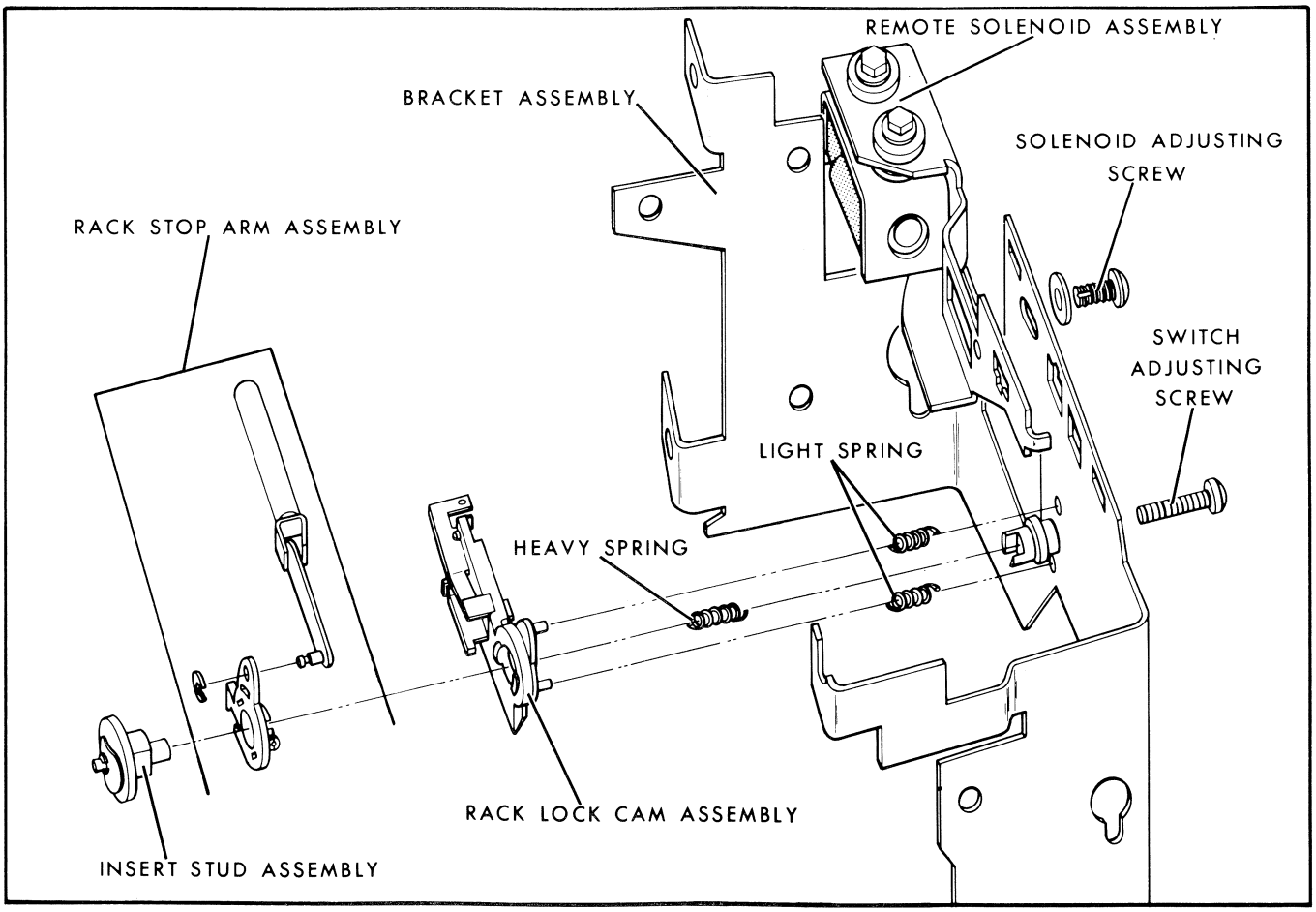
3.18.5 Reassemble in reverse order of disassembly.

3.19 REMOVAL OF REMOTE FOCUSING SWITCH IN MODELS 860 AND 860H

3.19.1 Remove base cover assembly (3.1).

3.19.2 Remove main projection lens.

3.19.3 Unsolder three (3) leads to switch.



3.19.4 Break cement seal and remove adjusting screw holding switch to lens mount housing.

3.19.5 Reassemble switch components as shown in illustration.

3.20 REMOVAL AND INSTALLATION OF PHOTOCELL ASSEMBLY

3.20.1 Remove base cover (3.1).

3.20.2 Remove the cell circuit board and cell (1) by applying heat from a fine tipped soldering iron to the two polystyrene posts (2) which fasten the circuit board to the black plastic cell housing. When the plastic flows, lift the cell from its housing (3).

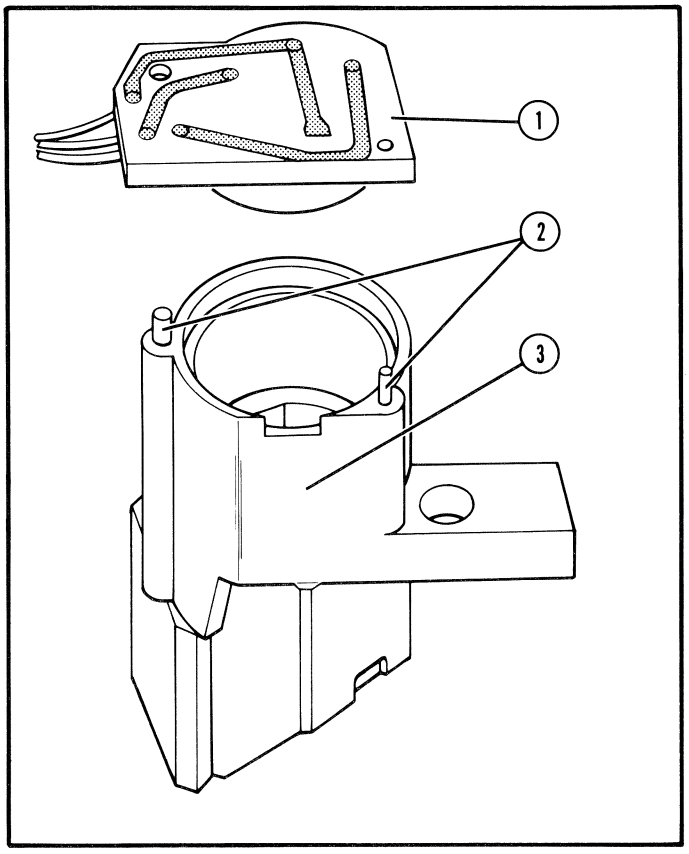
3.20.3 Unsolder the three wires which are attached to the circuit board.

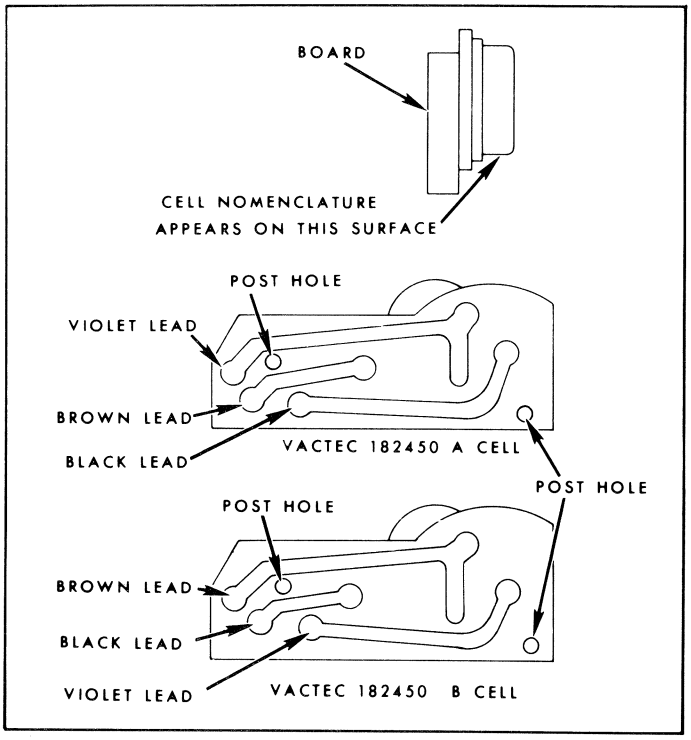
3.20.4 Reassemble in the reverse order.

NOTE: If there is not sufficient post (2) material to heat-seal the circuit board, replace the cell housing (remove one Phillips head screw).

3.20.5 When replacing the cell circuit board (part No. 182450) check the cell number and letter, which appear on the outside diameter of the cell housing (see illustration). There are two cell board assemblies: "A" and "B" which look alike but must be wired differently. Failure to wire as illustrated (i.e., "A" cell wired like "B" cell or vice versa) will cause the focus motor to drive continuously.

NOTE: When installing a new photocell or cell housing, align the cell following the procedure in 4.6.





3.21 REMOVAL OF LEVELING FOOT ASSEMBLY

3.21.1 Remove base cover (3.1).

3.21.2 Grasp leveling foot and unscrew past the bind until removed. If the plastic knob is broken, use pliers to grasp leveling foot.

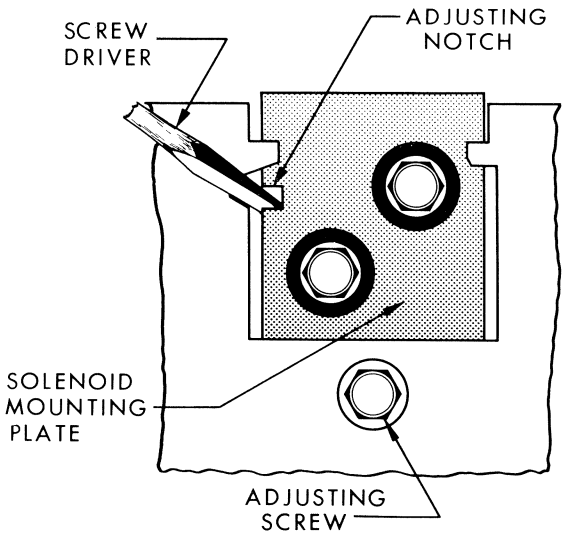
3.21.3 Install new leveling foot.

3.21.4 Crimp the top three (3) or four (4) threads perpendicular to the thread using a pair of diagonal cutters.

3.21.5 Replace base cover.

4. ADJUSTMENTS

4.1 CYCLE SOLENOID

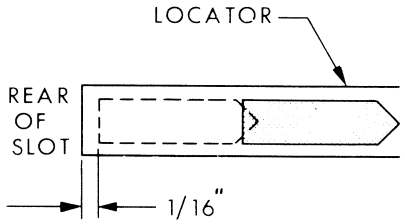


4.1.1 Solenoid should operate without chattering.

4.1.2 To adjust for minimum noise, loosen adjusting screw slightly, insert screwdriver into notch, and raise or lower solenoid mount as necessary. Tighten screw. If solenoid stroke is too short, reverse cycle will not work.

NOTE: This adjustment may be done with only the base cover removed.

4.2 LOCATOR LEVER

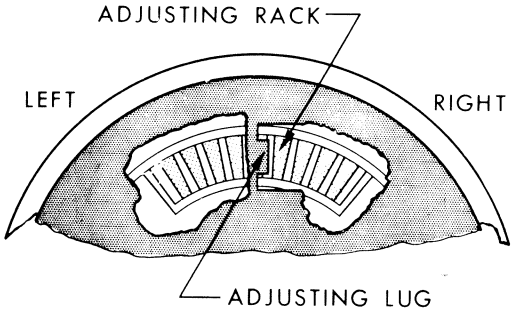


4.2.1 Locator should withdraw from lugs of slide tray and stop within 1/16-inch of, but not touching, rear of slot in the mechanism frame.

When locator moves again, any movement to rear indicates that the cam is "out of time".

4.2.2 Erratic or jerky movement of the slide tray is an indication that the cam shaft is "out of time".

4.2.3 Disengage clutch spring from contact. Rotate cam shaft with thumb, so top moves toward main motor until the cam has rotated approximately 180°.



4.2.4 Insert screwdriver in cam shaft and spread spacer and cam as indicated in Mechanism Assembly drawing.

4.2.5 Adjusting lug will probably be found in or near center of adjusting rack.

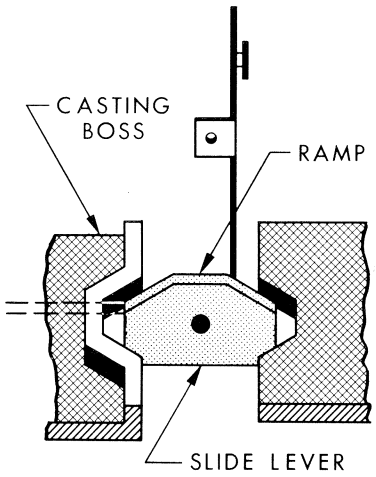
4.2.6 Moving lug to the left (toward motor) will cause locator to move closer to rear of slot.

NOTE: This adjustment must be done with base cover removed.

4.3 SLIDE LEVER

4.3.1 Slide lever must raise slides fully into tray so tray may rotate to the next slide. It must not raise slide so high that tray is raised by slide going into its compartment.

4.3.2 Loosen the inner screw on slide lever bracket, and with a small adjustable wrench, grasp bracket and move it to change pivot location of slide lever. Tighten screw.



4.3.3 This adjustment may be made with mechanism in projector housing and only base cover removed. Turn projector over and observe ramp of slide lever; at half-cycle position, its lower shoulder should be roughly level with surrounding casting boss of projector.

4.4 STRAY OR BACKGROUND LIGHT

4.4.1 Front condenser lens is unsymmetrical (very slightly - look for it). The front condenser lens in some older and other models of the *KODAK CAROUSEL* Projectors is symmetrical. If the front condenser lens is in backward, it can cause "focus drift". The FLATTER side of the front condenser lens should be toward the gate and the other more convex side, toward the lamp. The rear condenser lens and heat-absorbing glass in Models 760, 850 and 860 remain the same as illustrated (1.2.3).

4.4.2 Do not attempt to use the earlier style front condenser lens. Use of the current style front condenser lens, either coated or uncoated, will give satisfactory results.

4.4.3 Early models (850 only) may not have all required baffles - replace lamphouse door (see 3.4).

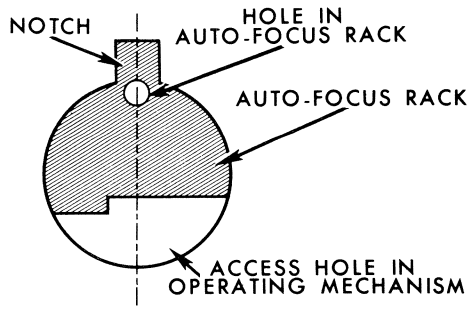
4.5 NULL ADJUSTMENT

4.5.1 Remove base cover (3.1) and projection lens.

4.5.2 Plug projector into a normal 110-120 voltage supply; turn projector upside down.

WARNING: DANGEROUS VOLTAGE

4.5.3 With projector switch on "Fan" and a glass slide in projector gate, observe action of auto-focus rack as you move the slide forward and backward in gate. Each time slide is "at rest" or in a projection position, small hole in auto-focus rack should line up in center of access hole and notch in mechanism frame. This is the "Null Alignment".

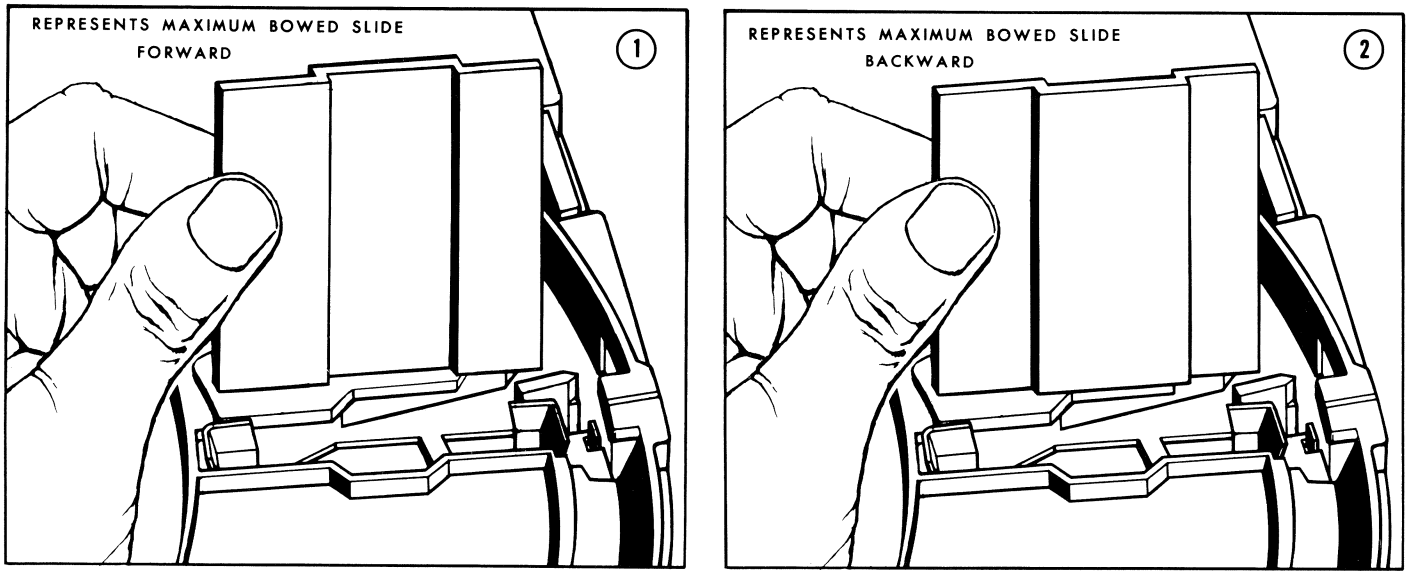


NULL ADJUSTMENT

4.5.4 If it does not line up, proceed with null adjustment, loosen cell housing screw and move cell housing in or out for correct null. Tighten screw and cement screw head to cell housing.

NOTE: Correct null adjustment will fix most projectors that lens drives in or out continuously with a slide in the gate.

4.5.5 Check accuracy of the null position by inserting the Tool #TL1744 in the gate as shown in illustration No. 1 below and allow the focus motor time to drive the lens forward. Reverse the tool as shown in illustration No. 2 and allow the focus motor to drive the lens backward.



4.5.6 If the focus motor does not come to a stop with the tool in the gate in either of the directions, the null position requires further adjustment. If the focus motor fails to stop in the forward direction, be sure the rack is not being stopped by the shutter pin.

4.6 CELL ALIGNMENT

4.6.1 Place a glass-metal-mounted slide in gate. (It may be Tool #TL1298 mounted as currently supplied.)

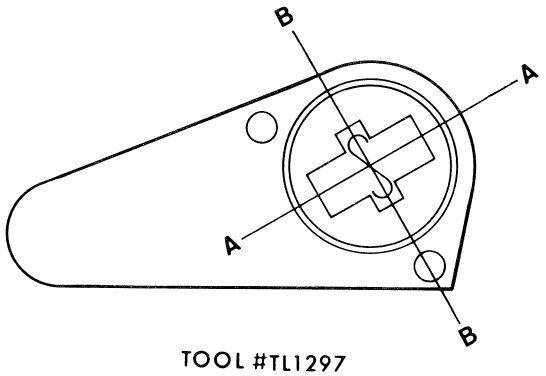
4.6.2 Check to see that null position of the auto-focus rack is as pictured in null adjustment section (4.5).

4.6.3 Disconnect focus motor.

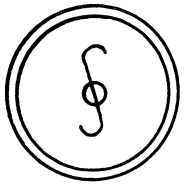
4.6.4 Remove filter and mask.

4.6.5 Position Cell Adjusting Tool #TL1297 over posts of cell housing or use fan cap (part No. 172115) placed in cell housing (closed end in).

4.6.6 After making sure auto-focus is in proper null position, "S" or "C" image should fall as pictured when using Tool #TL1297, or centered on center dot when using fan cap.



TOOL #TL1297



FAN CAP

4.6.7 If image is not centered, loosen cell housing mounting screw and bring image in along the B-B axis by moving cell housing back and forth. Snug down screw.

4.6.8 With two (2) screwdrivers, one (1) in back of cell housing for support, form ear on which housing is mounted, up or down, until image is centered in the A-A axis.

4.6.9 Reassemble mask, filter and photocell assembly: heat-seal two (2) posts and reconnect focus motor.

4.6.10 Make fine readjustment for correct null positioning, if necessary. Tighten and cement screw.

NOTE: This adjustment (4.6) is necessary if new cell or cell housing is installed. This may also be necessary if cell housing tab has been deformed.

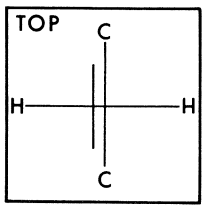
4.7 TARGET SLIDE ADJUSTMENT

NOTE: This entire adjustment (4.7) should not be performed unless a new rack assembly is installed in an old mechanism. This is a factory adjustment and should not be disturbed.

4.7.1 Place projector on bench upside down, remove base cover, place switch in "Fan" position, disconnect focus motor; plug projector into normal 110-120 voltage supply.

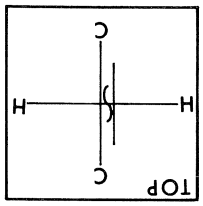
WARNING: DANGEROUS VOLTAGE

4.7.2 Insert glass-mounted target slide, Tool #TL1298, into gate. "Top" indicates top of projector when projector is right side up. Lock rack in null position.



TOOL #TL1298

4.7.3 Looking through the empty projection lens opening in the projector, the 6-volt lamp filament image should fall on the target slide as pictured.



4.7.4 The short line denotes a tolerance of .050-inch. Images should fall within this tolerance, or an additional .050-inch, and be equally spaced above and below horizontal line H-H, as illustrated.

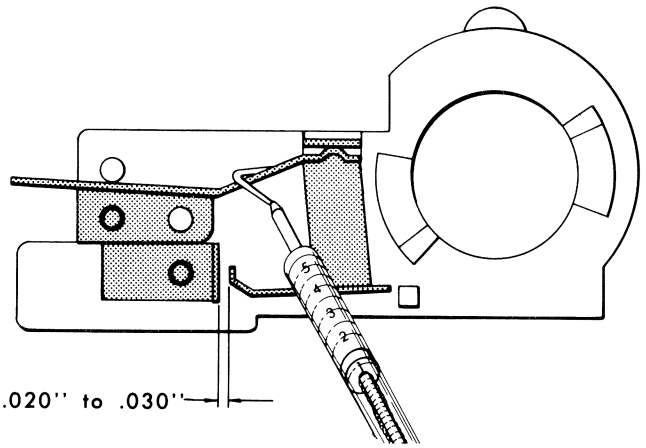
4.7.5 If it does not appear as illustrated, it can be brought into alignment by forming the lamp mounting end of the auto-focus rack.

4.7.6 Focus rack may be adjusted with Tool #TL1299 (revised) by reaching through opening in mechanism base plate near 6-volt lamp.

4.7.7 The null adjustment may be relaxed to aid in engaging tool to auto-focus rack. Once engaged, and while re-forming, null adjustment must be mechanically maintained by inserting a pointed tool into hole in rack and locked into notch in plate. Form (bend) rack as necessary to obtain correct alignment. To disengage tool, relax null adjustment again. Remember to check null position after performing this procedure.

4.8 SWITCH ADJUSTMENT FOR AUTO-FOCUS MODE OF 860 AND 860H MODELS

4.8.1 Remove switch (3.18), if normally closed contact is not providing a reliable circuit for auto-focus.



4.8.2 Check switch for proper contact settings.

a. Normally closed contacts should break between 1 1/2 oz to 4 oz

b. Normally open gap between contacts should be between .020-inch and .030-inch.

4.8.3 Reassemble adjusted switch.

4.9 SWITCH AND SOLENOID ADJUSTMENTS FOR REMOTE FOCUS MODE OF 860 AND 860H MODELS

4.9.1 Projector should be plugged into normal 110-120-volt line, and remote control cord plugged into projector.

4.9.2 Loosen solenoid adjusting screw. Place flat-blade screwdriver into slot, and move solenoid bracket back and forth until it just operates switch in both directions while actuating remote switch back and forth (focus motor operates). Now move bracket toward solenoid the thickness of the tab that protrudes through the lens mount plate.

4.9.3 Tighten solenoid adjusting screw to lock solenoid bracket in position.

4.9.4 Turn switch adjusting screw until focus rack just slips when actuated in either direction. Tighten screw 1/4 turn.

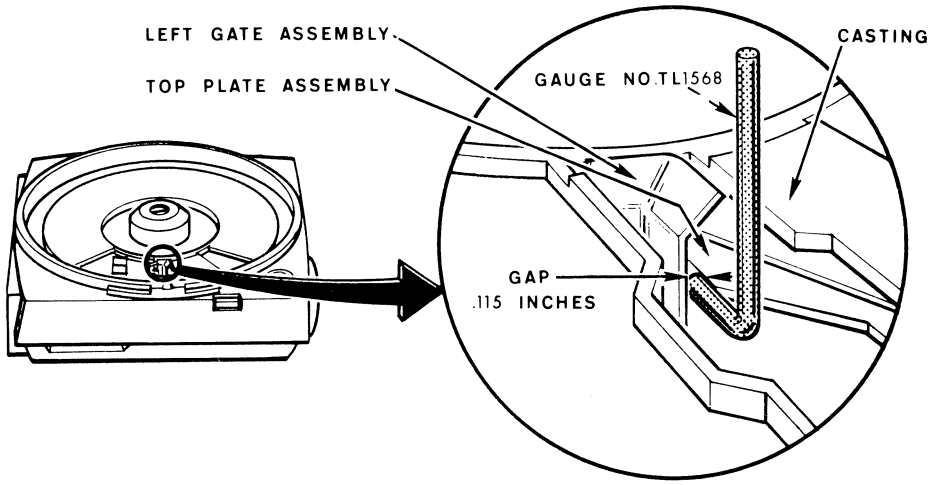
4.9.5 Cement both adjusting screw heads to lock in position.

4.10 GATE ALIGNMENT

4.10.1 Remove the slide tray and any slide left in the projector gate.

4.10.2 Check the gap between the LEFT GATE ASSEMBLY and the edge of the TOP PLATE ASSEMBLY of the mechanism, with gauge (#TL1568). The diameter of this tool is .115-inch. The tool should just pass through the gap. Clearance should not be excessive.

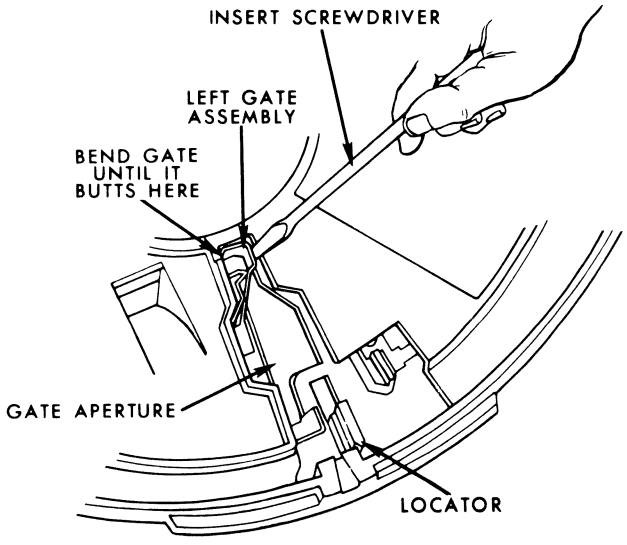
NOTE: Make sure the measurement is checked between the shiny, plated portion of the GATE ASSEMBLY and the gray sheet-metal TOP PLATE of the internal projector mechanism. Avoid measuring to either the main cast housing of the projector, or the black baffle, which is attached to the GATE ASSEMBLY of auto-focus models.



If the gap is less than .115-inch, follow steps 4.10.3 through 4.10.8.

4.10.3 Disconnect the power cord.

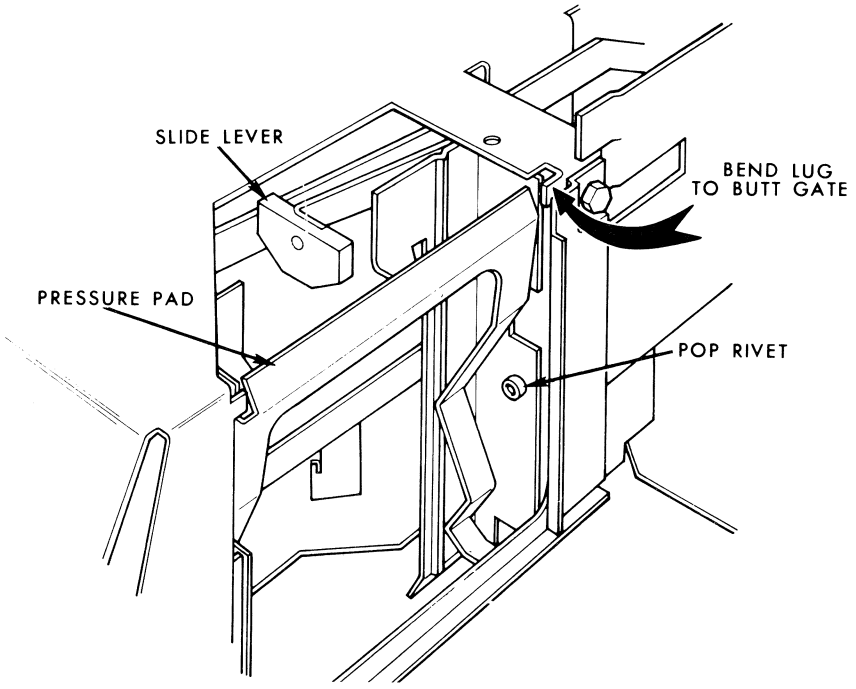
4.10.4 Insert a flat-blade screwdriver between the front edge of the LEFT GATE ASSEMBLY and the top of the main projector housing, as shown. Move the screwdriver handle toward the front of the projector to pry the top of the GATE ASSEMBLY toward the rear of the projector. Pry the assembly until it touches the housing casting at the point indicated in the diagram. The prying action will cause the GATE ASSEMBLY to pivot on the RIVET. When the screwdriver is withdrawn, the GATE ASSEMBLY will spring back slightly.



4.10.5 Check to see that the gap between the LEFT GATE ASSEMBLY and the TOP PLATE ASSEMBLY is at least .115-inch. If it is not, repeat 4.10.4 and check again.

4.10.6 Turn the projector upside down, open the lamphouse door, and remove the front condenser lens and the heat-absorbing glass. Locate the LUG (indicated by the heavy arrow immediately to the right of the cover assembly lip as you look toward the front of the projector). Bend the LUG in the direction shown by the arrow, until it just touches the GATE ASSEMBLY. This can be accomplished by placing the end of a screwdriver against the LUG and tapping the handle lightly with a small hammer. It will guard against the GATE ASSEMBLY slipping out of alignment again.

OPERATING MECHANISM



NOTE: Auto-focus projectors have a black shield covering most of the LUG; however, enough of the LUG is exposed to permit bending as described.

4.10.7 Replace the heat-absorbing glass and the front condenser lens.

4.10.8 Close and lock the lamphouse cover.

4.11 MIRROR ALIGNMENT

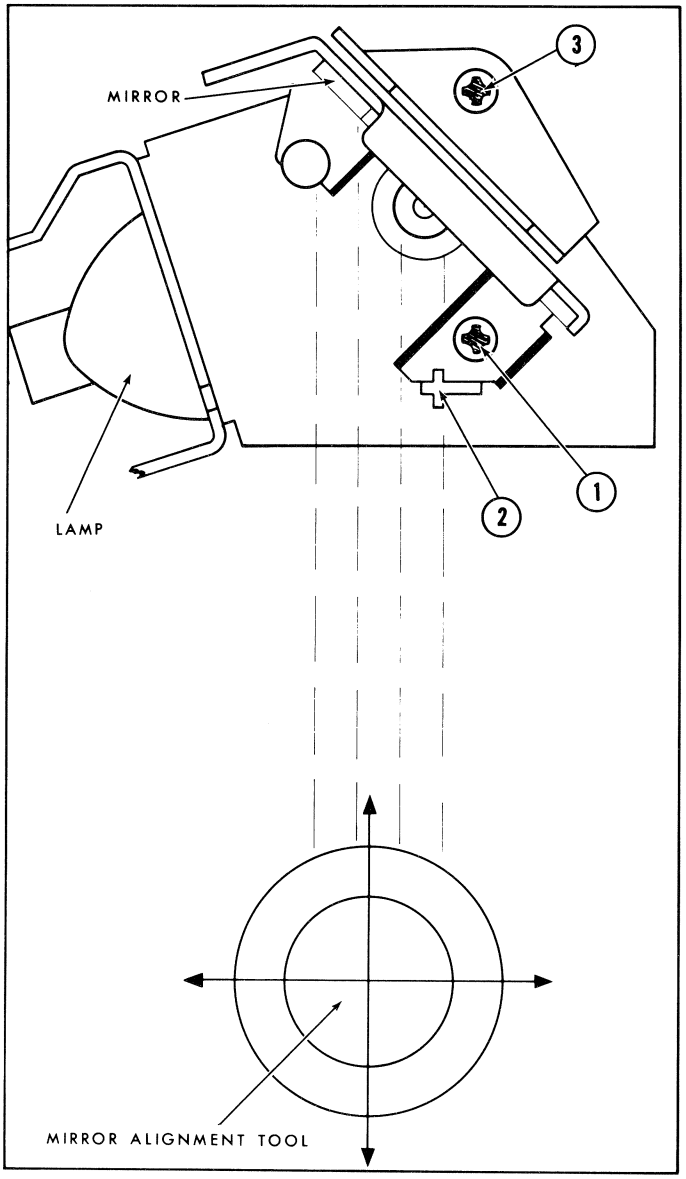
4.11.1 Remove projection lens and replace with mirror alignment lens (Tool #TL1759).

4.11.2 Plug the projector into a variable voltage source (*VARIAC*) set at 40 volts ac. If you do not have a variable voltage supply, you may use either a neutral density slide to reduce light intensity or a cardboard slide with a 1/4-inch hole at center.

NOTE: 40 volts ac or a special slide are used so that the lamp filament image on the mirror alignment tool can be looked at without doing harm to your eyes.

4.11.3 Place the power switch in the "Low" position. Alignment is proper when the circle of light is centered on the alignment tool. [If the circle is left or right of center, loosen screw (1), place a flat-blade screwdriver in the adjustment slot (2) and twist to align.] Tighten screw.

4.11.4 If the circle is up or down from center, adjust by turning screw (3) clockwise to move up and counterclockwise to move down.



4.11.5 After adjustment is complete, cement screw heads.

5. TROUBLESHOOTING

SYMPTOM	POSSIBLE CAUSE	REMEDY
5.1 Projector will not cycle (forward).	1. Cycle solenoid failure.	1. Check 24-volt supply; replace defective solenoid (3.10.3).
	2. Clutch spring may be bent.	2. Replace spring (3.11) or replace cam shaft assembly (3.10).
	3. Check for bind in cycle lever.	3. Remove bind.
	4. Check for clearance between clutch contact arm of cycle lever and TIP of clutch spring.	4. Form cycle lever.
5.2 Continuous cycling.	1. Clutch spring bent or broken.	1. Replace spring (3.11) or replace cam shaft (3.10).
	2. Short in remote cord.	2. Check cord (3.14); replace if necessary.
	3. Bind in select, cycle, or direction lever.	3. Re-form levers for bind and lubricate.
	4. Clutch spring not being stopped by contact arm of cycle lever.	4. Replace spring (3.11), replace cam shaft (3.10) or re-form contact arm of cycle lever.
	5. 6-volt lamp terminal contacting mechanism frame.	5. Add glass or electrical tape to mechanism frame at contact point.
5.3 Projector will not index (forward or reverse).	1. Select lever interfering with movement of index lever, as in half-cycle operation.	1. Check for binds in select lever.
	2. Index lever not shifting to low side of cam.	2. Check for burr on index lever.
5.4 Projector will not reverse.	1. Cycle solenoid out of adjustment.	1. Readjust (4.1).
	2. Bind in cycle lever and/or direction lever.	2. Check and remove bind; lubricate if necessary.

SYMPTOM	POSSIBLE CAUSE	REMEDY
	3. Direction lever hairspring missing or bent.	3. Remove mechanism (3.8) and replace spring.
	4. Clutch spring bent.	4. Replace spring (3.11) or replace cam shaft (3.10).
	5. Reverse button of remote control cord not held long enough.	5. Customer error.
	6. Cycle solenoid does not operate.	6. Check 24-volt supply. If 24 volts ac $\pm$ 4Vac is not present, replace main motor. If present, replace solenoid.
5.5 Projector always reverses.	1. Bind between direction lever and mechanism frame.	1. Remove bind and lubricate if necessary.
	2. Defective remote cord.	2. Check for bind between reverse and forward contacts (3.14).
5.6 Noisy operation.	1. Broken or malformed ribs on fan causing "fluttering" noise.	1. Replace fan (3.6).
	2. Lack of lubrication on fan shaft.	2. Lubricate shaft (3.6).
	3. Fan cap not fully seated.	3. Seat with thumb.
	4. Worm pulley with a high spot will cause a "fluttering" noise.	4. Replace worm pulley (3.13).
	5. Gear noise from focus motor.	5. Increase backlash between gears or install new motor (3.9.2).
5.7 Tray cannot be rotated when "Select" button is held down.	1. Projector not on.	1. Projector must be turned "On".
	2. Locator does not withdraw from tray lugs.	2. Check locator adjustment (4.2).

SYMPTOM	POSSIBLE CAUSE	REMEDY
	3. Slide lever not raising slide fully into tray.	3. Check slide lever adjustment (4.3).
5.8 Shutter "hang-up".	1. Shutter spring unhooked or missing.	1. Remove mechanism (3.8) and replace spring.
	2. Shutter may be striking cycle lever.	2. Remove mechanism (3.8); file cycle lever at point of contact with shutter. Do not file shutter or light leak on projection screen may result.
5.9 Projection lens drifts on "High". No slide in gate.	1. Stray light.	1. a. Check for baffling (4.4). b. Check front condenser lens for proper orientation (flatter side of lens toward gate). See illustration in 1.4.3.
	2. Null position incorrect.	2. Adjust null-cell alignment (4.5 and 4.6).
	3. Cell housing filter(s), steel mask missing or defective or mirror missing or defective.	3. Add or replace items which are missing or defective. If mirror in cell housing is at all questionable, replace cell housing.
	4. If drift continues after steps 1-3 at 130 volts.	4. Replace cell and component board (3.16).
5.10 Projection lens drifts on "Fan". No slide in gate.	1. Focus rack off or under drive gear.	1. Reposition focus rack. Replace rack spring if off or missing.
	2. Rack binding.	2. Leave slack in 6-volt lamp leads.
	3. Main drive motor.	3. Disconnect orange and red wires from secondary of main drive motor. If focus motor stops, check secondary for short with continuity checker. If there is no continuity between orange and red leads, install new main drive motor (3.5).

SYMPTOM	POSSIBLE CAUSE	REMEDY
		NOTE: Orange and red are isolated secondaries and should show no continuity to gray, yellow, green, and blue secondaries. If orange or red wires show continuity to yellow, install new main drive motor (3.5). CAUTION: Make all continuity checks with power cord disconnected. If orange and red leads show continuity, replace cell and component board. If focus motor does not stop with orange and red leads disconnected, replace cell and component board.
5.11 Projection lens drifts on "Fan". Slide in gate.	1. Focus rack off or under drive gear. 2. Rack bindings. 3. If drift continues.	1. Reposition focus rack. Replace rack spring if missing or off. 2. Leave slack in 6-volt lamp leads. 3. Adjust null alignment (4.5).
5.12 Focus motor drives in one direction.	1. Null alignment. 2. Cell filter(s).	1. Adjust null alignment. Add missing filters and mask. Replace cell housing if mirror is questionable. 2. See section 5.9.3. If the above does not correct condition, replace cell and component board (3.16).
5.13 Focus motor dead.	1. Possible loose *WIRE-NUTS* on focus motor or 6-volt lamp. 2. 6-volt lamp burned out. 3. Null-cell alignment.	1. Tighten *WIRE-NUTS*. 2. Replace rack assembly lamp. 3. Adjust as mecessary (4.5 and 4.6).

SYMPTOM	POSSIBLE CAUSE	REMEDY
	4. Dead spots in focus motor.	4. Replace focus motor (3.9.2).
5.14 Focus motor oscillates, with slide in gate and lamp on "High".	1. Defective focus motor.	1. Replace focus motor. Be sure to dress *WIRE-NUTS* away from worm gear (3.9.2).
5.15 Focus motor runs continuously.	1. Transistor defective.	1. Replace circuit board (3.16).
	2. Photocell wired incorrectly.	2. Rewire correctly (3.20.5).
	3. Rack strikes shutter pin.	3. Remove base cover. Remove 6-volt lamp and sokcet from the focus rack assembly (Pops out). Clean the divider wall area adjacent to the bent-over end of the shutter pin. Turn the end of the bent shutter pin toward the front of the projector and tape the pin to the divider wall in this position, using tape, part No. 186560, or equivalent. Replace 6-volt lamp assembly and base cover.
5.16 Remote focus fails.	1. Diode in remote control defective.	1. Replace diode (3.14).
	2. Main motor 24-volt winding burned out.	2. Replace motor (3.5) and circuit board (3.16).
	3. Focus motor dead.	3. Replace focus motor (3.9.2).
	4. Switch and solenoid adjustments incorrect.	4. Adjust as necessary (4.9).
5.17 Fails to focus on warped slides.	1. Check null and cell alignment.	1. Adjust null and cell alignment as necessary (4.5 and 4.6).
5.18 Slides jam.	1. Gate not properly aligned.	1. Align gate (4.10).
5.19 Projector stops running or will not turn on.	1. No power to projector.	1. Check power supply and power cord.

SYMPTOM	POSSIBLE CAUSE	REMEDY
	2. Thermal fuse open.	2. Check fuse with continuity checker. If it shows open, replace fuse (3.2).
5.20 Illumination uneven.	1. Mirror alignment incorrect.	1. Adjustment mirror alignment (4.11).

6. TOOLS, CEMENTS AND LUBRICANTS

6.1 SPECIAL SERVICE TOOLS

Tool #TL862	Glass-mounted test slide
Tool #TL972	*KODAK READY-MOUNT* Test Slide
Tool #TL1031	1/4-inch hex socket wrench with 6 inch shank and plastic handle
Tool #TL1115	Mechanism operating fixture (optional)
Tool #TL1297	Cell Adjusting Tool (No longer available) Use fan cap.
Tool #TL1298	Target Slide
Tool #TL1299	Rack Forming Tool (revised)
Tool #TL1568	Gate Alignment Tool
Tool #TL1744	Auto-Focus Gauge
Tool #TL1759	Mirror Alignment Tool

6.2 CEMENT

G-135 *GLYPTAL*

Adjustment screw on cell housing
Adjustment screw on remote solenoid
Adjustment screw on rack lock cam assembly
Adjustment screws on mirror bracket

6.3 LUBRICANTS (Application - see 6.4)

763001 (A&O 61-3686) SAE #20 *CITGO PACEMAKER* T-30 Oil

763002 (A&O 61-3655) Plastilube #1

763003 (A&O 10-592) Plastilube #1 Grease plus 12% Moly

6.4 LUBRICATION

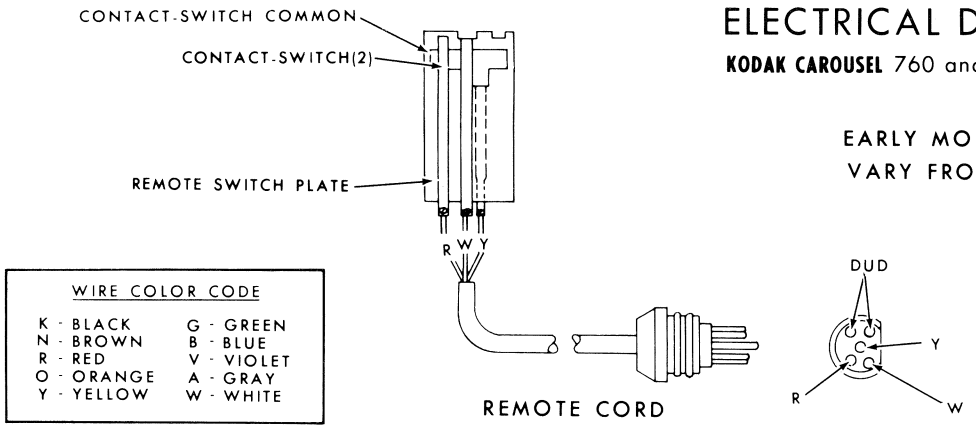
LUBRICATION POINTS	AMOUNT	LUBRICANT
Bearings of main drive motor when motor has been removed for other repairs.	2 drops	763001
Bearing of clutch shaft	2 drops	"
All worms and gears	Light coat	763002
Nylon cam surfaces	Light coat	"
Fan and fan shaft	Pack cavity	"
Steel and cork fan washer	Heavy coat	"
Pivot point of levers and cam levers	Generous	763003
Nylon bushing on drive lever	Medium	"
Dimples on indexer lever (underside)	Medium	"
Slot at end of shutter lever	Medium	"
Clutch assembly	Generous	"

Lubricate all points with a light coat. A little lubrication applied frequently is better than overlubrication. The serviceman should use his judgment and lubricate points as needed.

ELECTRICAL DIAGRAMS

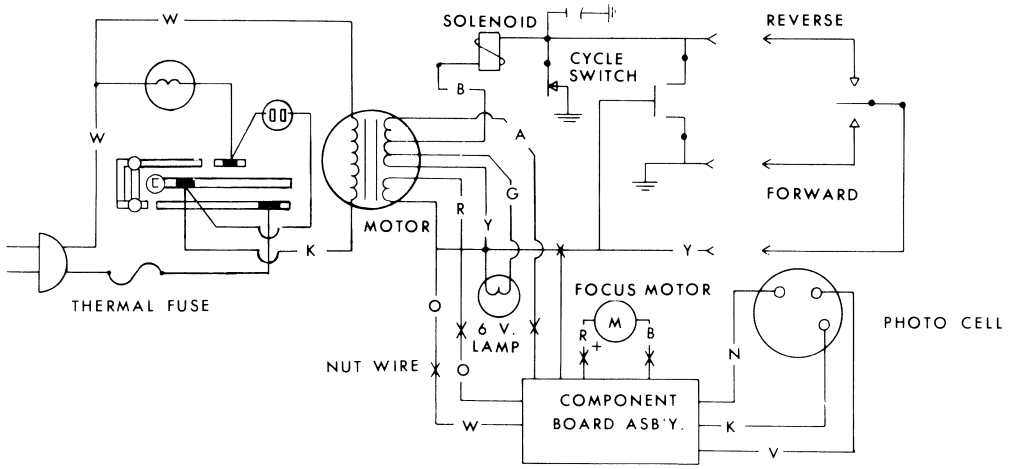
KODAK CAROUSEL 760 and 760H Projectors

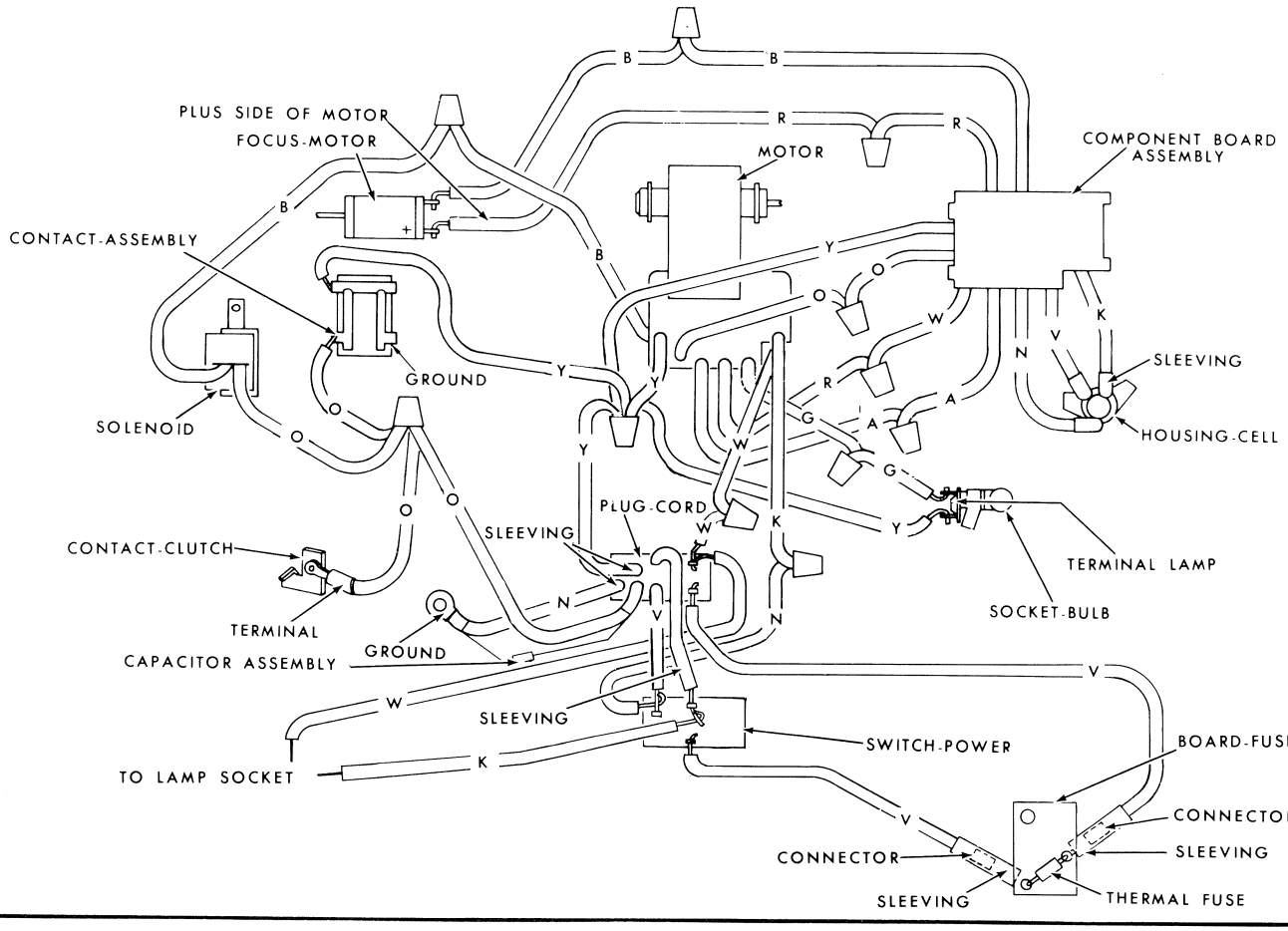
EARLY MODEL PROJECTORS MAY VARY FROM DIAGRAMS SHOWN



WIRE COLOR CODE

K - BLACK	G - GREEN
N - BROWN	B - BLUE
R - RED	V - VIOLET
O - ORANGE	A - GRAY
Y - YELLOW	W - WHITE

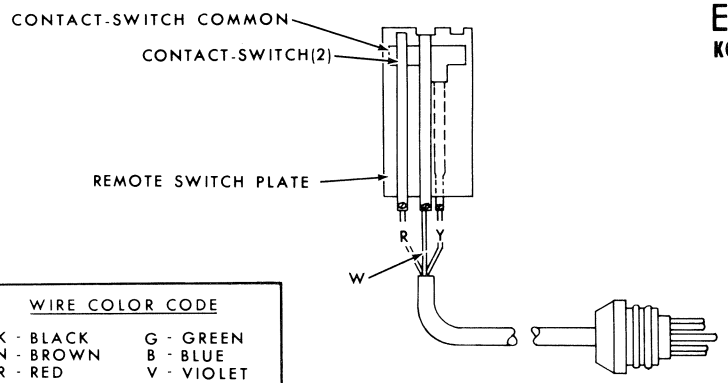




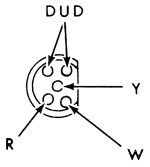
ELECTRICAL DIAGRAMS

KODAK CAROUSEL 850 and 850H Projectors

EARLY MODEL PROJECTORS MAY VARY FROM DIAGRAMS SHOWN

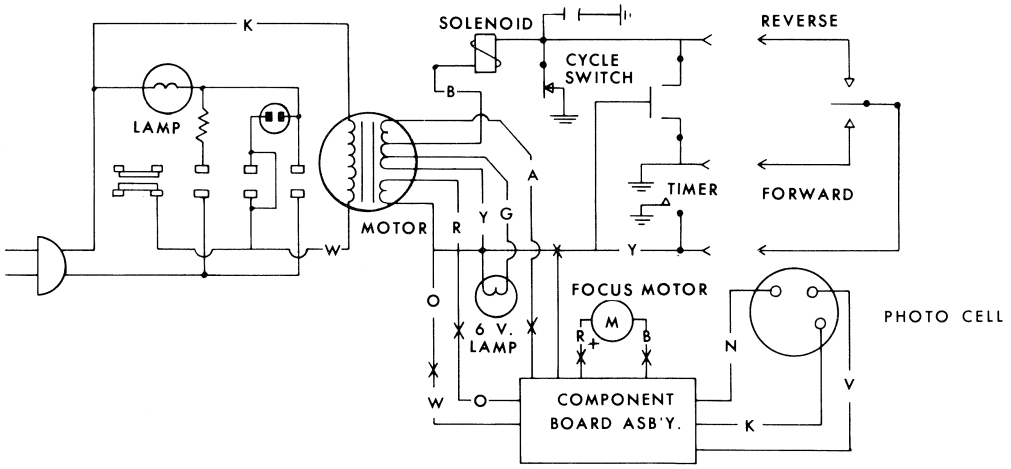


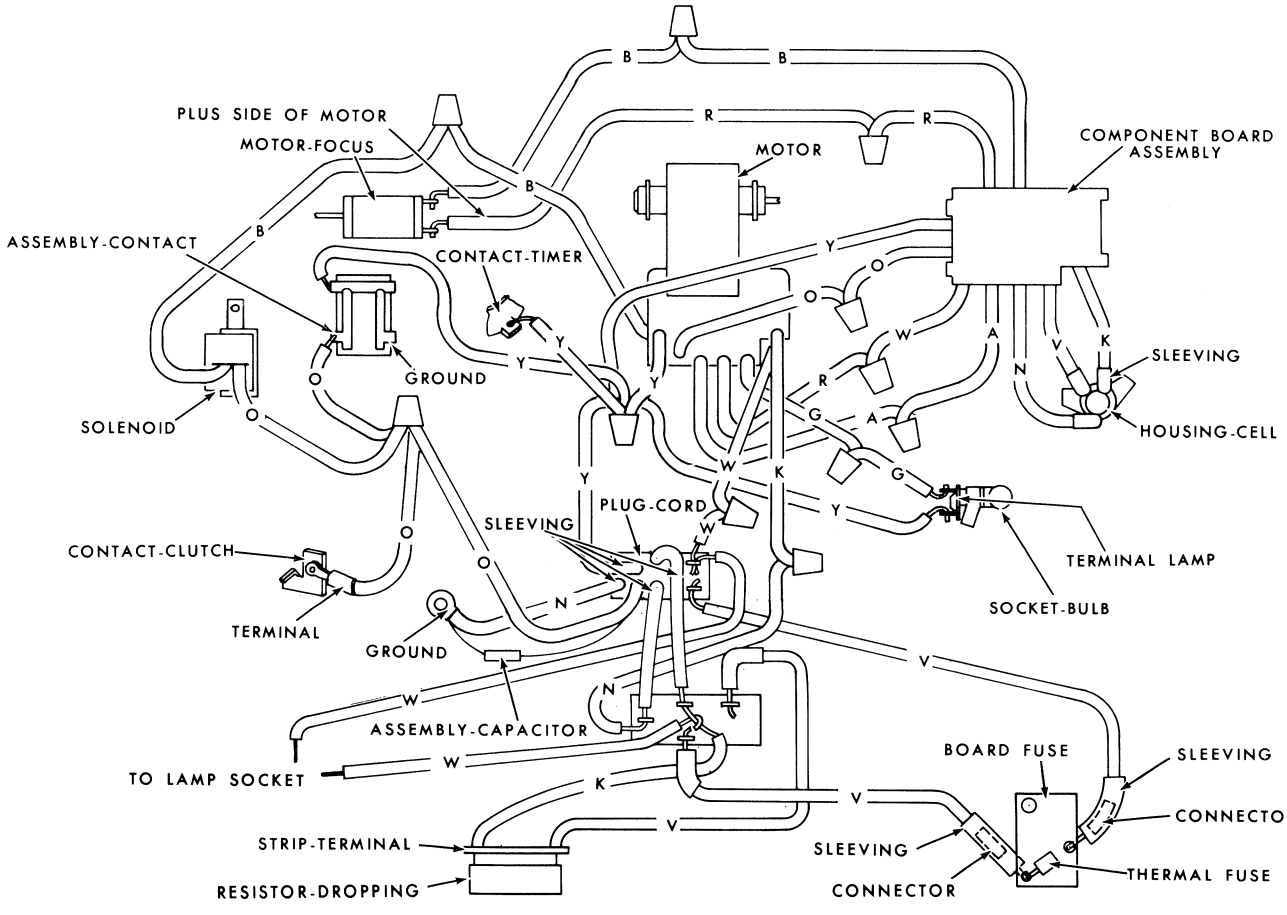
REMOTE CORD



WIRE COLOR CODE

K - BLACK	G - GREEN
N - BROWN	B - BLUE
R - RED	V - VIOLET
O - ORANGE	A - GRAY
Y - YELLOW	W - WHITE

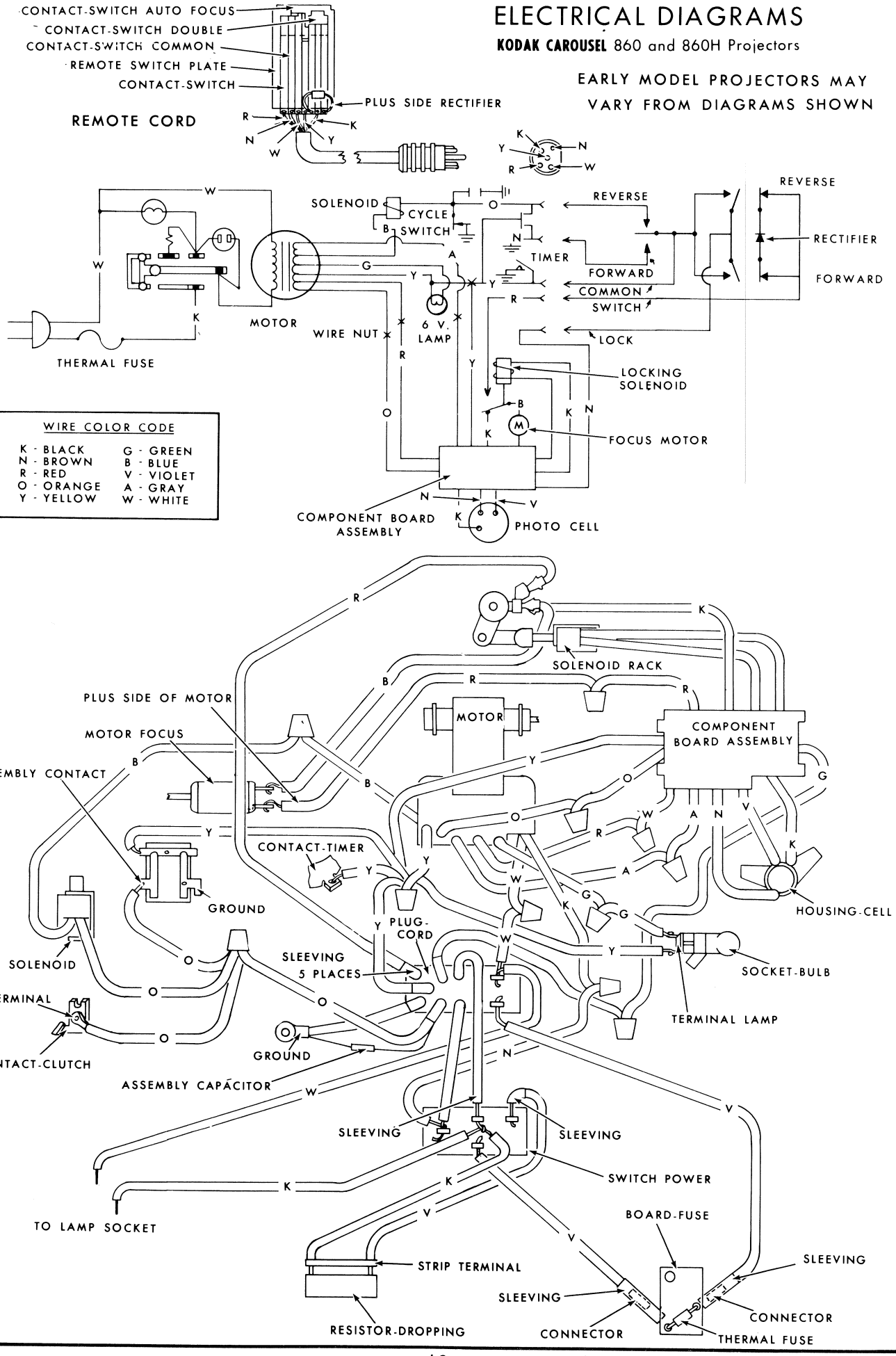




ELECTRICAL DIAGRAMS

KODAK CAROUSEL 860 and 860H Projectors

EARLY MODEL PROJECTORS MAY VARY FROM DIAGRAMS SHOWN



NOVEMBER 1974

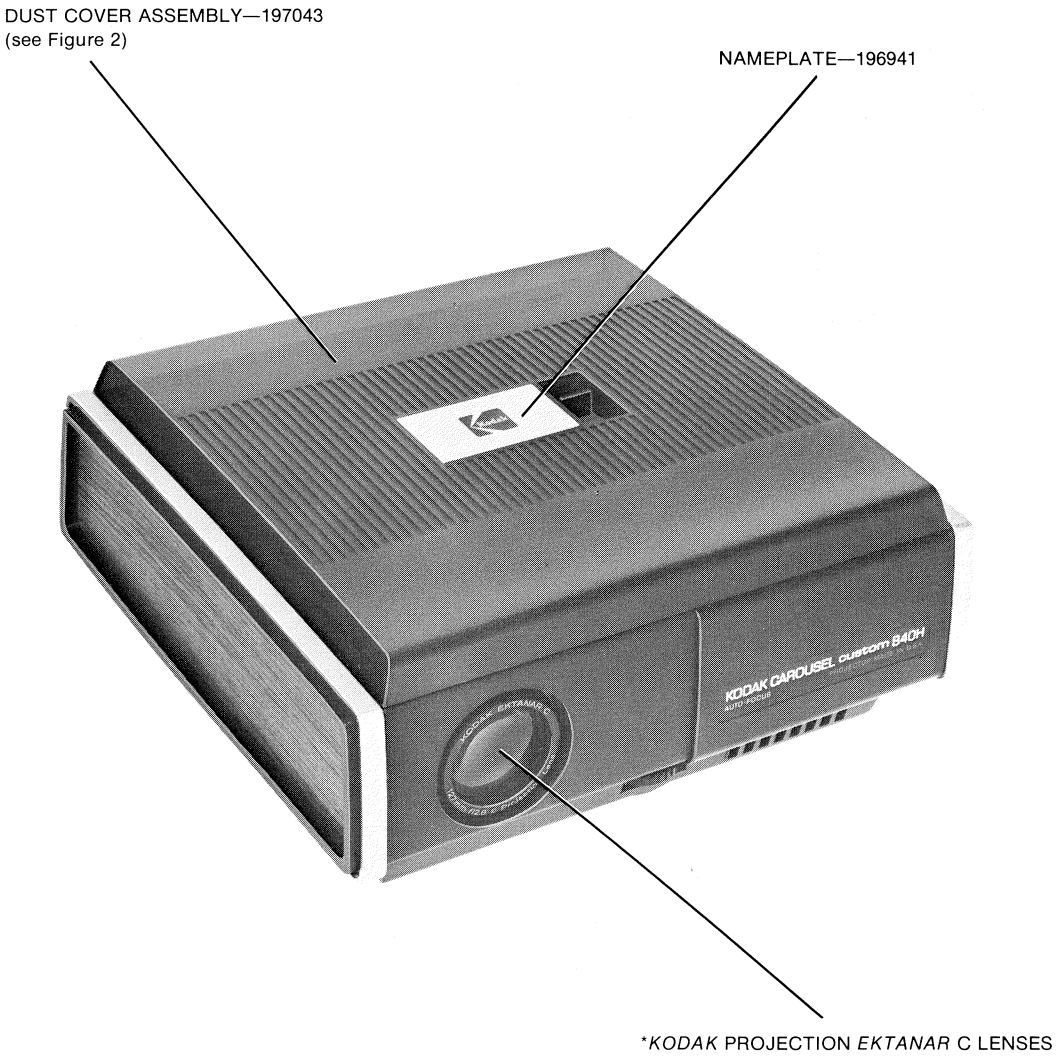
PARTS LIST NO. 775515

KODAK CAROUSEL Custom 840H Projector

Order parts from

Eastman Kodak Company, Central Parts Service
800 Lee Road, Rochester, New York 14650

Order by PART NUMBER



*Listed in the Kodak Price Catalog

FIGURE 1

Order by PART NUMBER, NAME, and EQUIPMENT MODEL.

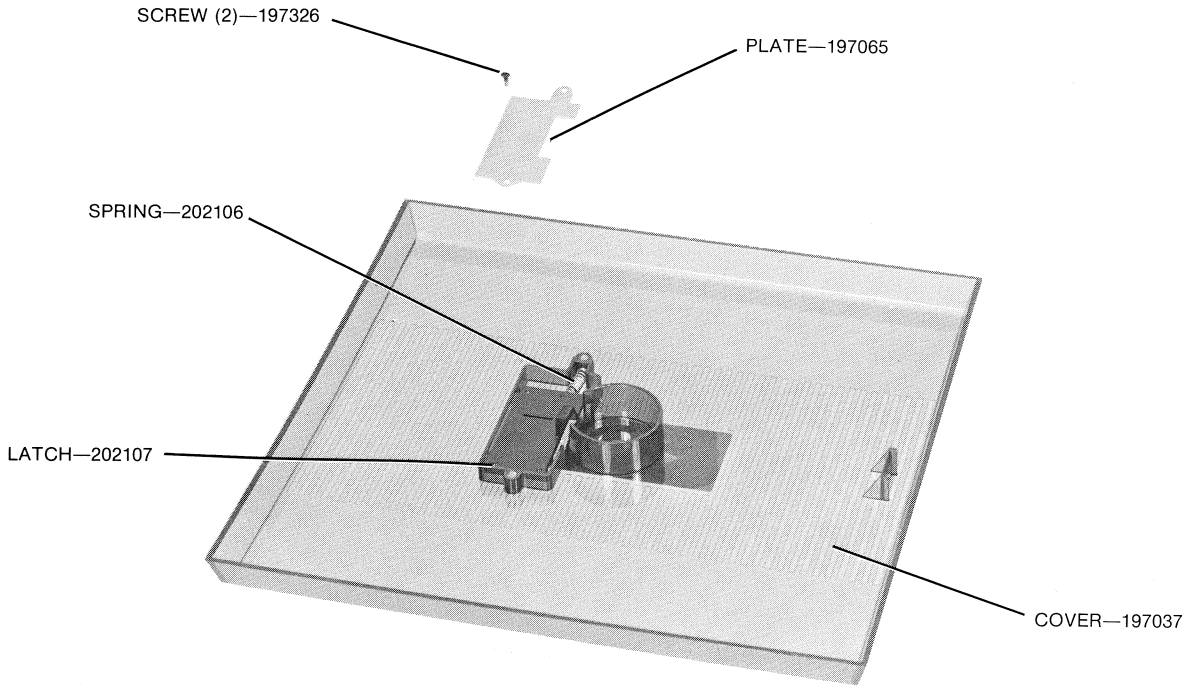


FIGURE 2 DUST COVER ASSEMBLY—197043

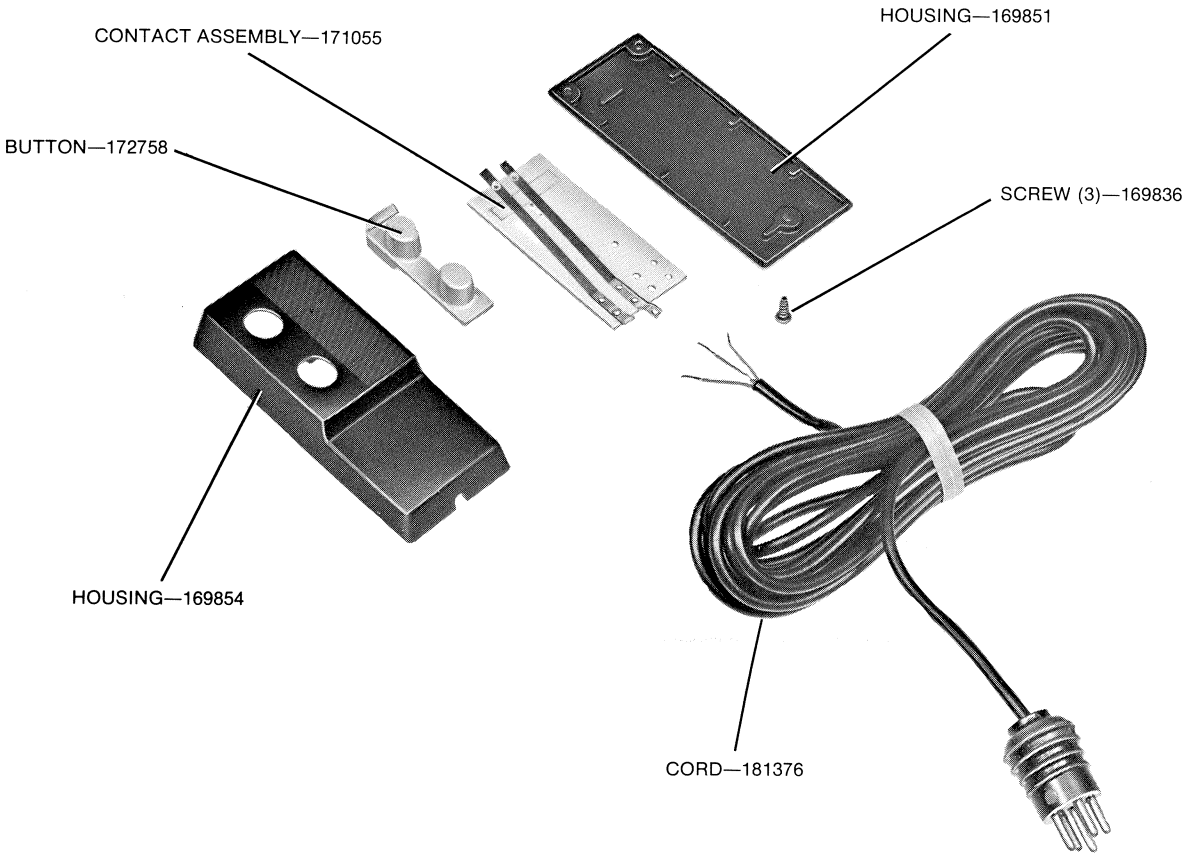
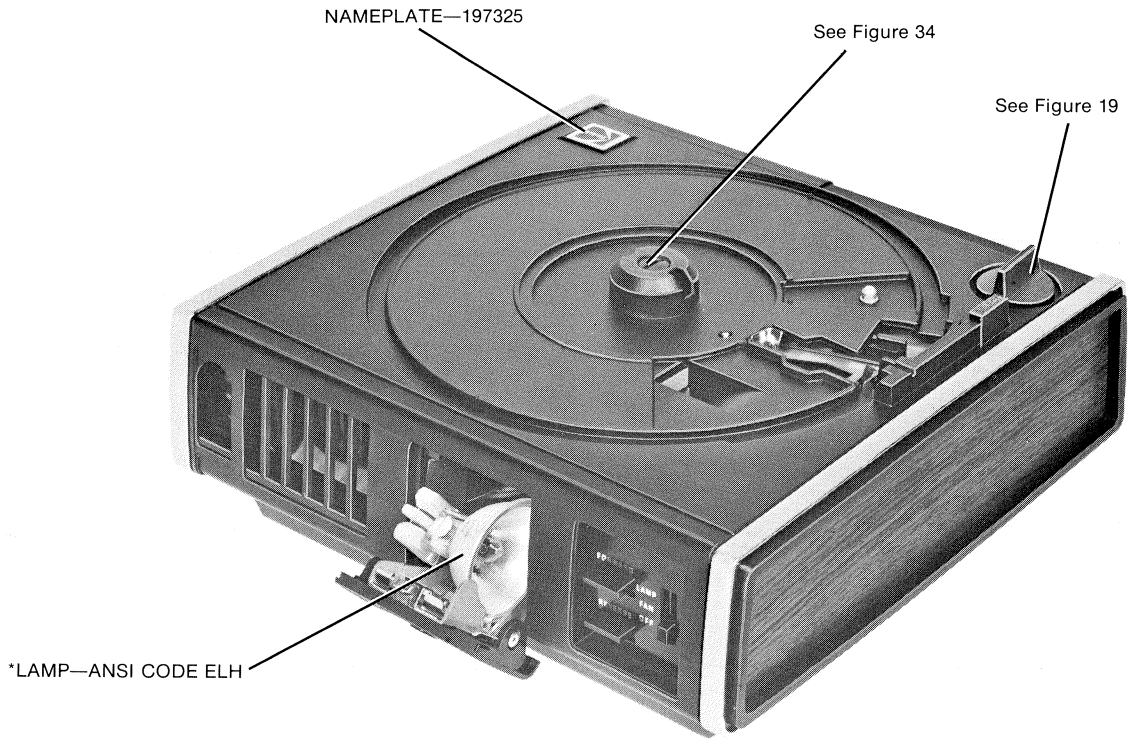


FIGURE 3 REMOTE CONTROL ASSEMBLY—171054



*Listed in the Kodak Price Catalog

FIGURE 4

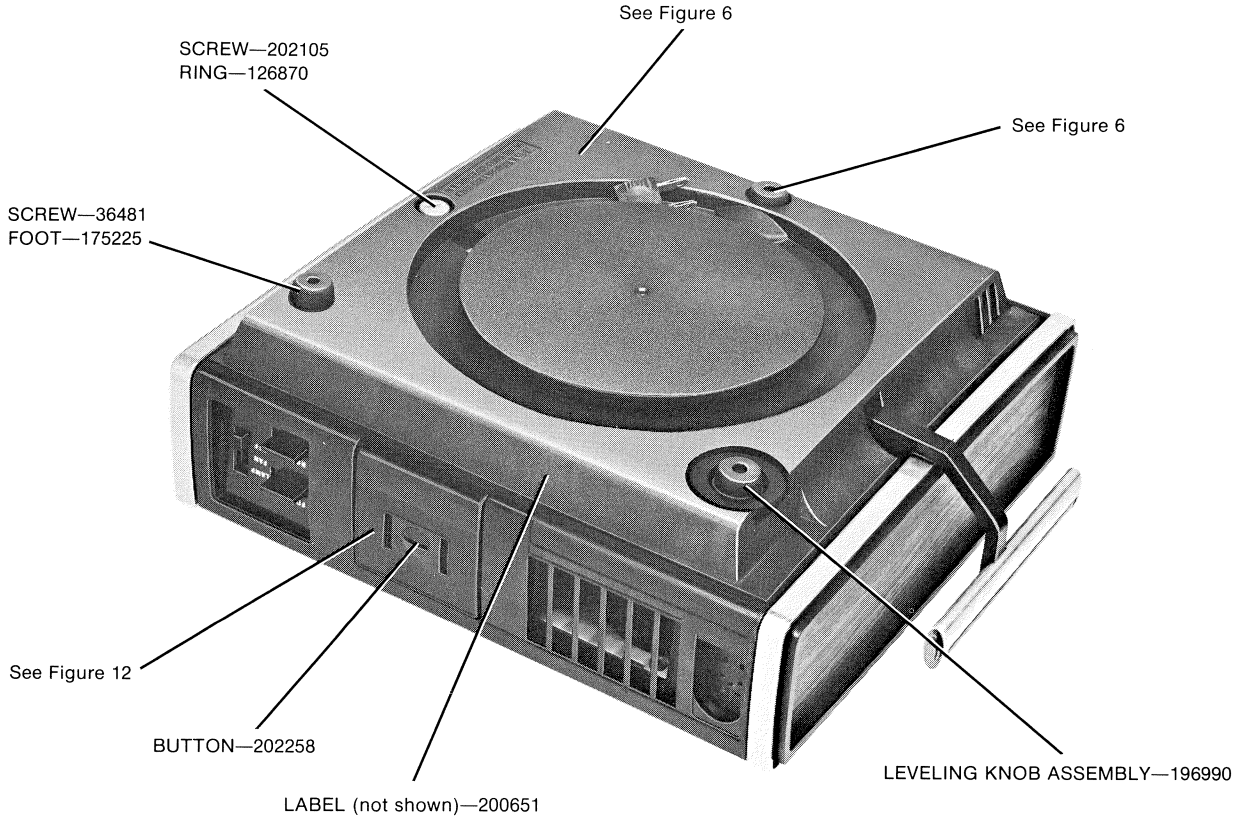


FIGURE 5

Order by PART NUMBER, NAME, and EQUIPMENT MODEL.

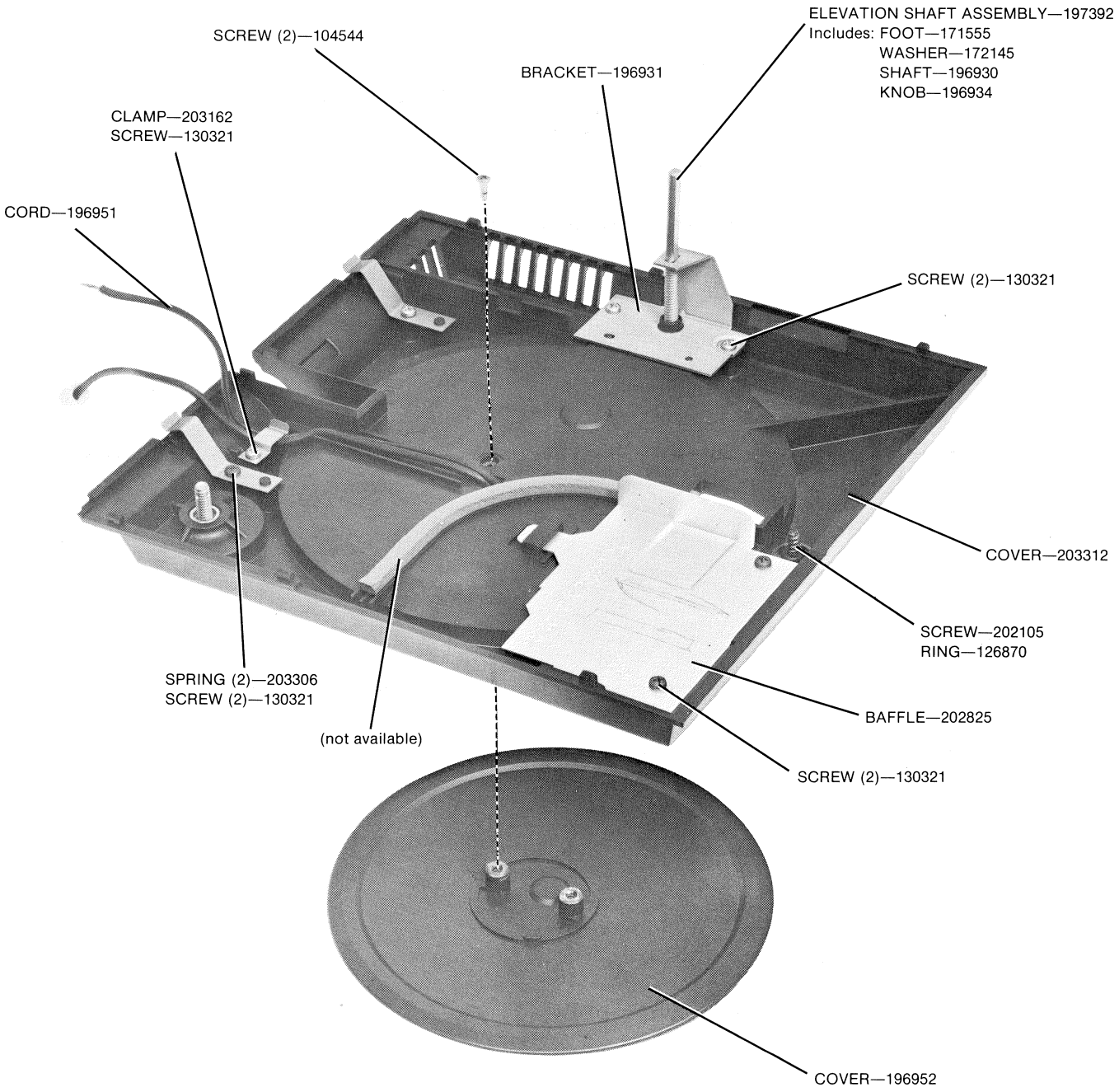


FIGURE 6 BASE COVER ASSEMBLY—196960

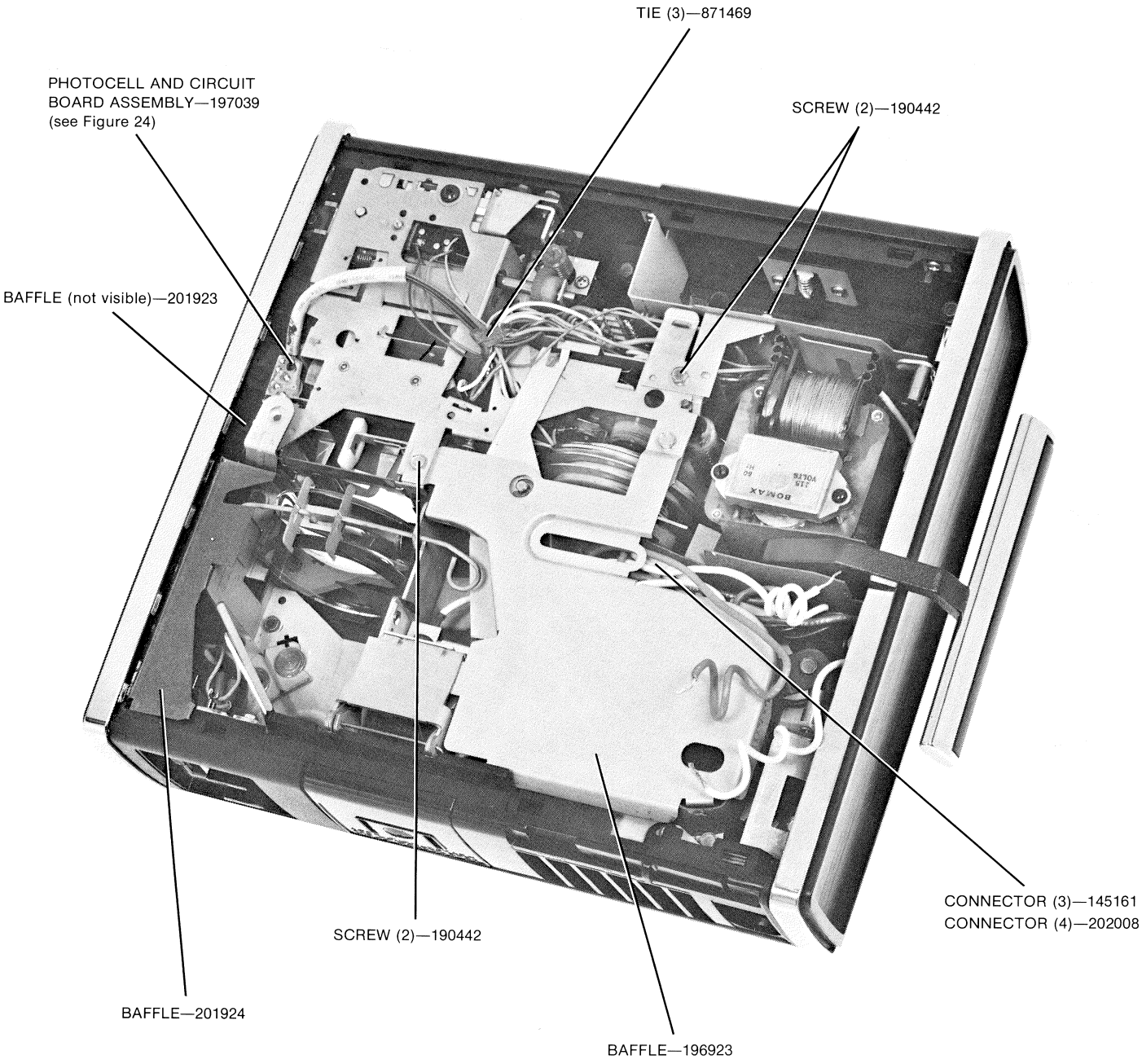

TIE (3)—871469
PHOTOCELL AND CIRCUIT BOARD ASSEMBLY—197039 (see Figure 24)
SCREW (2)—190442
BAFFLE (not visible)—201923
CONNECTOR (3)—145161
CONNECTOR (4)—202008
SCREW (2)—190442
BAFFLE—201924
BAFFLE—196923

FIGURE 7

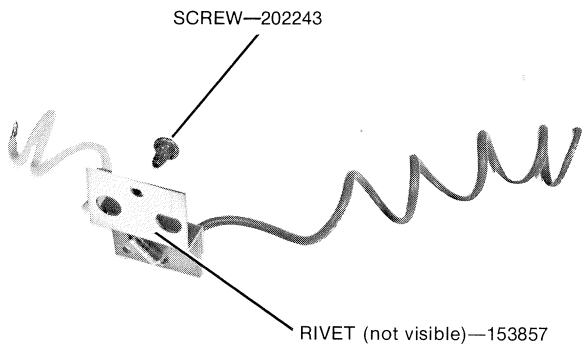


FIGURE 8 FUSE BRACKET ASSEMBLY—197013

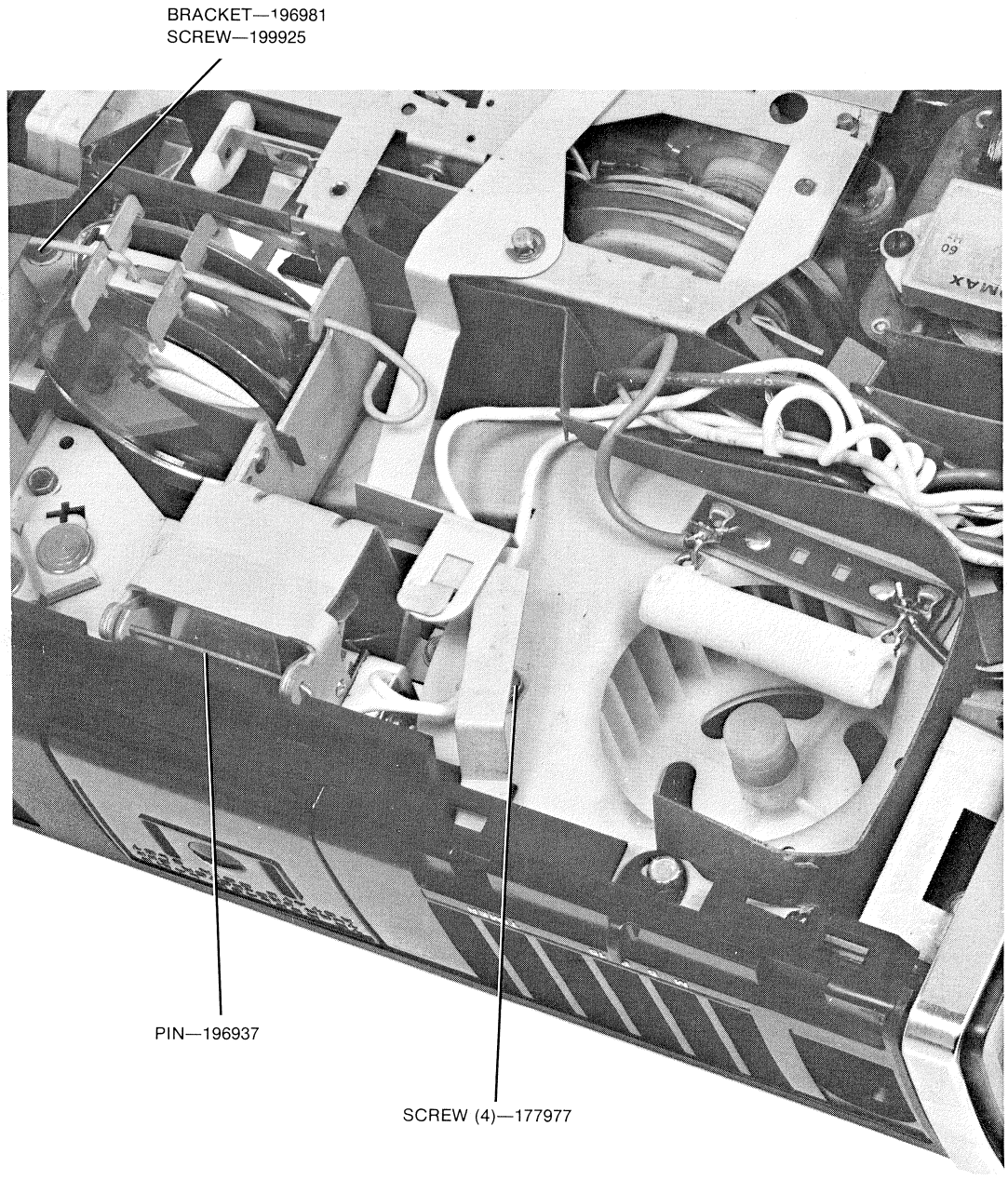
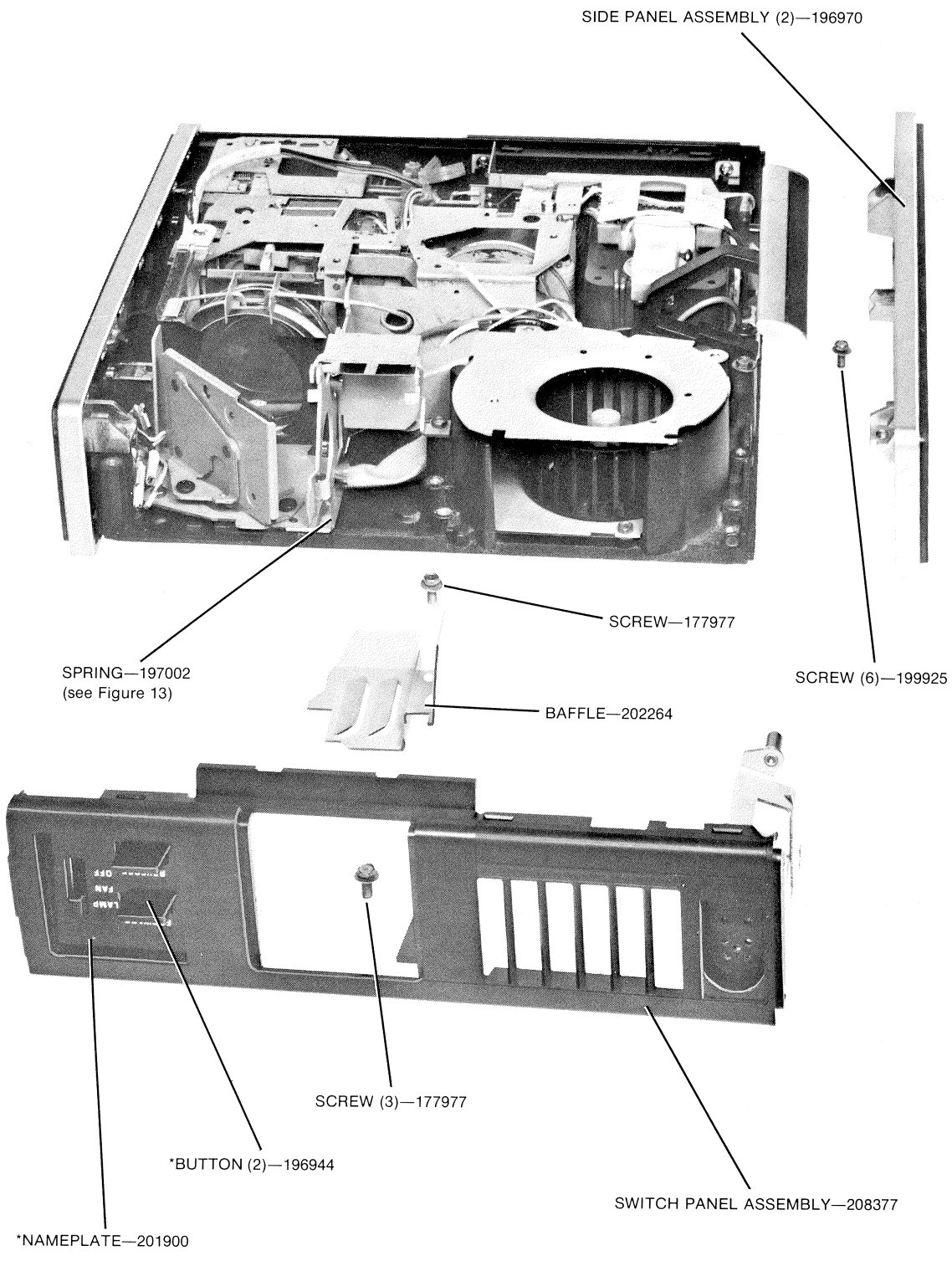


FIGURE 9



*Included in the SWITCH PANEL ASSEMBLY—208377

FIGURE 10

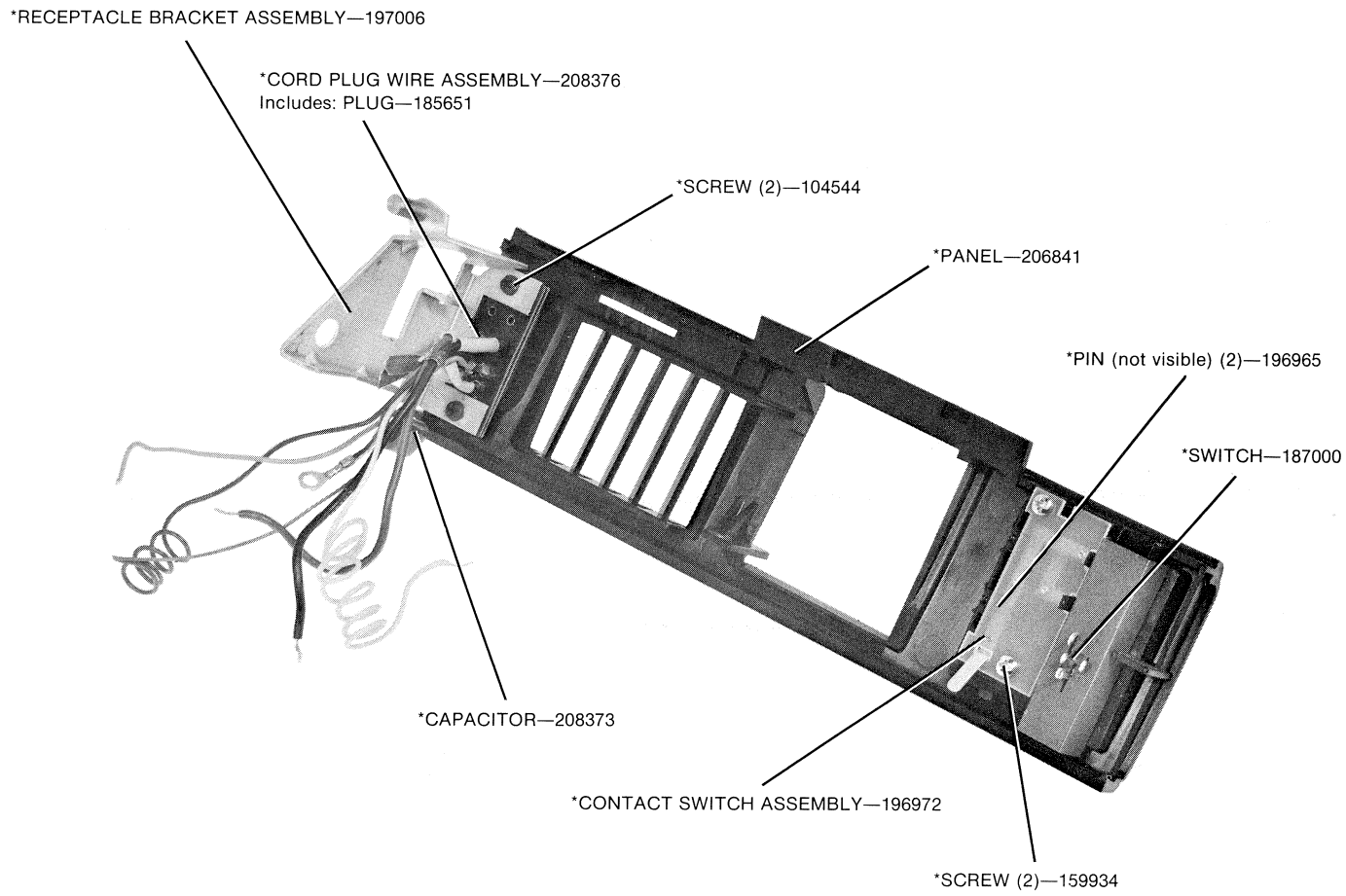


FIGURE 11 SWITCH PANEL ASSEMBLY—208377

*Included in the SWITCH PANEL ASSEMBLY—208377

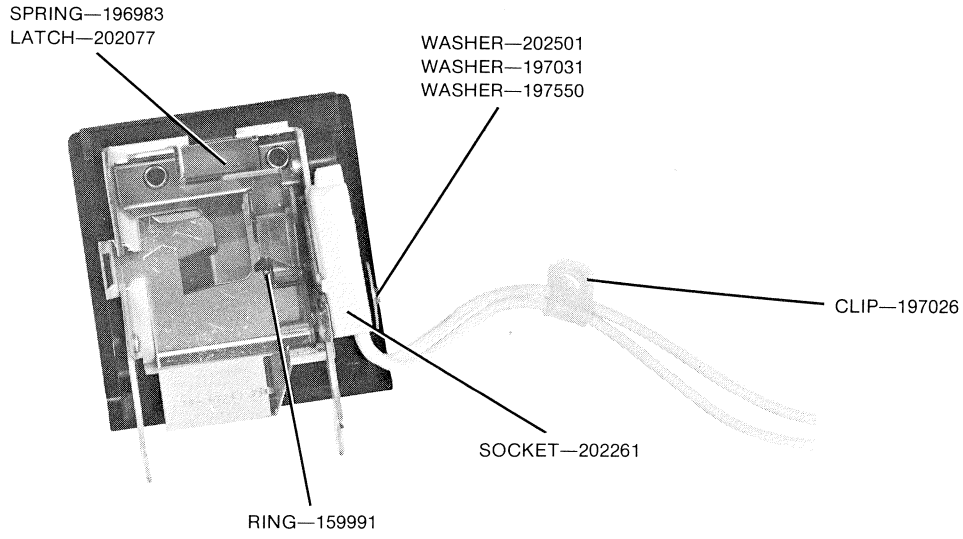
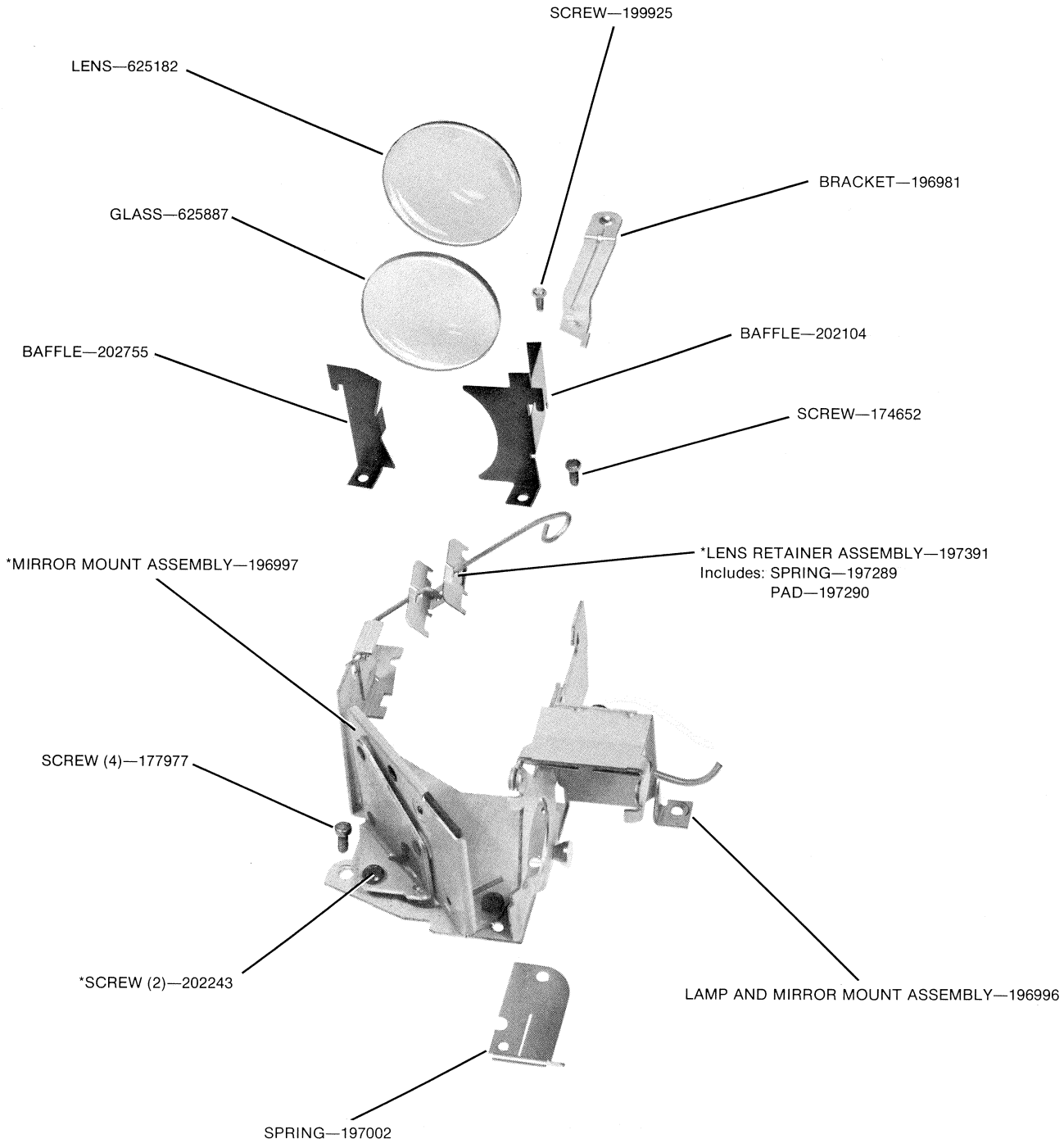


FIGURE 12 LAMP DOOR ASSEMBLY—197004



*Included in the LAMP AND MIRROR MOUNT ASSEMBLY—196996

FIGURE 13

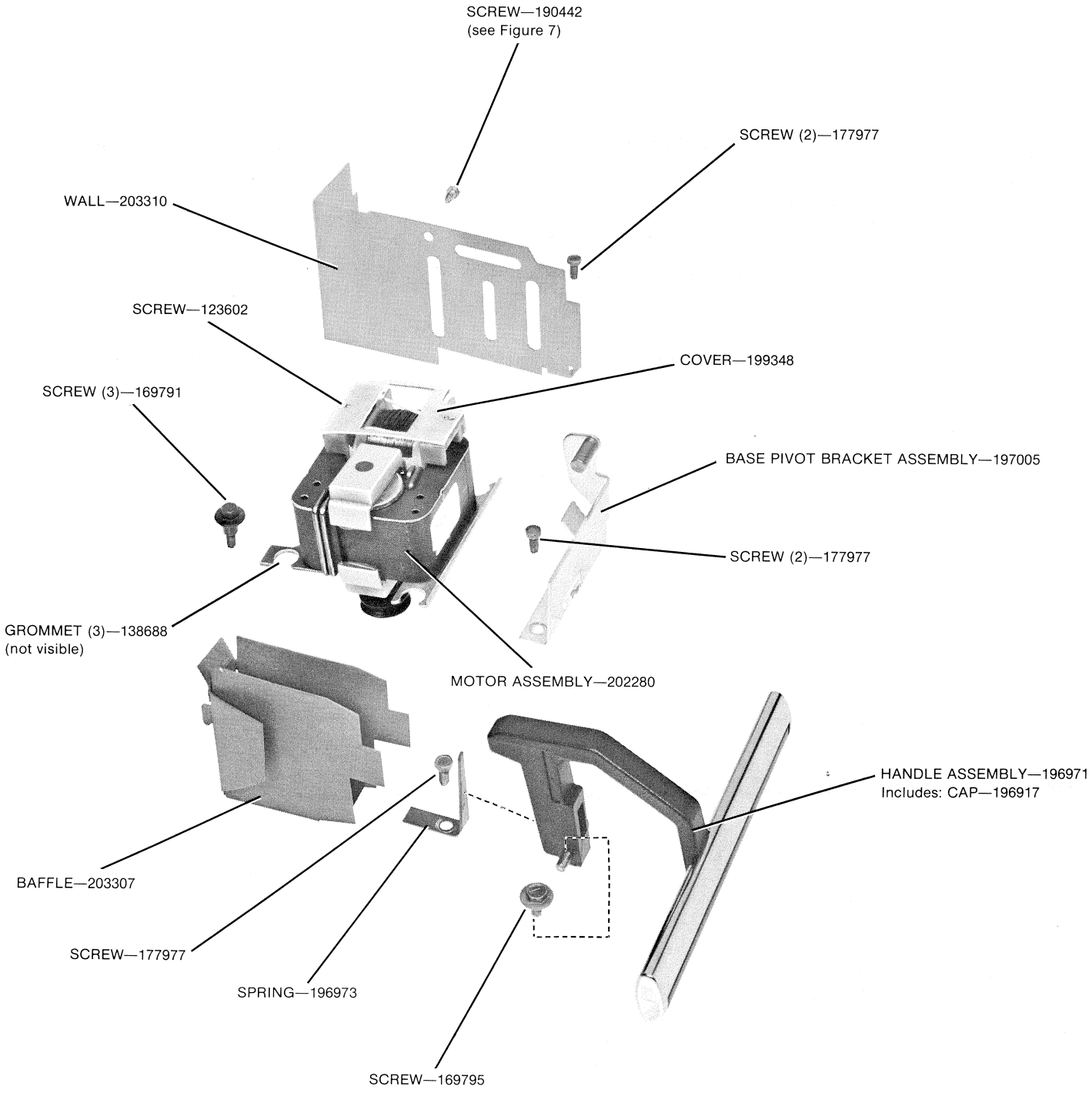

SCREW—190442
(see Figure 7)
SCREW (2)—177977
WALL—203310
SCREW—123602
COVER—199348
SCREW (3)—169791
BASE PIVOT BRACKET ASSEMBLY—197005
SCREW (2)—177977
GROMMET (3)—138688
(not visible)
MOTOR ASSEMBLY—202280
HANDLE ASSEMBLY—196971
Includes: CAP—196917
BAFFLE—203307
SCREW—177977
SPRING—196973
SCREW—169795

FIGURE 14

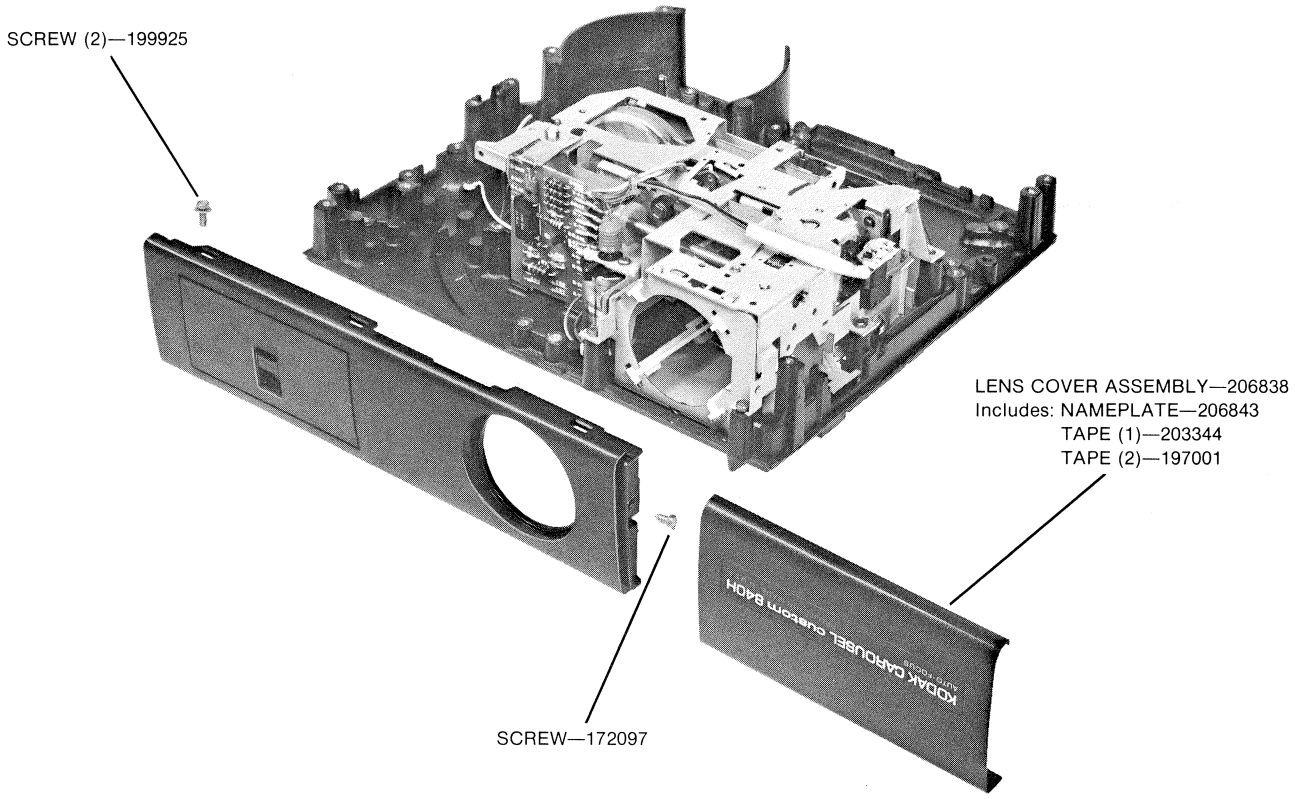


FIGURE 15

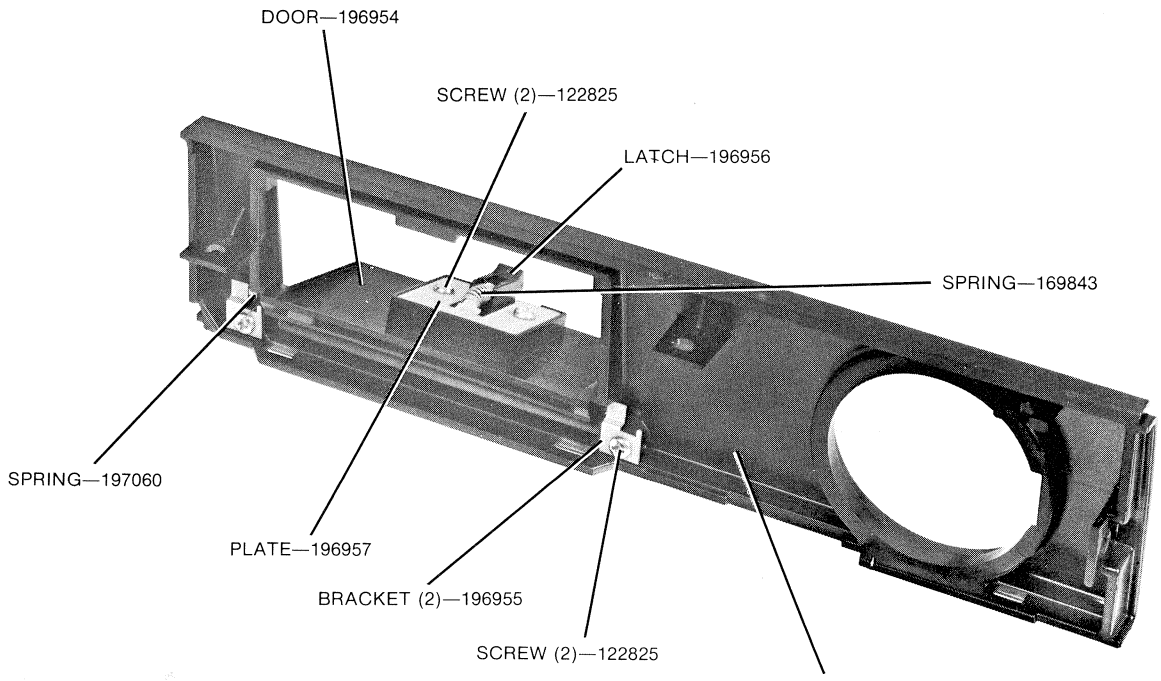


FIGURE 16

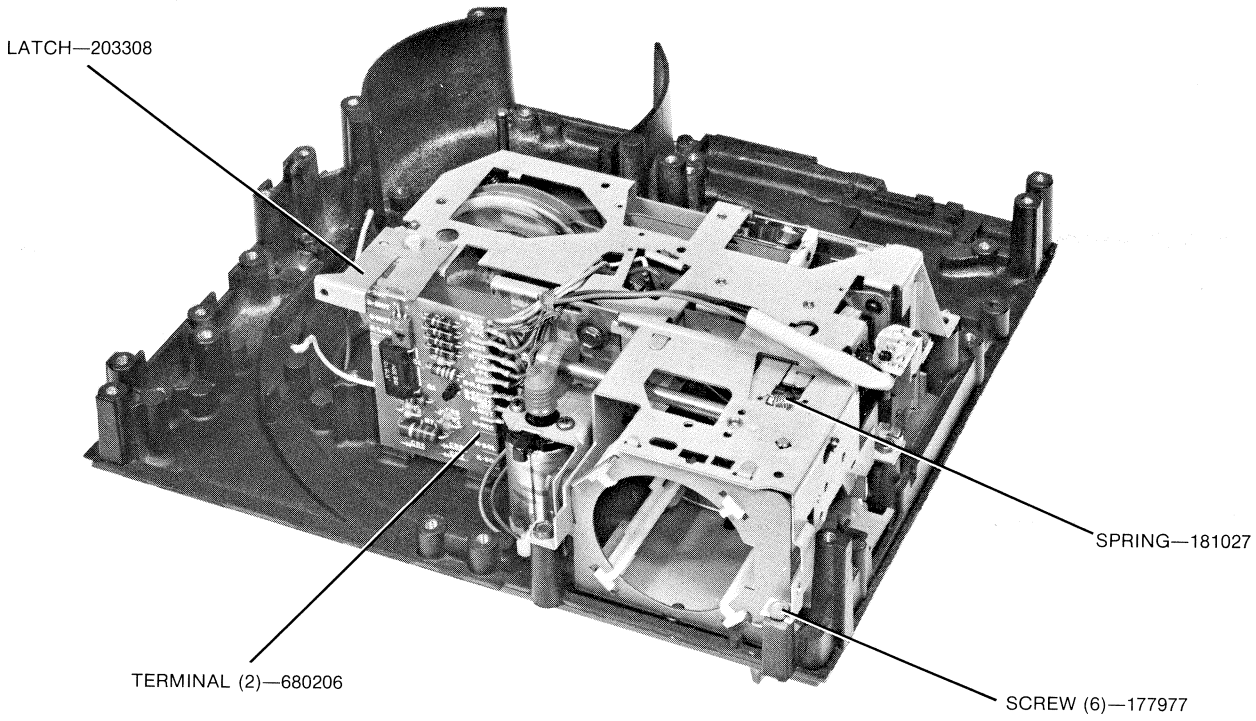


FIGURE 17

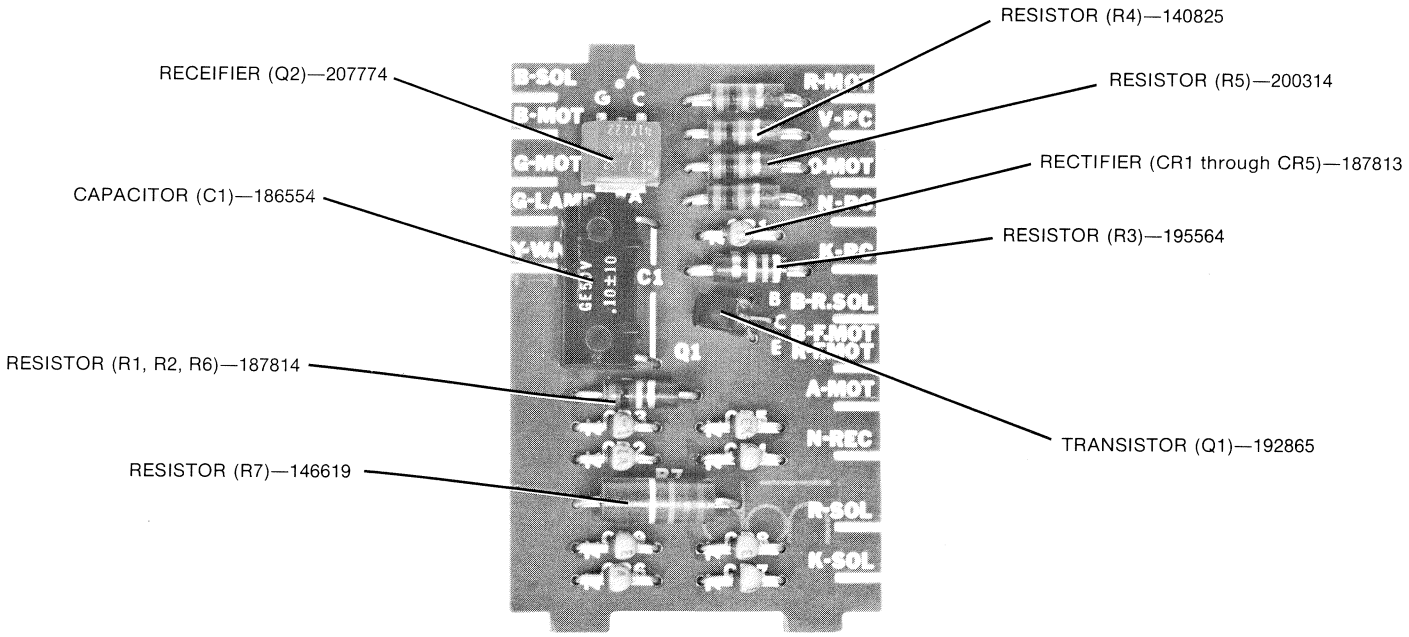


FIGURE 18 COMPONENT BOARD ASSEMBLY—197399

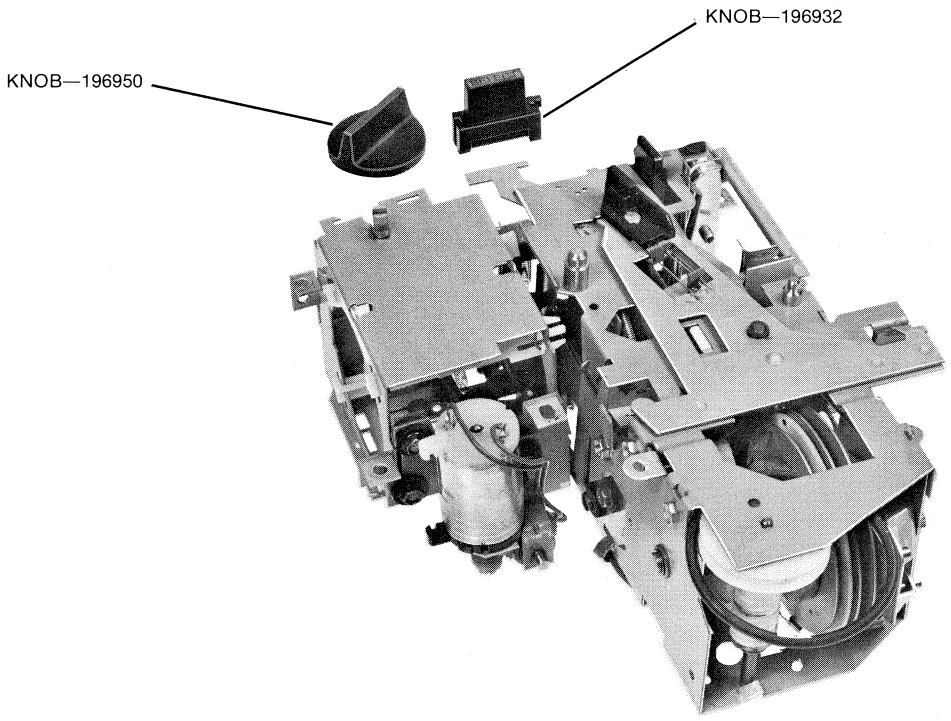


FIGURE 19

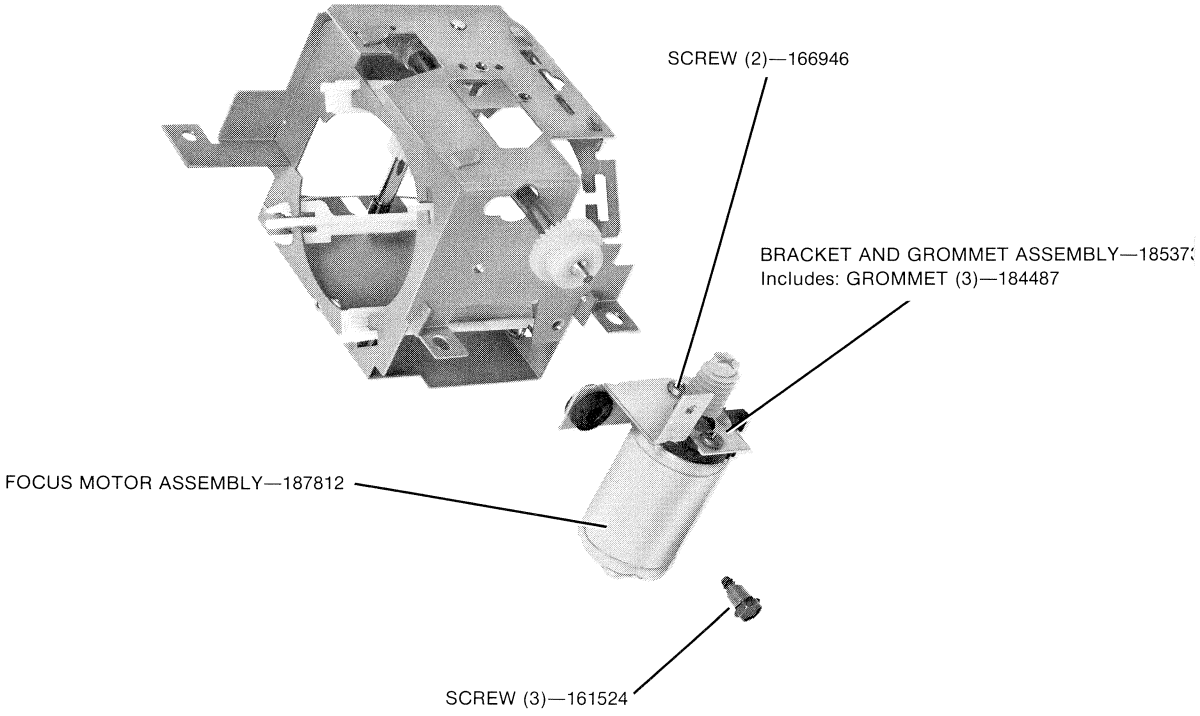


FIGURE 20

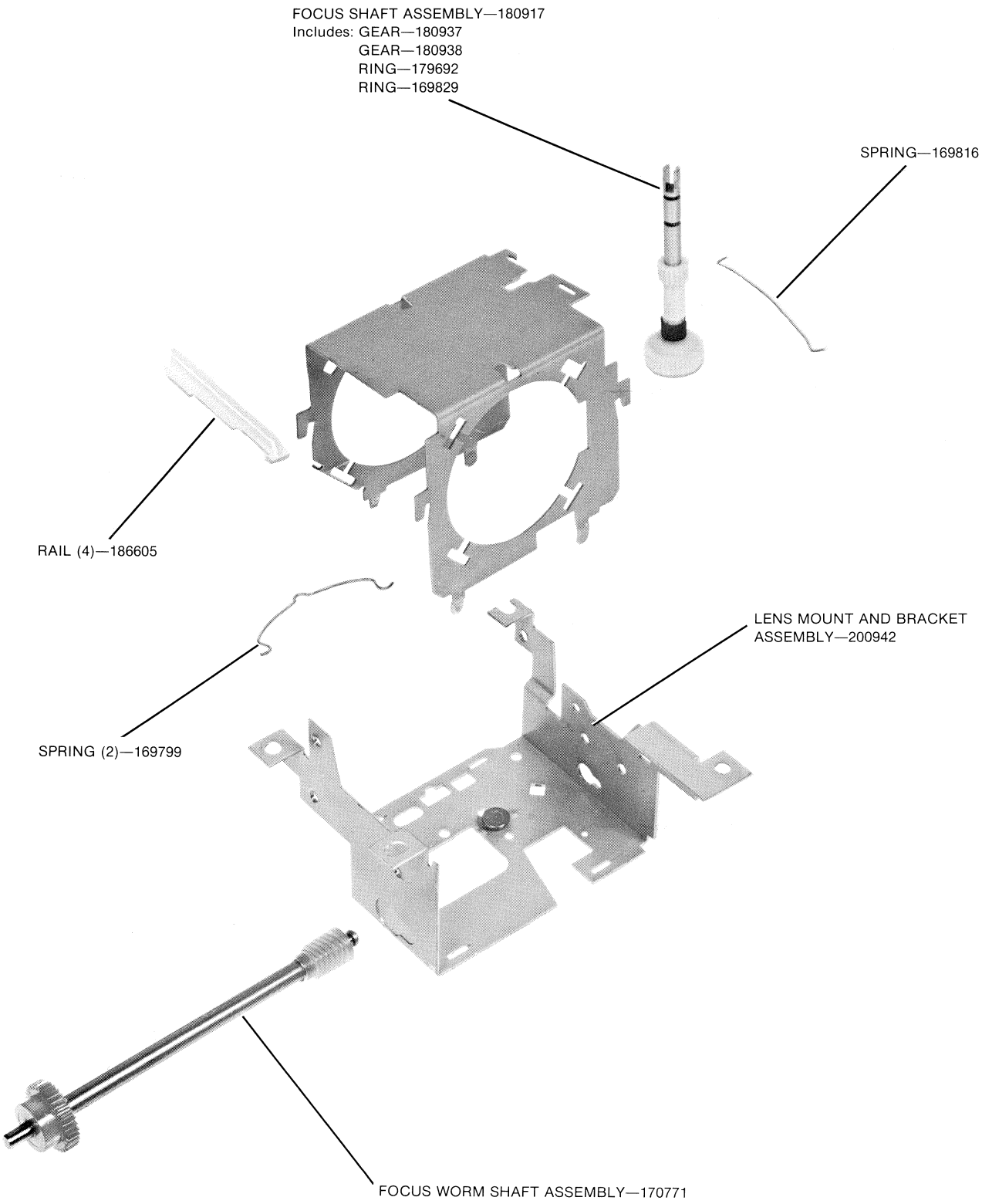

FOCUS SHAFT ASSEMBLY—180917
Includes: GEAR—180937
GEAR—180938
RING—179692
RING—169829
SPRING—169816
RAIL (4)—186605
LENS MOUNT AND BRACKET ASSEMBLY—200942
SPRING (2)—169799
FOCUS WORM SHAFT ASSEMBLY—170771

FIGURE 21

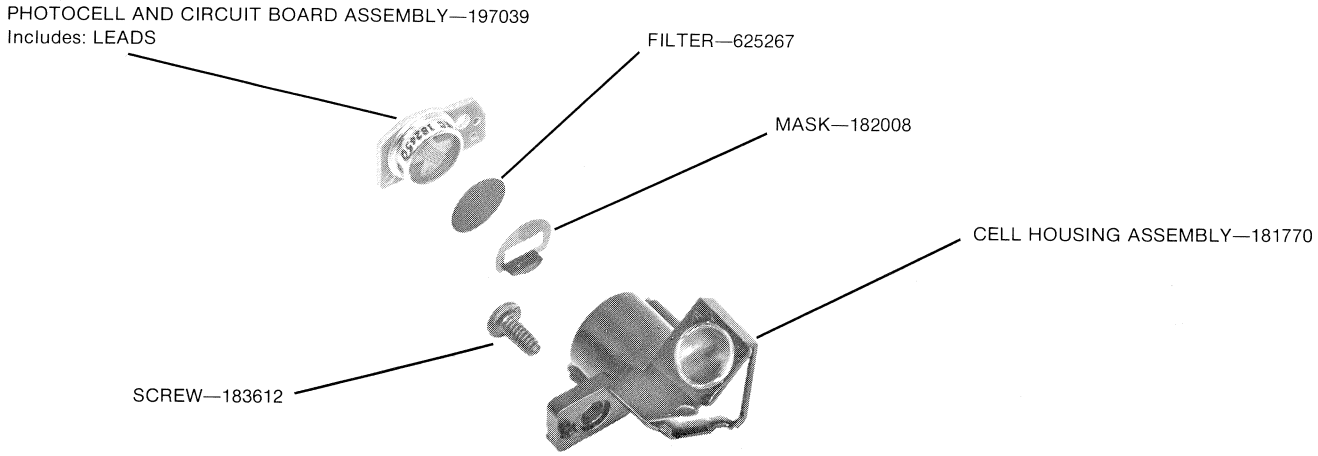


FIGURE 22

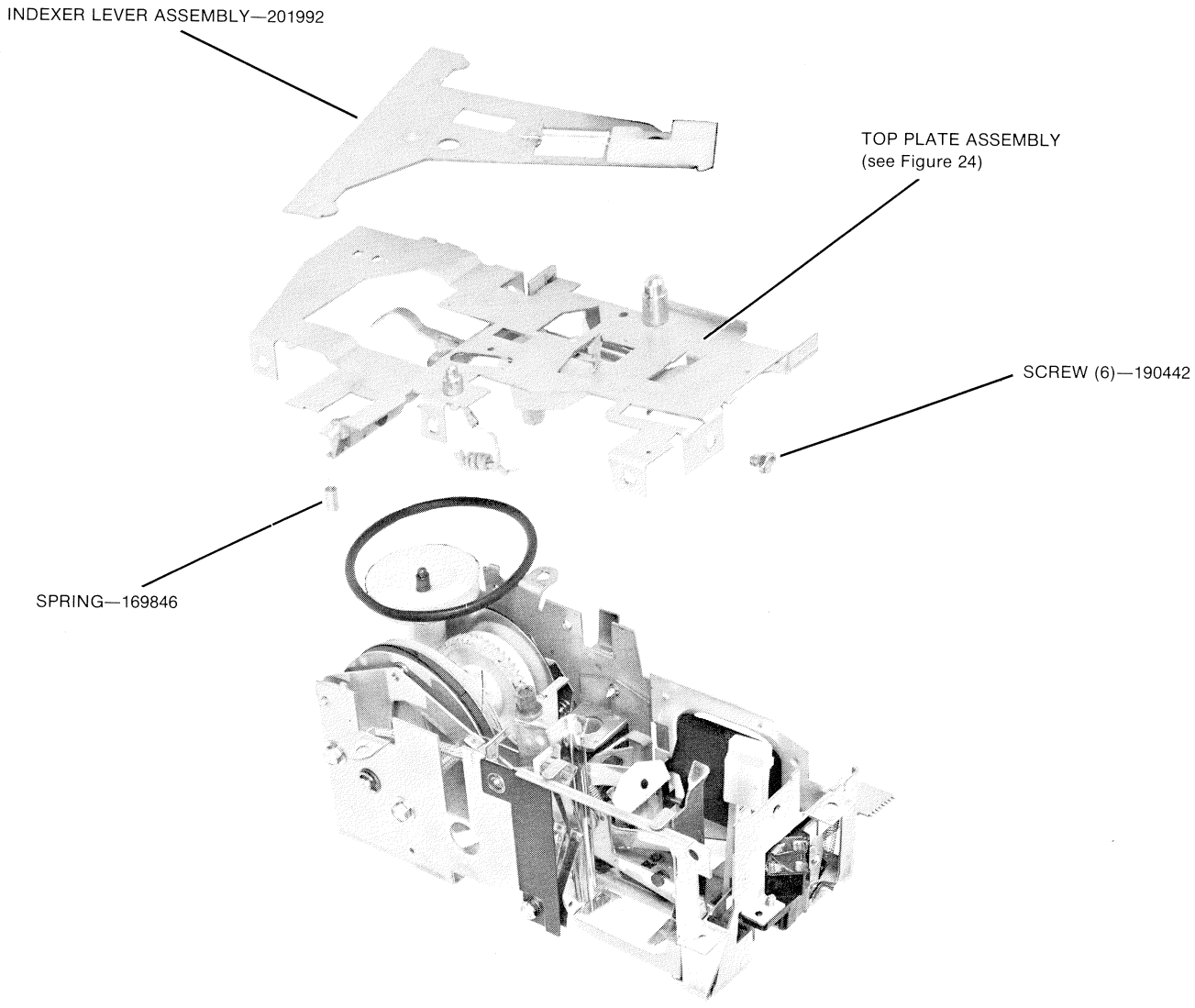


FIGURE 23 MECHANISM ASSEMBLY—206837

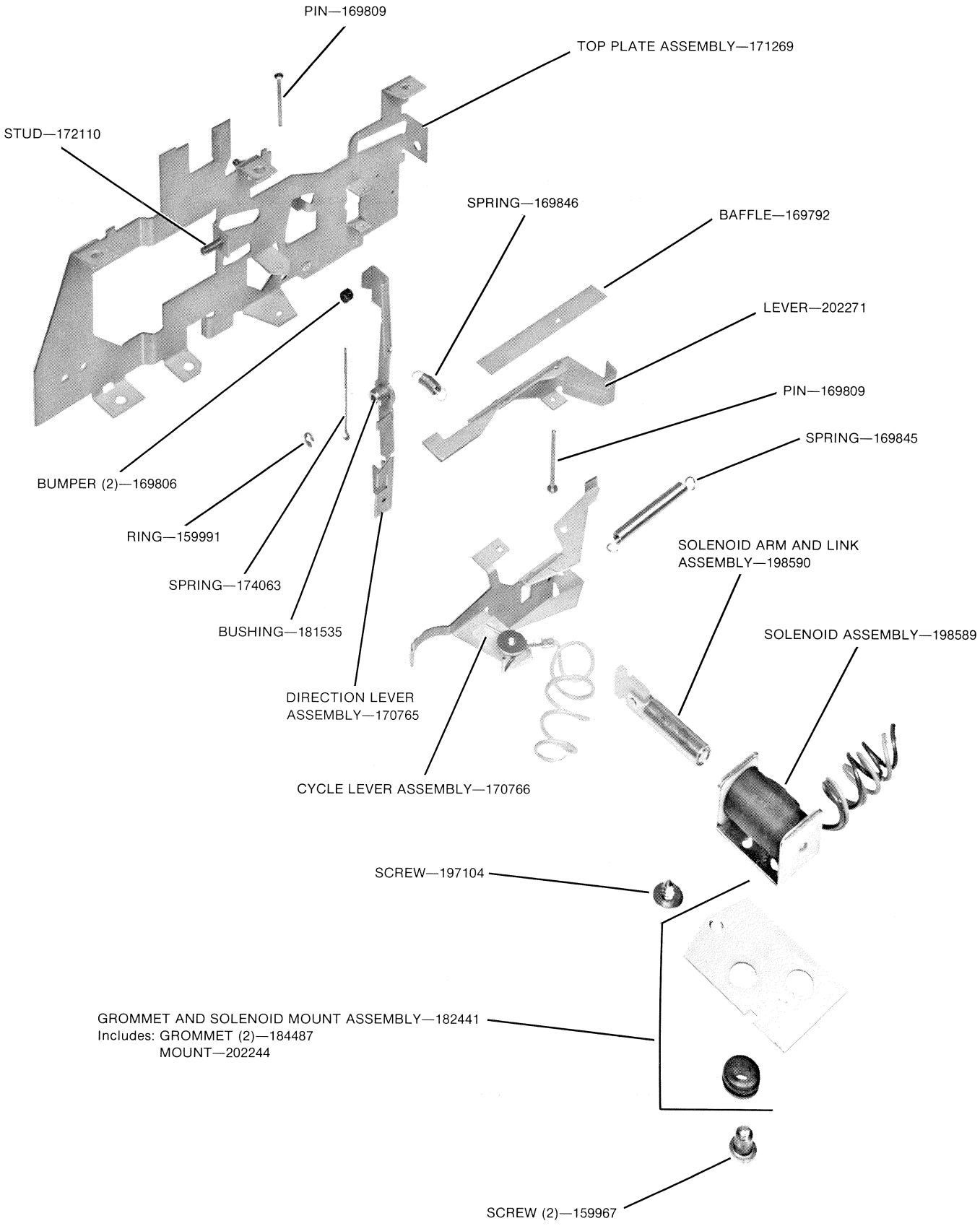

PIN—169809
TOP PLATE ASSEMBLY—171269
STUD—172110
SPRING—169846
BAFFLE—169792
LEVER—202271
PIN—169809
SPRING—169845
BUMPER (2)—169806
RING—159991
SPRING—174063
BUSHING—181535
DIRECTION LEVER ASSEMBLY—170765
SOLENOID ARM AND LINK ASSEMBLY—198590
SOLENOID ASSEMBLY—198589
CYCLE LEVER ASSEMBLY—170766
SCREW—197104
GROMMET AND SOLENOID MOUNT ASSEMBLY—182441
Includes: GROMMET (2)—184487
MOUNT—202244
SCREW (2)—159967

FIGURE 24

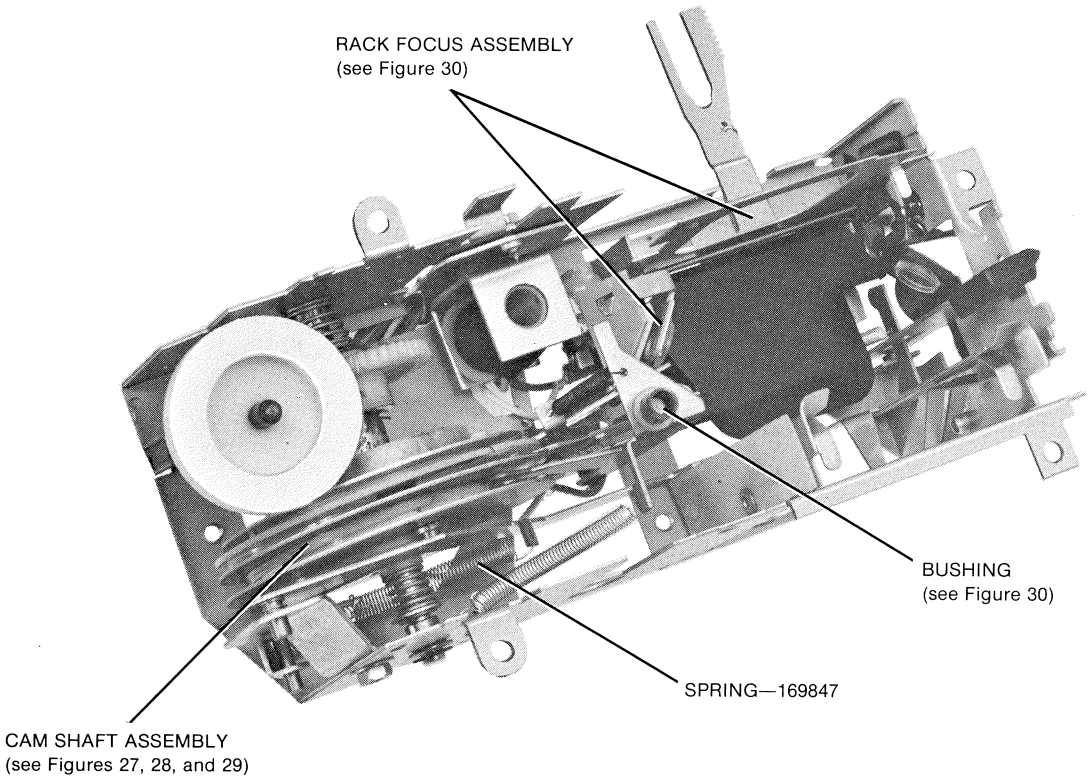


FIGURE 25

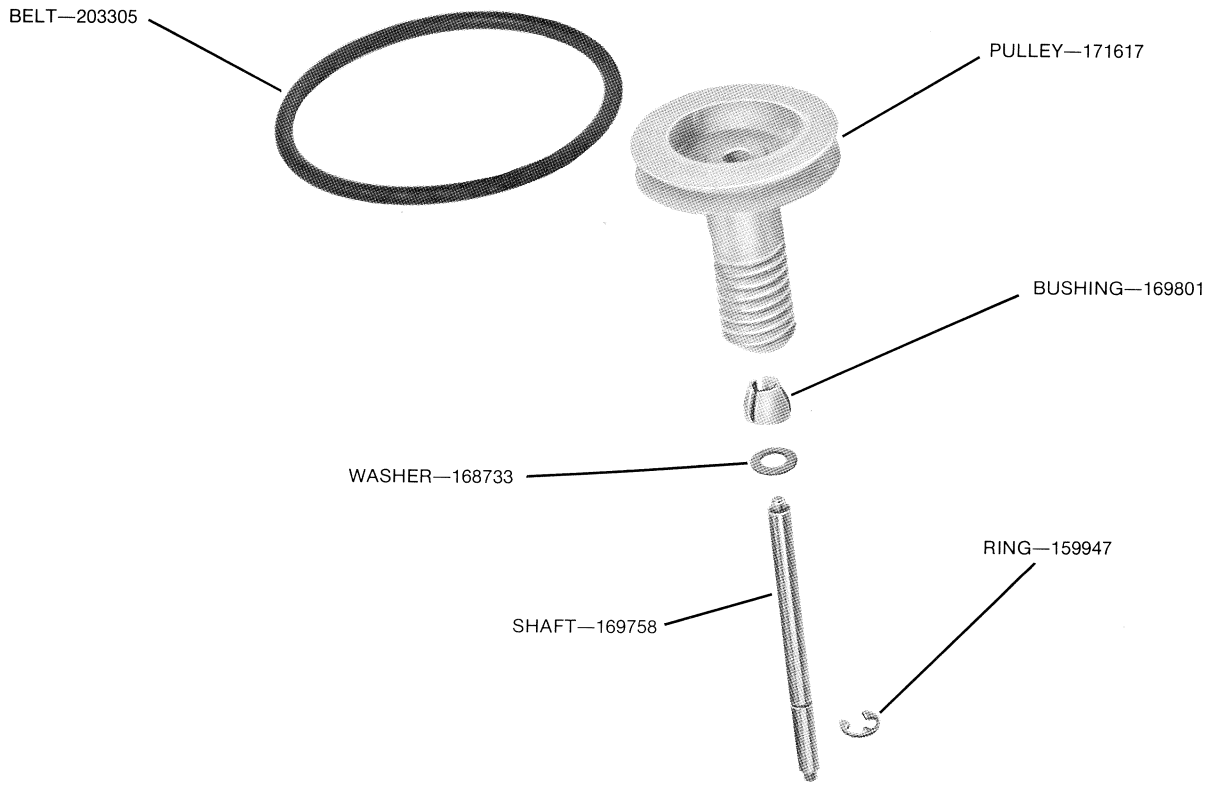
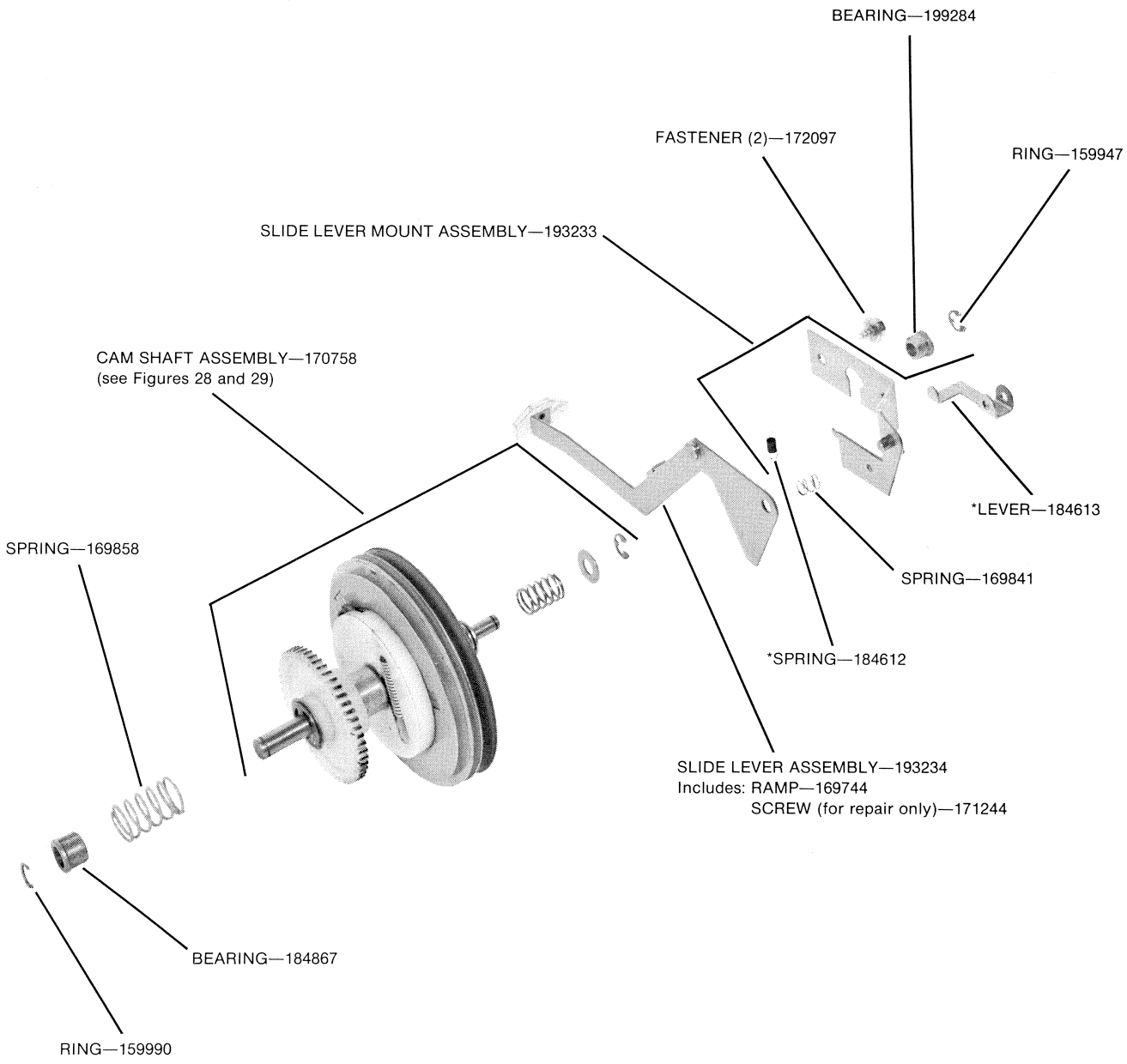


FIGURE 26

Order by PART NUMBER, NAME, and EQUIPMENT MODEL.



*Included in the SLIDE MOUNT LEVER AND SPRING ASSEMBLY

FIGURE 27

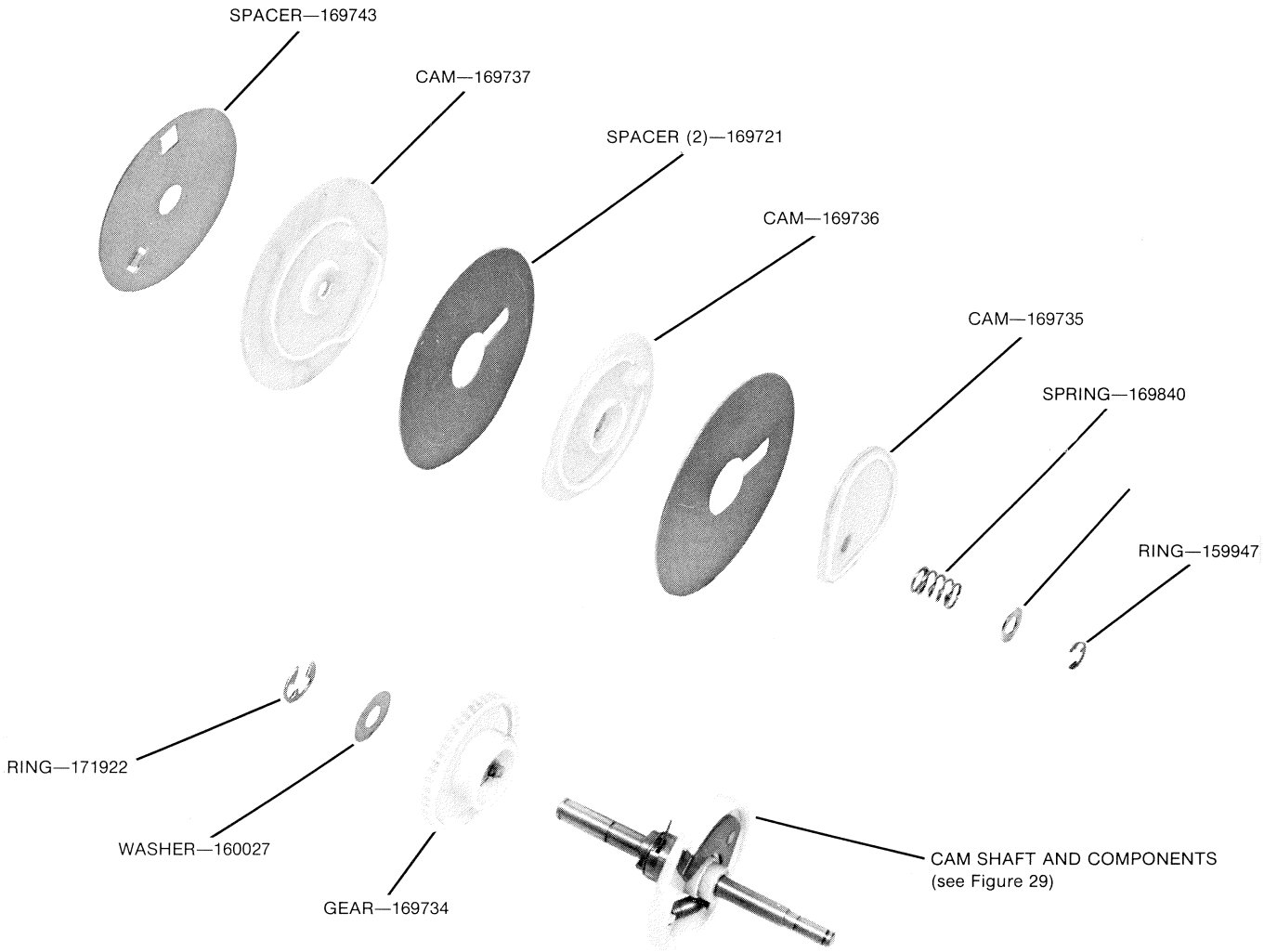


FIGURE 28 CAM SHAFT ASSEMBLY—170758

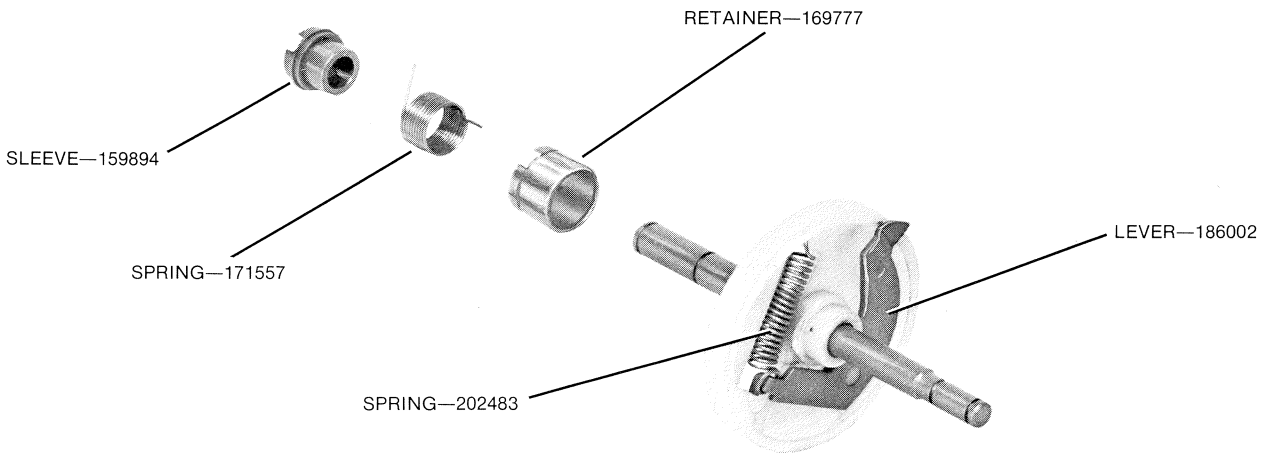


FIGURE 29

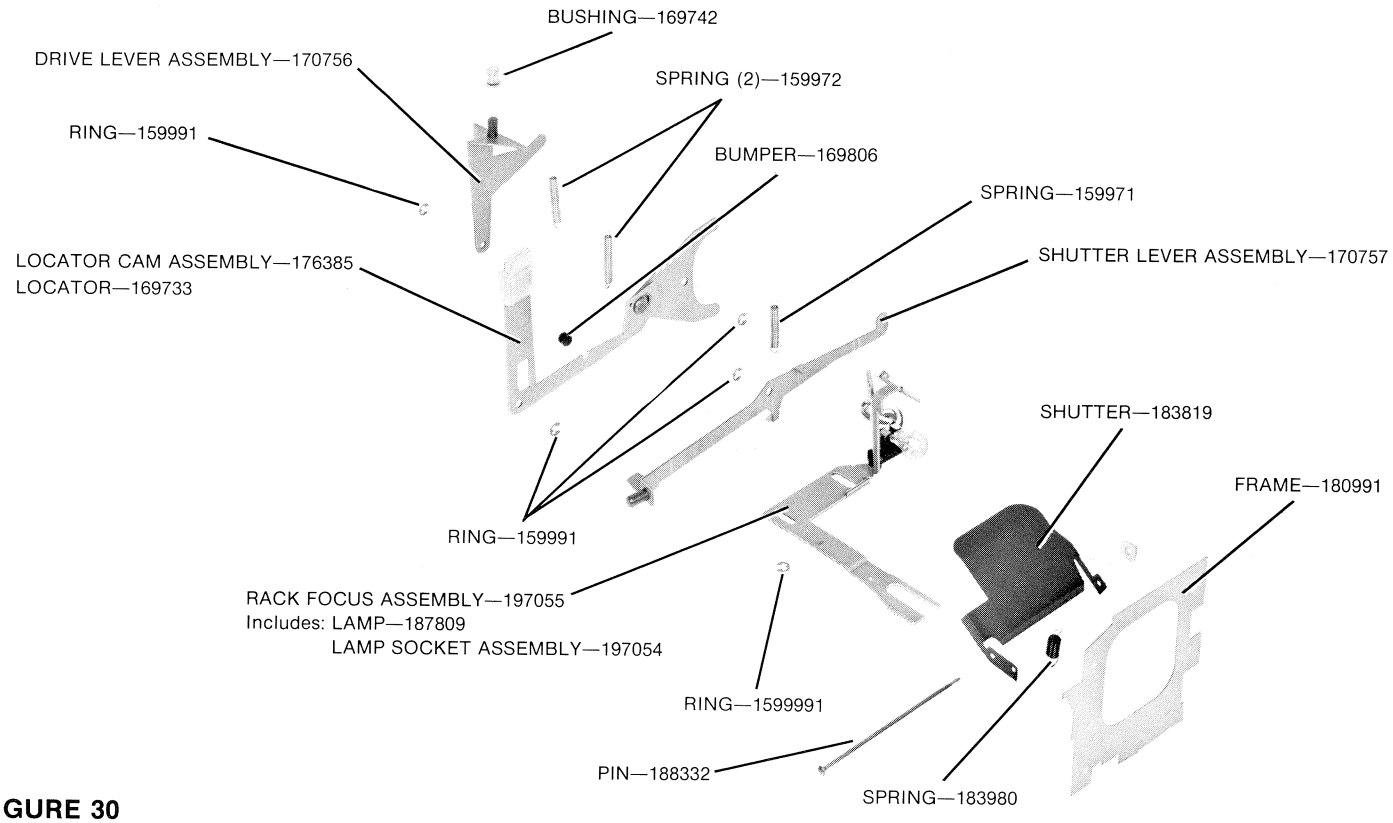


FIGURE 30

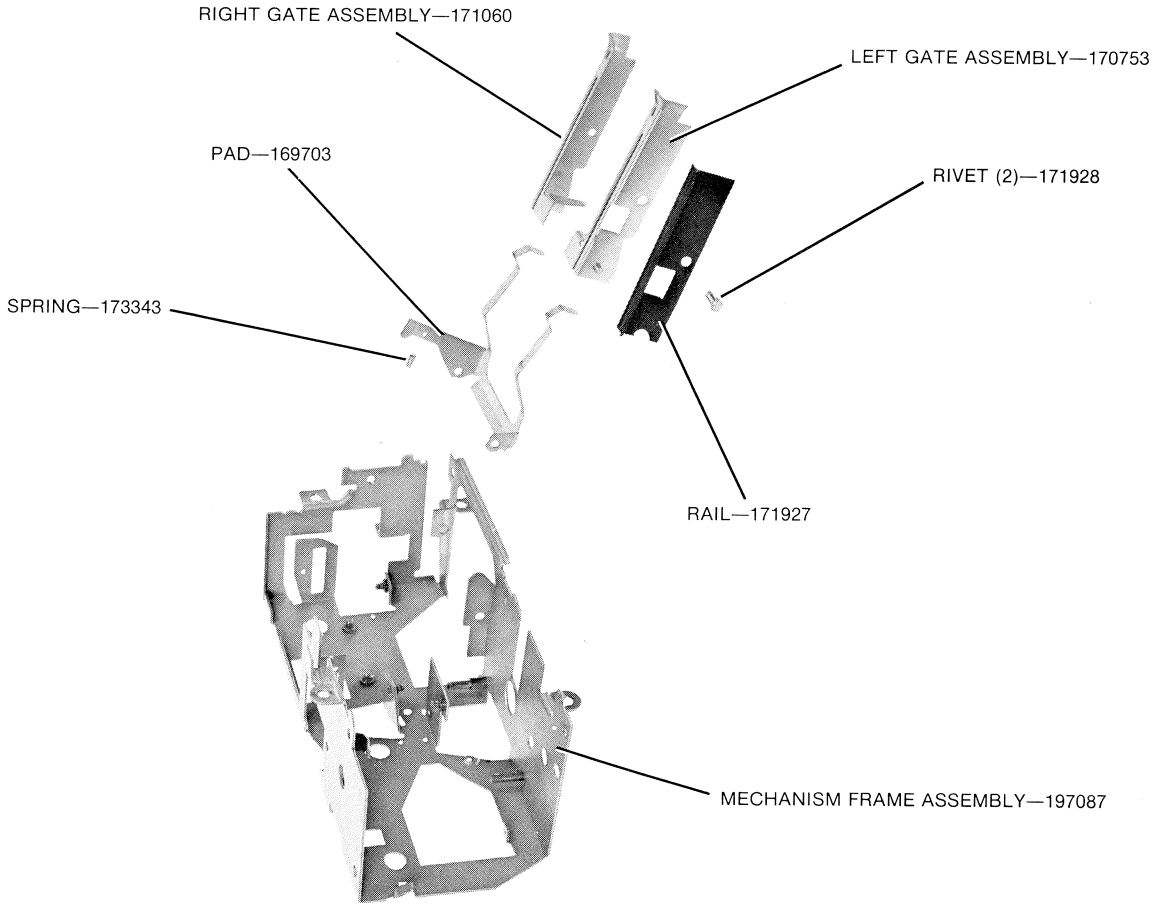


FIGURE 31

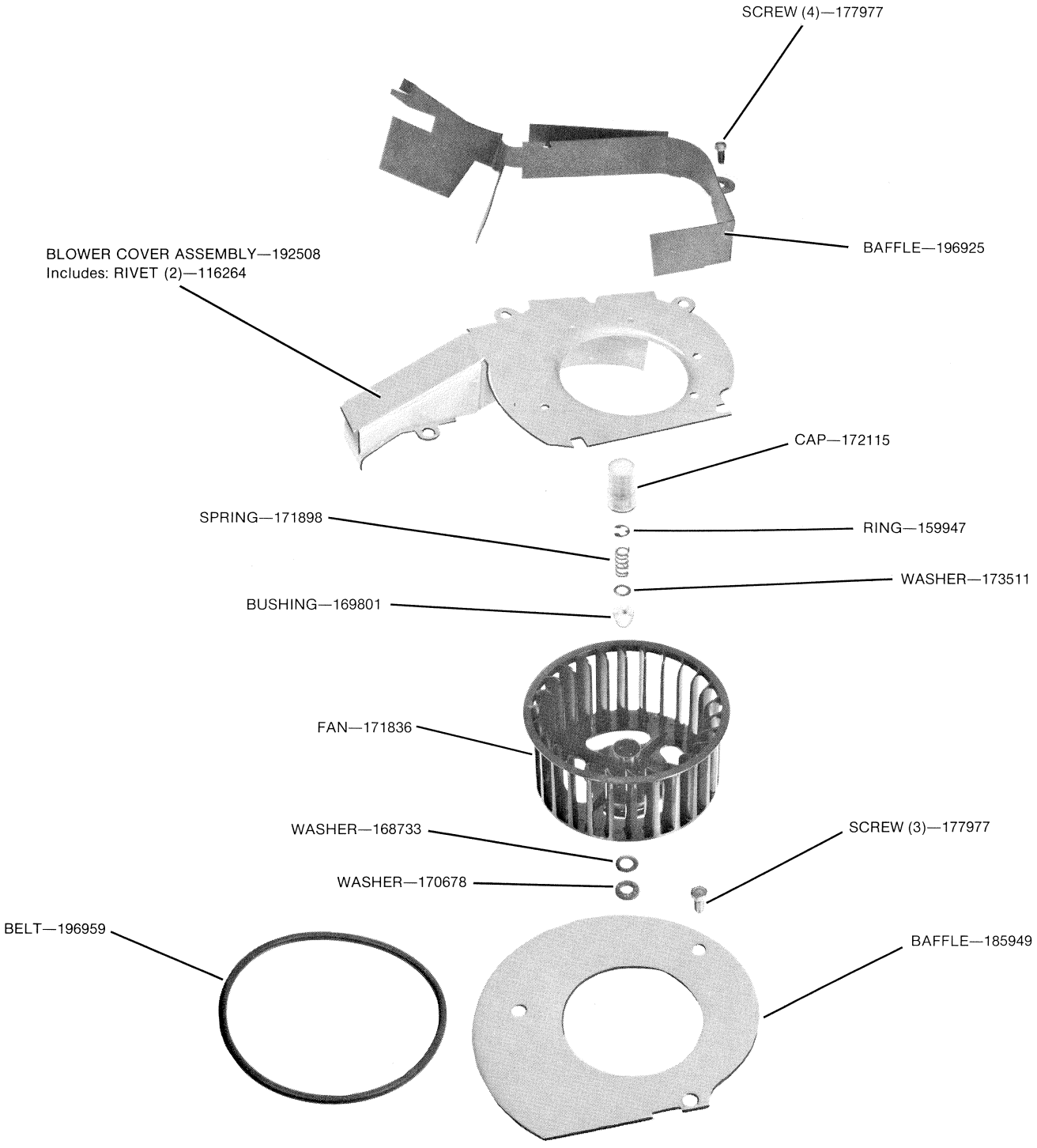

SCREW (4)—177977
BAFFLE—196925
BLOWER COVER ASSEMBLY—192508
Includes: RIVET (2)—116264
CAP—172115
SPRING—171898
RING—159947
WASHER—173511
BUSHING—169801
FAN—171836
WASHER—168733
SCREW (3)—177977
WASHER—170678
BELT—196959
BAFFLE—185949

FIGURE 32

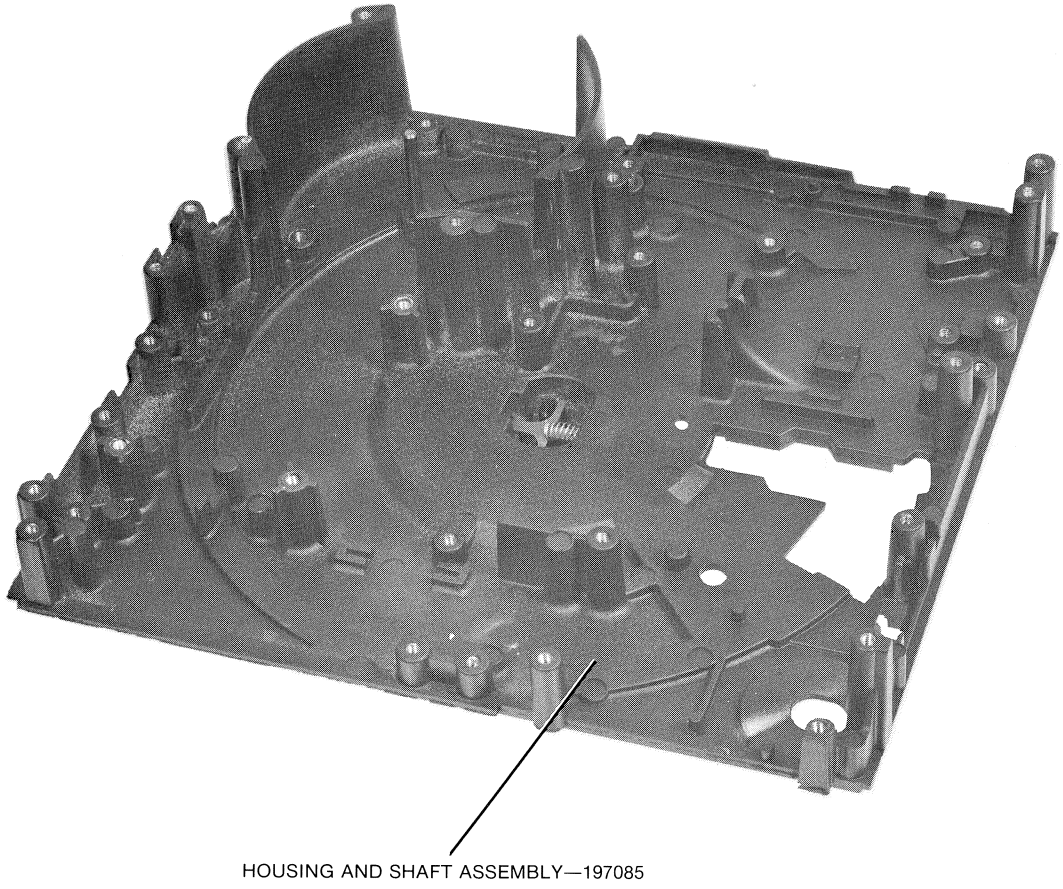


FIGURE 33

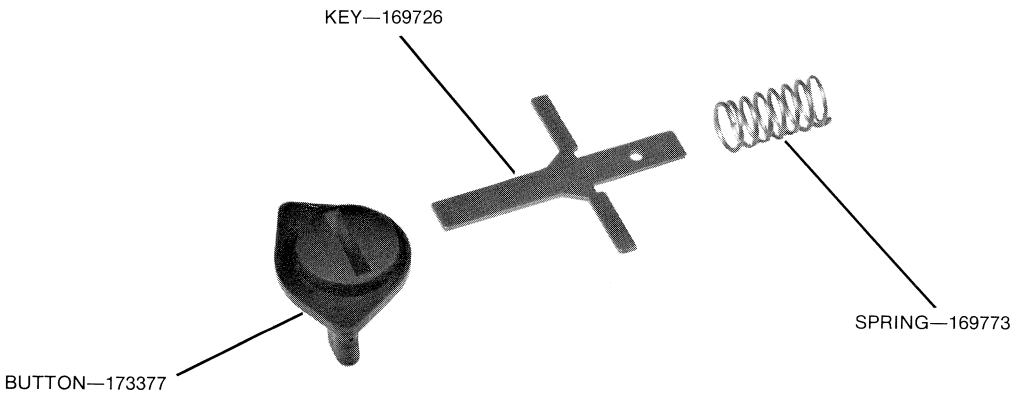


FIGURE 34

PART NO.	PART NAME	FIG.
36481	Screw - Tap, Type B, No. 6 x 3/8, pan hd	5
104544	Screw - Tap, Type B, No. 6 x 7/16, pan hd	6,11
116264	Rivet - Blower cover	32
122825	Screw - Tap, Type B, No. 6 x 1/4, pan hd	16
123602	Screw - Motor cover	14
126870	Ring - Retaining (Truarc No. 5133-37*)	5,6
130321	Screw - Tap, Type B, No. 6 x 3/8, pan hd	6
138688	Grommet - Motor	14
140825	Resistor (R4)	18
145161	Connector	7
146619	Resistor (R7)	18
153857	Rivet - Fuse bracket	8
159894	Sleeve - Clutch	29
159934	Screw - Tap, Type B, No. 6 x 5/16, PHILLIPS EK min hd	11
159947	Ring - Retaining (Truarc No. 5133-18*)	26,27,28,32
159967	Screw - Solenoid	24
159971	Spring - Locator lever	30
159972	Spring - Drive lever	30
159990	Ring - Retainer (Truarc No. 5103-25*)	27
159991	Ring - Retaining (Truarc No. 5133-12*)	12,24,30
160027	Washer - Cam shaft	28
161524	Screw - Focus bracket	20
166946	Screw - Tap, Type B, No. 5 x 3/16, pan hd	20
168733	Washer	26,32
169703	Pad - Pressure	31
169721	Spacer - Cam	28
169726	Key - Spindle	34
169733	Locator	30
169734	Gear - Worm	28
169735	Cam - Slide	28
169736	Cam - Index	28
169737	Cam - Locator	28
169742	Bushing - Drive post	30
169743	Spacer - Drive	28
169744	Ramp - Slide lever	27
169758	Shaft - Worm pulley	26
169773	Spring - Spindle key	34
169777	Retainer - Clutch spring	29
169791	Screw - Motor	14
169792	Baffle - Shutter	24
169795	Screw - Handle	14
169799	Spring - Lens rail	21
169801	Bushing - Fan	26,32
169806	Bumper	24,30
169809	Pin - Cycle lever	24
169816	Spring - Focus shaft	21
169829	Ring - Compression (Tinnerman C3157-20-4*)	21
169836	Screw - Tap, Type B, No. 4 x 5/16, PHILLIPS EK min hd	3
169840	Spring - Cam	28
169841	Spring - Slide lever stud	27
169843	Spring - Latch	16
169845	Spring - Select lever	24
169846	Spring - Direction lever	23,24
169847	Spring - Slide lever	25
169851	Housing - Switch bottom	3
169854	Housing - Switch	3
169858	Spring - Drive shaft	27
170678	Washer - Fan	32
170753	Left Gate Assembly	31
170756	Drive Lever Assembly	30
170757	Shutter Lever Assembly	30
170758	Cam Shaft Assembly	27,28
170765	Direction Lever Assembly	24
170766	Cycle Lever Assembly	24
170771	Focus Worm Shaft Assembly	21
171054	Remote Control Assembly	3
171055	Contact Assembly	3
171060	Right Gate Assembly	31
171244	Screw - Tap, Type B, No. 2 x 3/16, pan hd	27
171269	Top Plate Assembly	24
171535	Bushing - Direction lever	24
171555	Foot	5
171557	Spring - Clutch	29
171617	Pulley - Worm	26
171836	Fan	32
171898	Spring - Fan	32
171922	Ring - Retaining (Truarc No. 5133-25*)	28
171927	Rail - Slide lever	31
171928	Rivet - Gate	31
172097	Fastener - Lever mount	27
172110	Stud - Direction lever	24
172115	Cap - Fan	32
172145	Washer - Elevation	6
172758	Button - Remove control	3
173343	Spring - Pressure pad	31
173377	Button - Spindle	34
173511	Washer - Lower fan	32
174063	Spring - Cycle lever	24
174652	Screw - Tap, Type F, 8-32 x 1/4, hex hd	13
175225	Foot	5
176385	Locator Cam Assembly	30
177977	Screw - Tap, SWAGEFORM, 8-32 x 3/8, hex hd	9,10,13,14,17,32
179692	Ring - Compression (Tinnerman C2684-017-4*)	21
180917	Focus Shaft Assembly	21
180937	Gear - Focus clutch	21
180938	Gear - Rack clutch	21
180991	Frame - Light	30
181027	Spring - Rack	17
181376	Cord - Remote control	3
181770	Cell Housing Assembly	22
182008	Mask - Cell	22
182441	Grommet and Solenoid Mount Assembly	24

PART NO.	PART NAME	FIG.
183612	Screw - Tap, SWAGEFORM, 6-32 x 5/16, pan hd	22
183819	Shutter	30
183980	Spring - Shutter	30
184487	Grommet - Solenoid	20,24
184612	Spring - Retard lever	27
184613	Lever - Cam retard	27
184867	Bearing - Cam shaft	27
185373	Bracket and Grommet Assembly	20
185651	Plug - Cord	11
185949	Baffle - Blower	32
186002	Lever - Clutch	29
186554	Capacitor (C1)	18
186605	Rail - Lens	21
187000	Switch - Power	11
187809	Lamp	30
187812	Focus Motor Assembly	20
187813	Rectifier (CR1, CR2, CR3, CR4, CR5)	18
187814	Resistor (R1, R2, R6)	18
188332	Pin - Shutter	30
190442	Screw - Tape, Type AB, No. 8 x 5/16, hex hd	7,14,23
192508	Blower Cover Assembly	32
192865	Transistor (Q1)	18
193233	Slide Mount Lever Assembly	27
193234	Slide Lever Assembly	27
195564	Resistor (R3)	18
196917	Cap - Handle	14
196923	Baffle - Resistor	7
196925	Baffle - Bottom air	32
196930	Shaft - Elevation	6
196931	Bracket - Elevation	6
196932	Knob - Select	19
196934	Knob - Elevation	6
196937	Pin - Lamp door	9
196941	Nameplate - Dust cover	1
196944	Button - Cycle	10
196950	Knob - Focus	19
196951	Cord - Power	6
196952	Cover - Cord wrap	6
196954	Door - Storage	16
196955	Bracket - Storage door	16
196956	Latch - Door	16
196957	Plate - Latch	16
196959	Belt - Fan	32
196960	Base Cover Assembly	6
196965	Pin - Cycle button	11
196970	Side Panel Assembly	10
196971	Handle Assembly	14
196972	Contact Switch Assembly	11
196973	Spring - Handle	14
196981	Bracket - Base lock	9,13
196983	Spring - Door latch	12
196990	Leveling Knob Assembly	5
196996	Lamp and Mirror Mount Assembly	13
196997	Mirror Mount Assembly	13
197001	Tape - Nameplate	15
197002	Spring - Light shield	10,13
197004	Lamp Door Assembly	12

PART NO.	PART NAME	FIG.
197005	Base Pivot Bracket Assembly	14
197006	Receptacle Bracket Assembly	11
197013	Fuse Bracket Assembly	8
197026	Clip - Socket wire	12
197031	Washer - Socket stud	12
197037	Cover - Cust	2
197039	Photocell and Circuit Board Assembly	7,22
197043	Dust Cover Assembly	1,2
197054	Lamp Socket Assembly	30
197055	Rack Focus Assembly	30
197060	Spring - Door pivot	16
197065	Plate - Dust cover	2
197085	Housing and Shaft Assembly	33
197087	Mechanism Frame Assembly	31
197104	Screw - Tap, Type AB, No. 8 x 5/16, hex hd	24
197289	Spring - Lens retainer	13
197290	Pad - Lens retainer	13
197325	Nameplate - Symbol	4
197326	Screw - Tap, Type BF, No. 4 x 1/4, pan hd	2
197391	Lens Retainer Assembly	13
197392	Elevation Shaft Assembly	6
197399	Component Board Assembly	18
197550	Washer - Lamp socket	12
198589	Solenoid Assembly	24
198590	Solenoid Arm and Link Assembly	24
199284	Bearing - Cam shaft	27
199348	Cover - Motor	14
199925	Screw - Base lock	9,10,13,15
200314	Resistor (R5)	18
200651	Label - Lamp	5
200942	Lens Mount and Bracket Assembly	21
201900	Nameplate - Switch	10
201923	Baffle - Mechanism	7
201924	Baffle - Switch	7
201992	Indexer Lever Assembly	23
202008	Connector	7
202077	Latch Lamp door	12
202104	Baffle - Stray light	13
202105	Screw - Base cover	5,6
202106	Spring - Dust cover	2
202107	Latch - Dust cover	2
202261	Socket - Lamp	12
202243	Screw - Tap, SWAGEFORM, 8-32 x 5/16, pan hd	8,13
202244	Mount - Solenoid	24
202258	Button - Lamp door	5
202261	Socket - Lamp	12
202264	Baffle - Top housing	10
202271	Lever - Select	24
202280	Motor Assembly	14
202483	Spring - Crank	29
202501	Washer - Lamp stud	12
202755	Baffle - Lamp mount	13
202825	Baffle - Base cover	6
203162	Clamp - Cord	6
203175	Panel - Lens	16
203305	Belt - Mechanism	26

PART NO.	PART NAME	FIG.
203306	Spring - Base cover	6
203307	Baffle - Handle	14
203308	Latch - Component board	17
203310	Wall - Compartment	14
203312	Cover - Base	6
203344	Tape - Sliding cover	15
206837	Mechanism Assembly	23
206838	Lens Cover Assembly	15
206841	Panel - Switch	11
206843	Nameplate - Front	15
207774	Rectifier (Q2)	18
208373	Capacitor	11
208376	Cord Plug Wire Assembly	11
208377	Switch Panel Assembly	10,11
625182	Lens - Condenser	13
625267	Filter - WRATTEN	22
625887	Glass - Heat absorbing	13
680206	Terminal	17
850254	Washer - Cam shaft	28
871469	Tie - Wire	7

*The manufacturer's name and part number shown in parentheses are being used by Kodak at this time for replacement parts. In an emergency, customers may be able to purchase this part locally in a minimum of time. There may be other manufacturers' parts with identical specifications which may be suitable.

DECEMBER, 1972

Parts List No. 775166

KODAK CAROUSEL CUSTOM 850H, 850H-K and 860H PROJECTOR

Order parts from

Eastman Kodak Company, Central Parts Service
800 Lee Road, Rochester, New York 14650

Order by PART NUMBER, NAME, and EQUIPMENT MODEL.

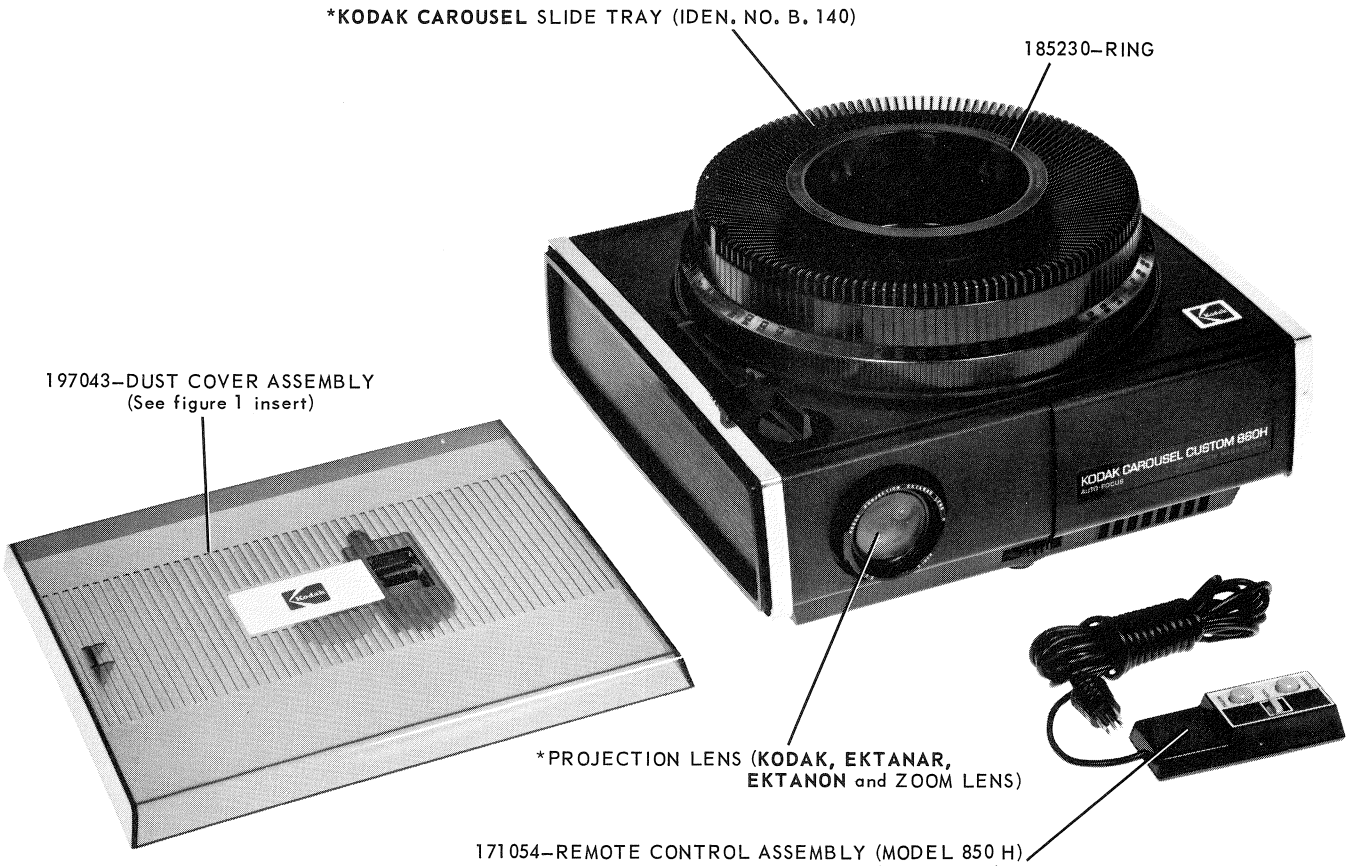


FIGURE 1

*Listed in KODAK Price Catalog

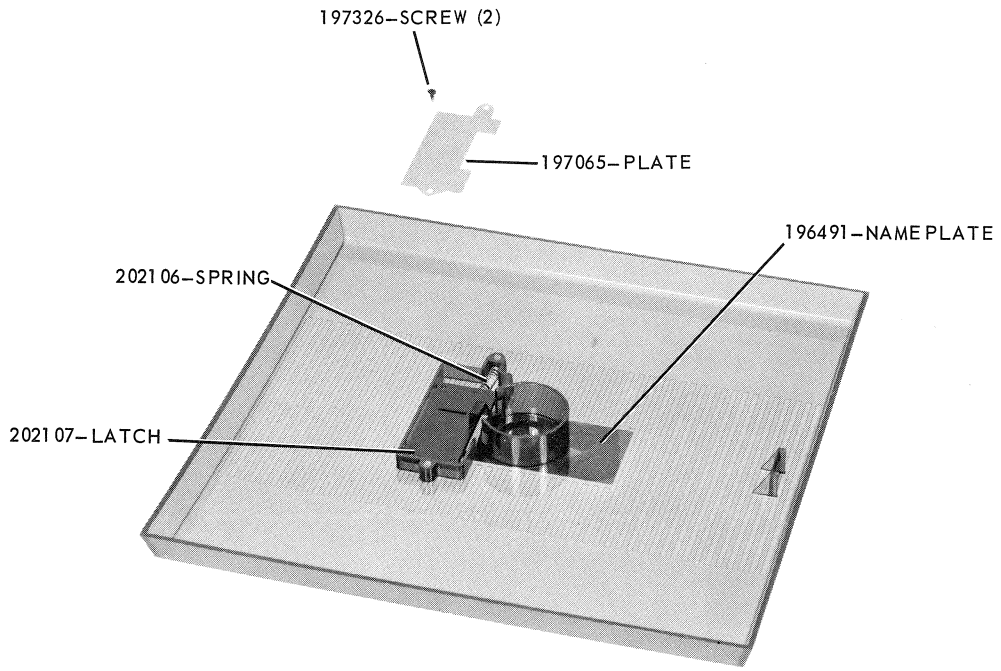


FIGURE 1 INSERT 197043–DUST COVER ASSEMBLY

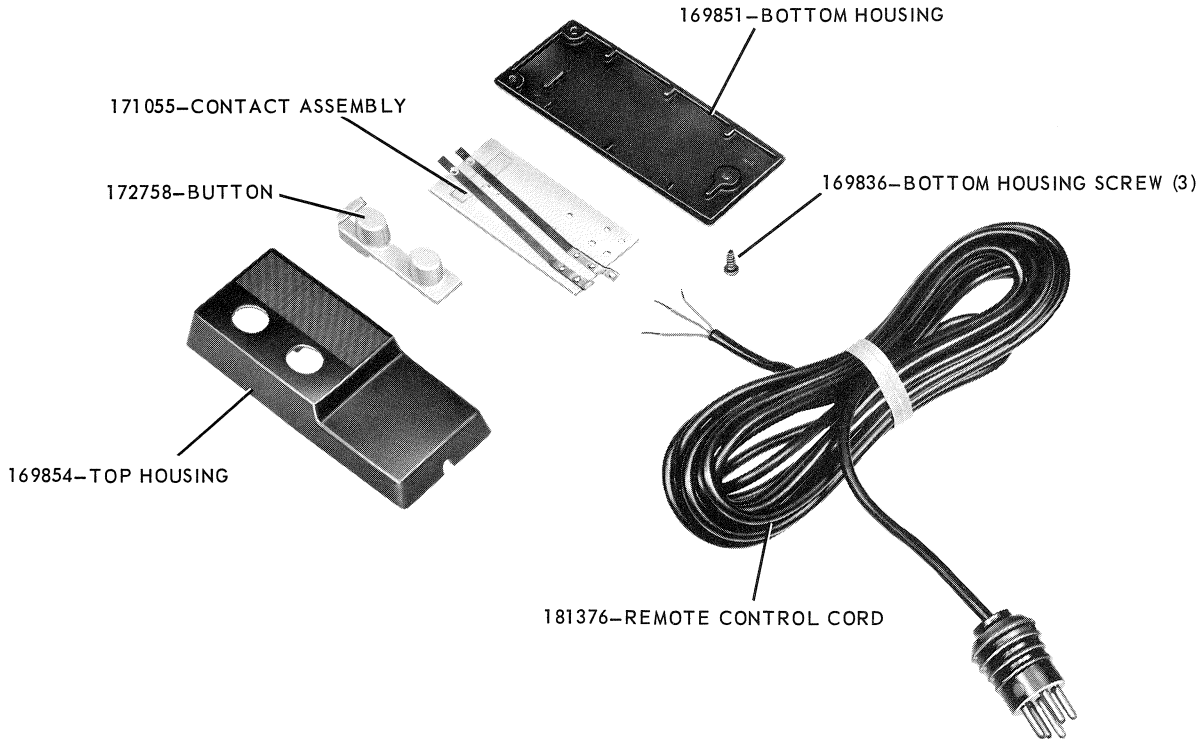


FIGURE 2 171054–REMOTE CONTROL ASSEMBLY (MODEL 850 H ONLY)

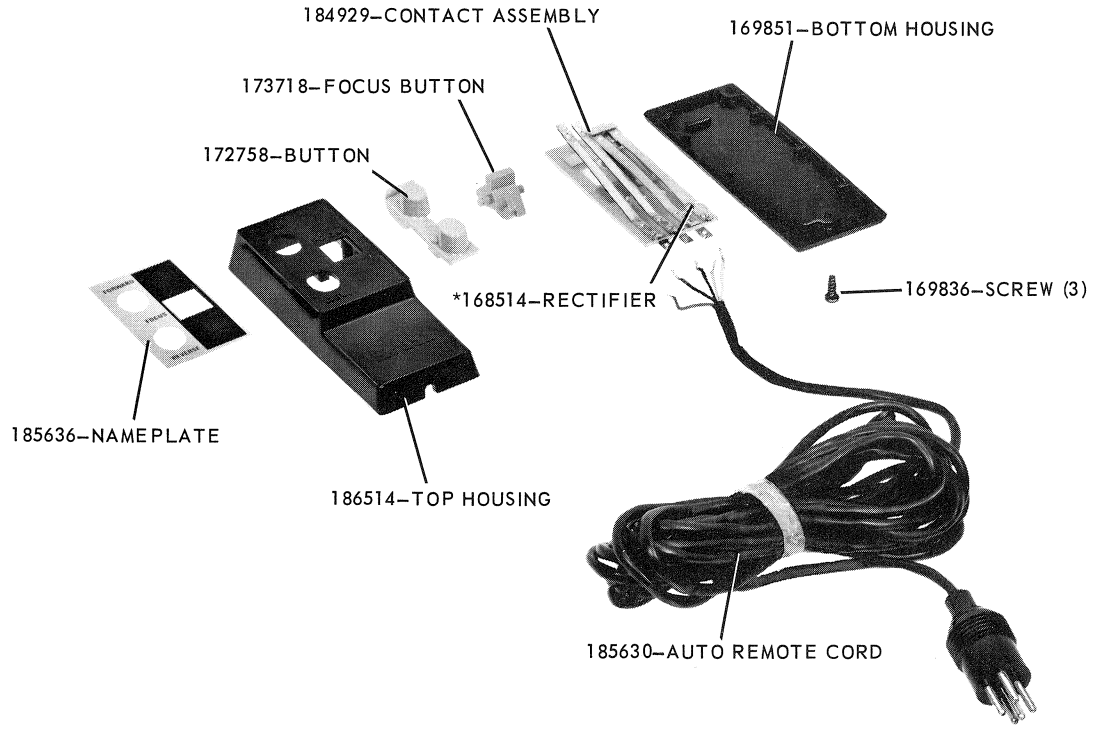


FIGURE 3 184927–REMOTE CORD ASSEMBLY (MODEL 860 H ONLY)

*168514–RECTIFIER
NOT Included in 184929–CONTACT ASSEMBLY

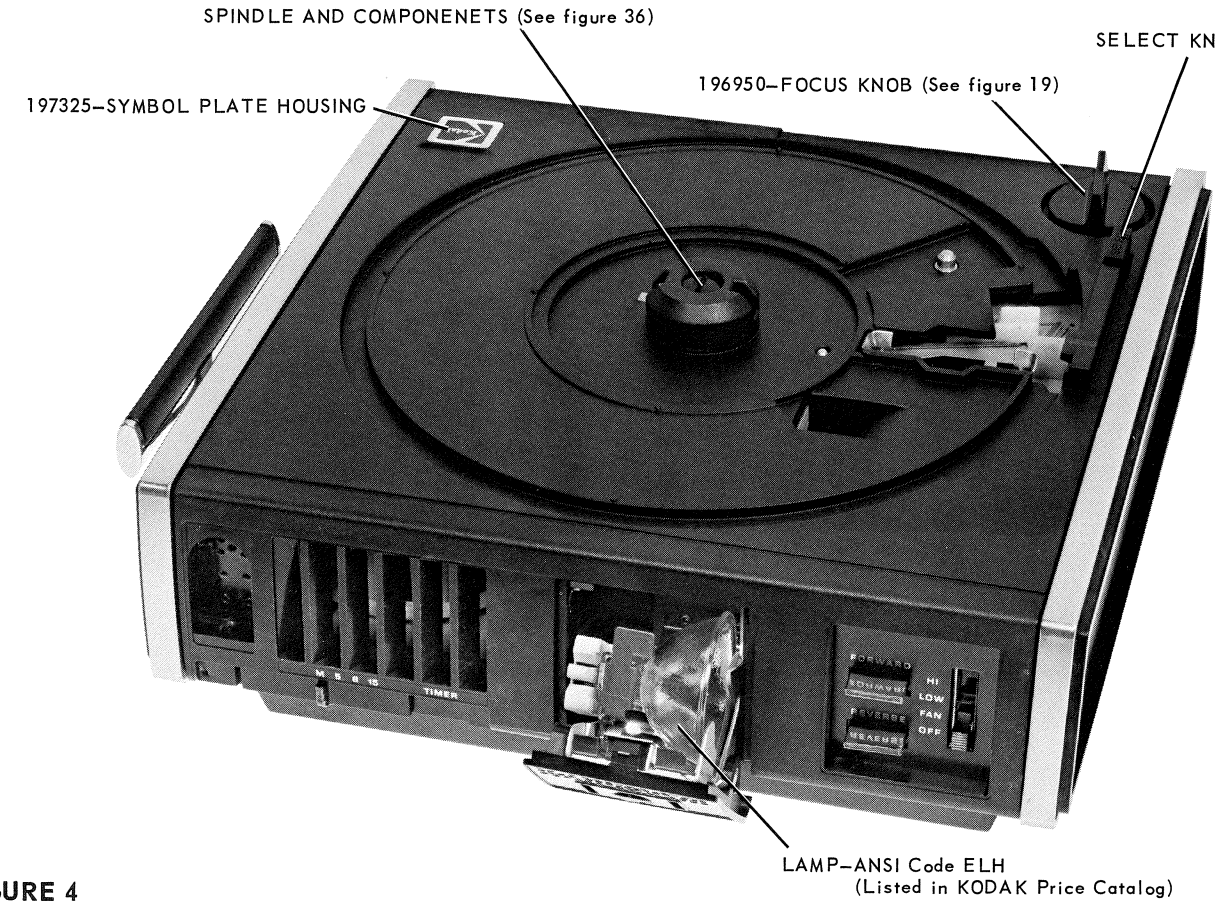


FIGURE 4

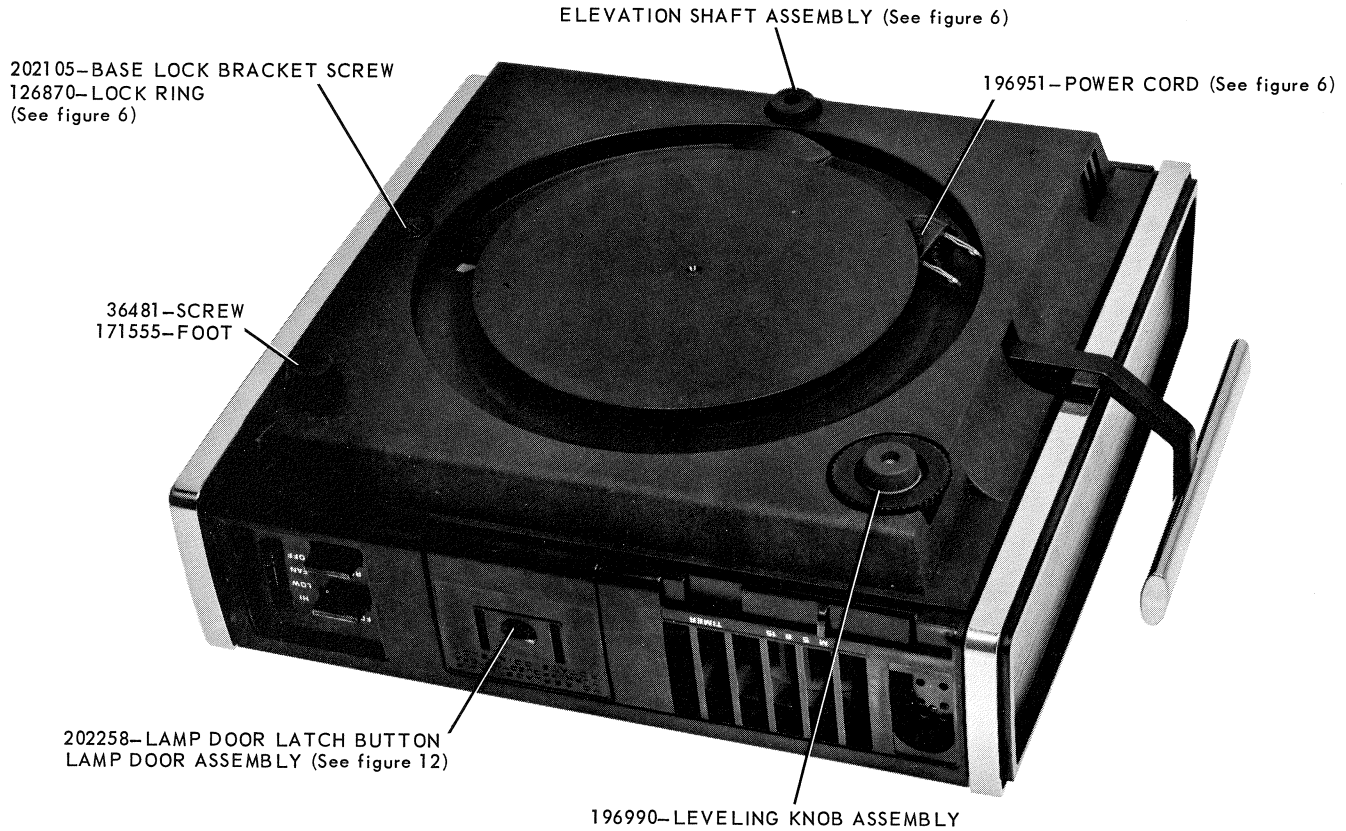


FIGURE 5

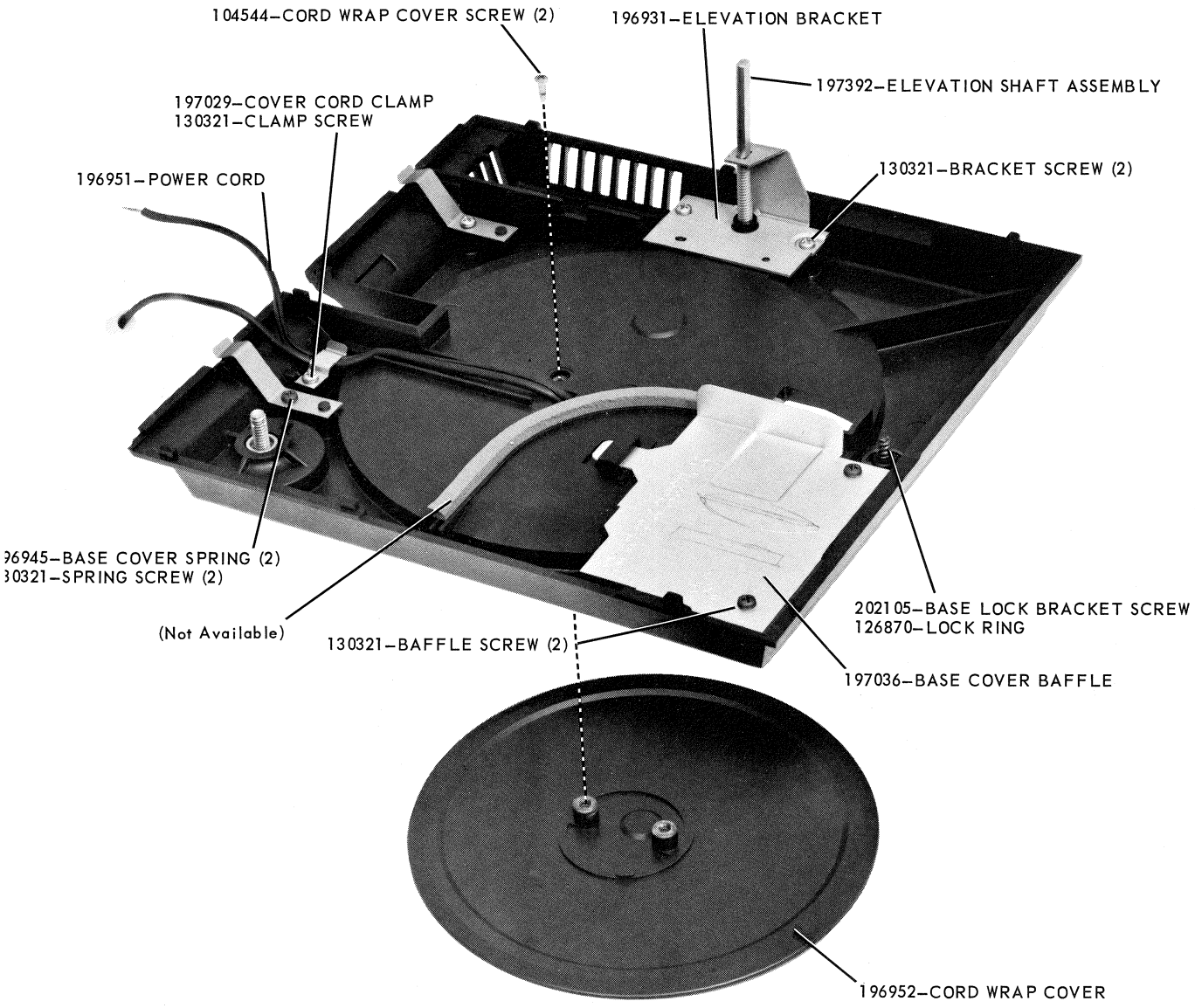


FIGURE 6 197084–BASE COVER ASSEMBLY

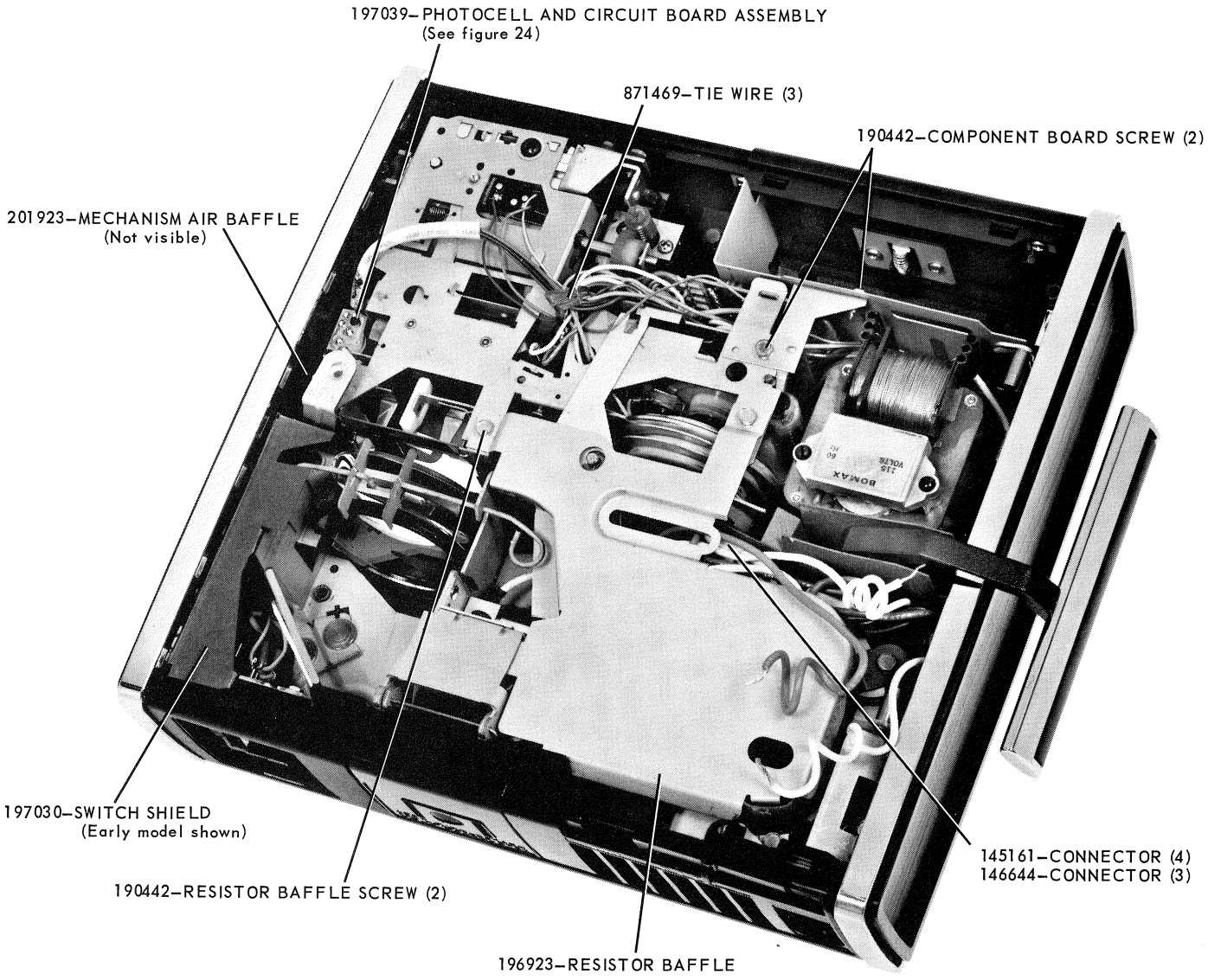
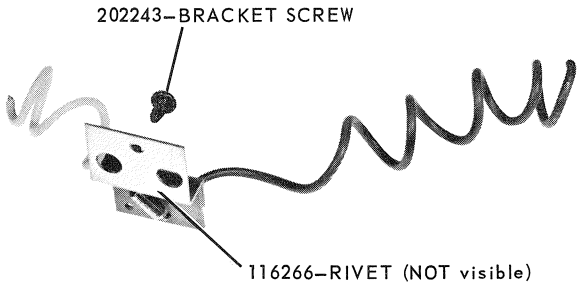

197039–PHOTOCELL AND CIRCUIT BOARD ASSEMBLY
(See figure 24)
871469–TIE WIRE (3)
190442–COMPONENT BOARD SCREW (2)
201923–MECHANISM AIR BAFFLE
(Not visible)
197030–SWITCH SHIELD
(Early model shown)
190442–RESISTOR BAFFLE SCREW (2)
196923–RESISTOR BAFFLE
145161–CONNECTOR (4)
146644–CONNECTOR (3)

FIGURE 7



IGURE 8 197013–FUSE BRACKET ASSEMBLY

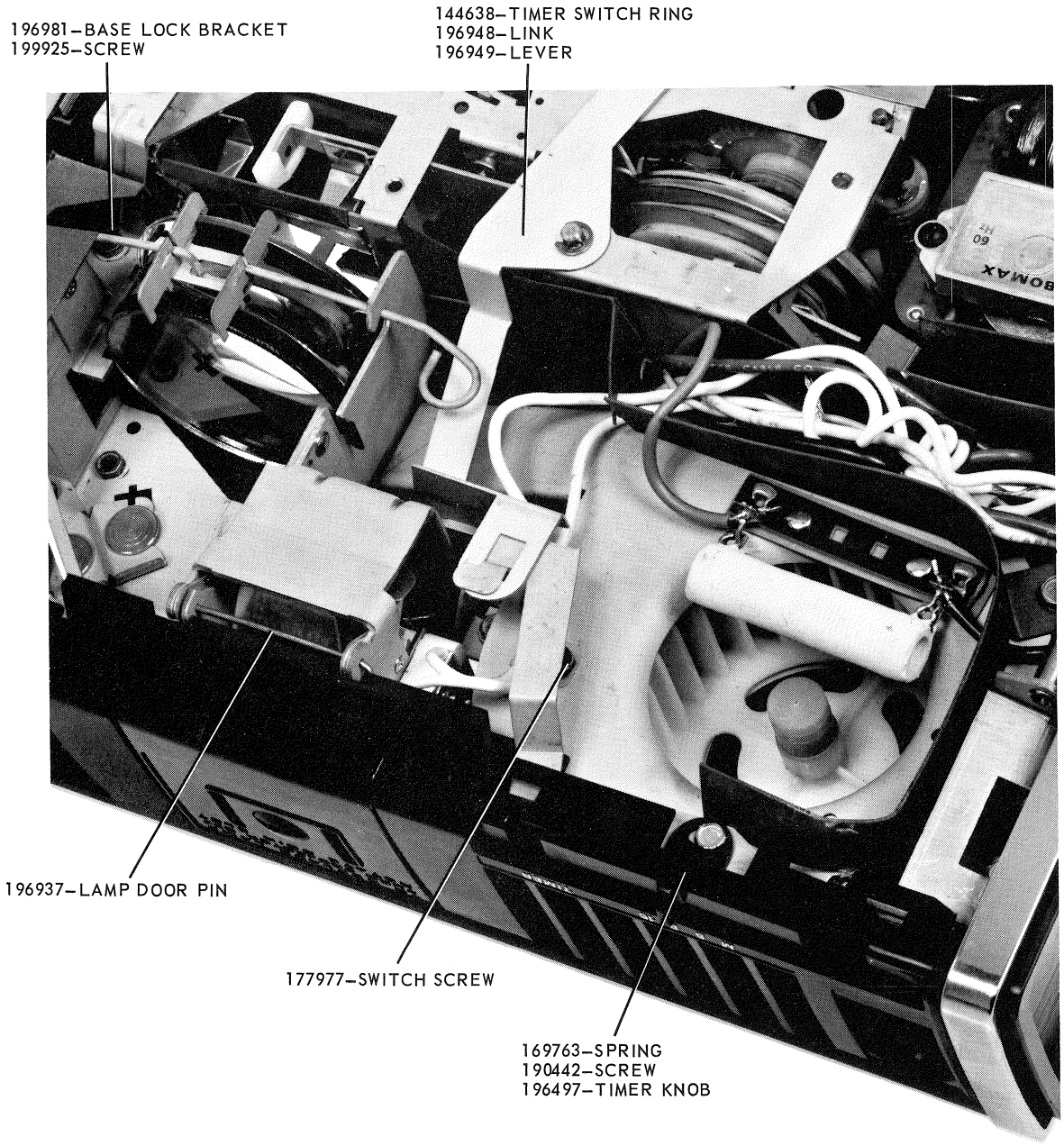


FIGURE 9

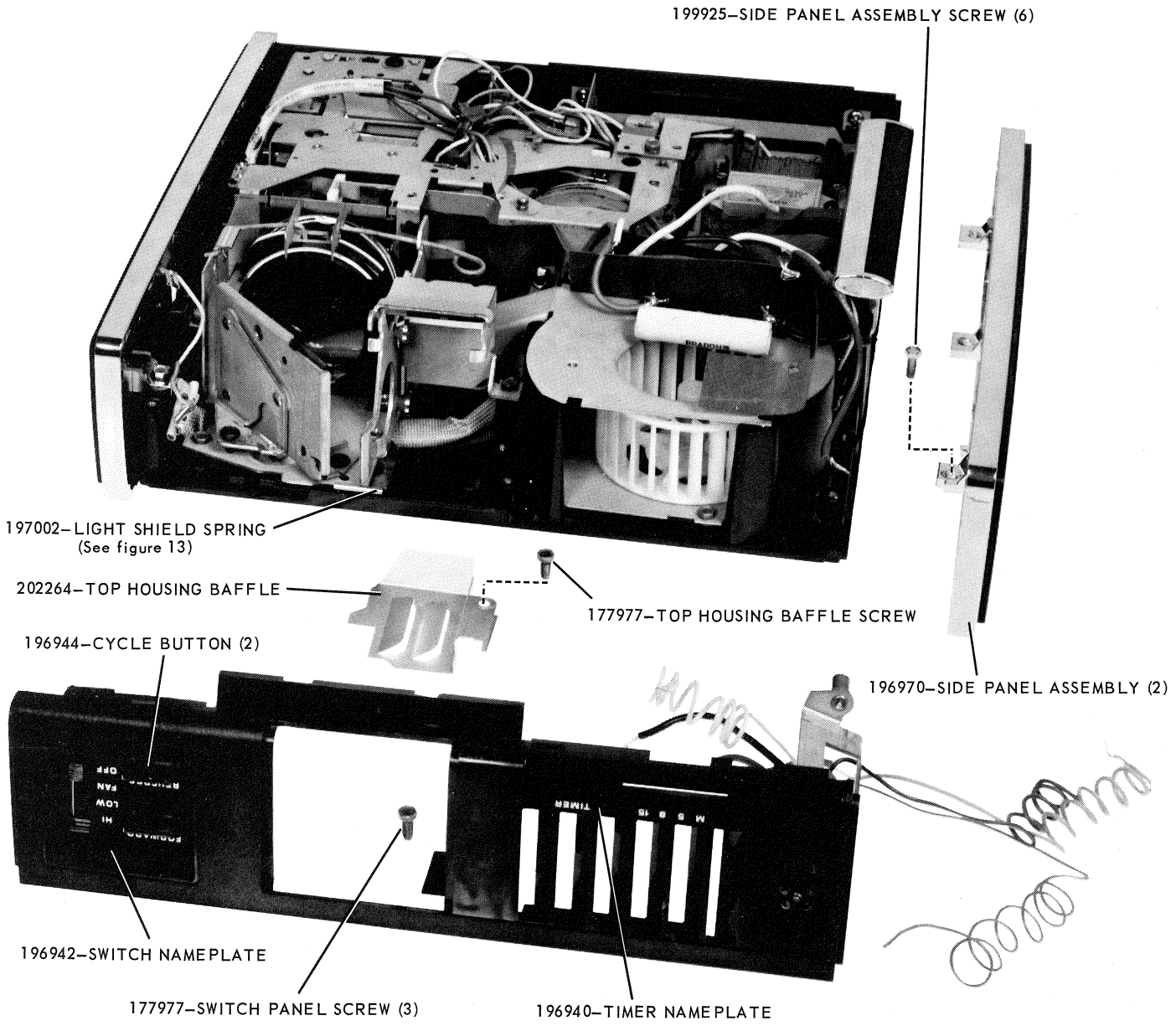

199925–SIDE PANEL ASSEMBLY SCREW (6)
197002–LIGHT SHIELD SPRING
(See figure 13)
202264–TOP HOUSING BAFFLE
177977–TOP HOUSING BAFFLE SCREW
196944–CYCLE BUTTON (2)
196970–SIDE PANEL ASSEMBLY (2)
196942–SWITCH NAMEPLATE
177977–SWITCH PANEL SCREW (3)
196940–TIMER NAMEPLATE

FIGURE 10

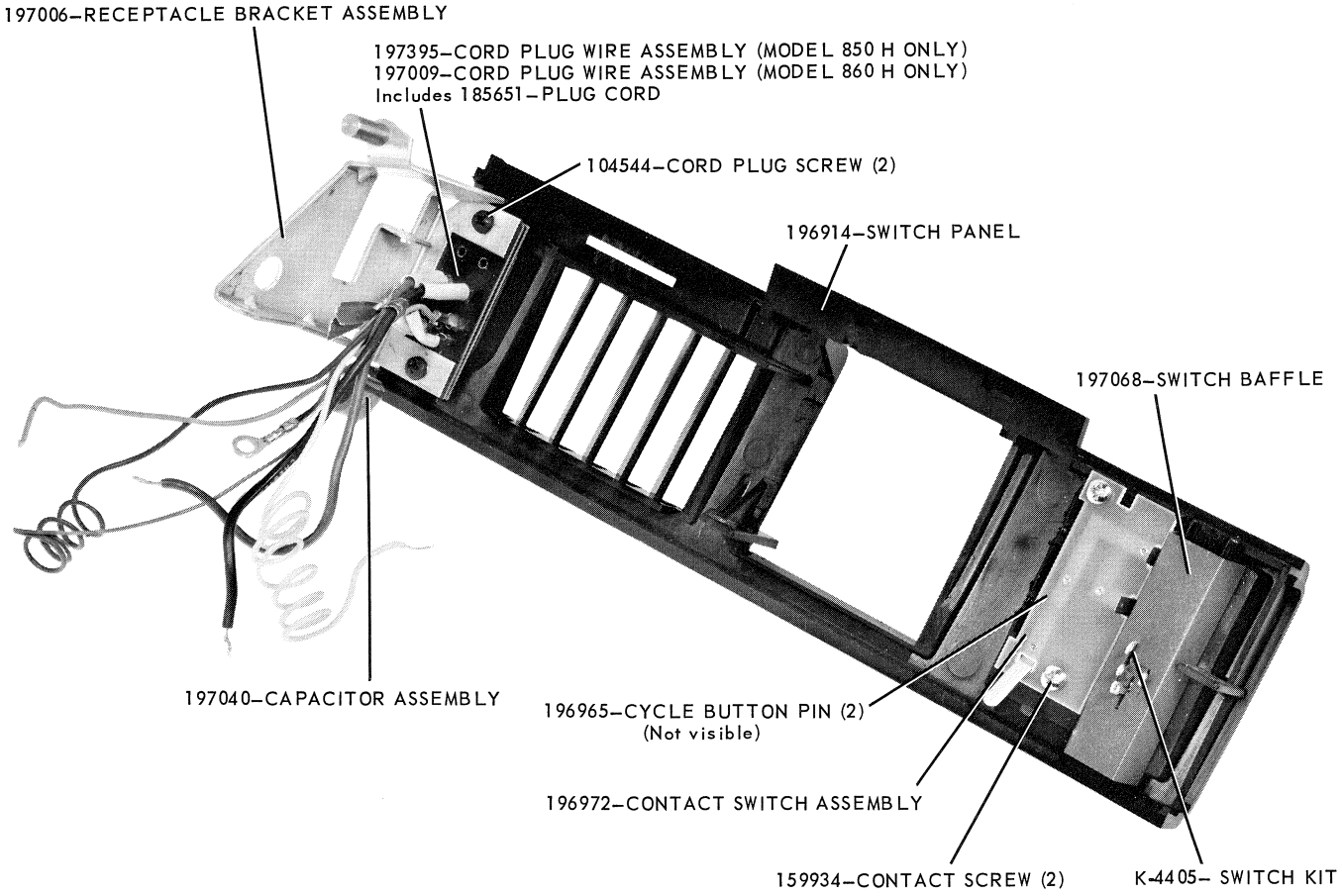


FIGURE 11

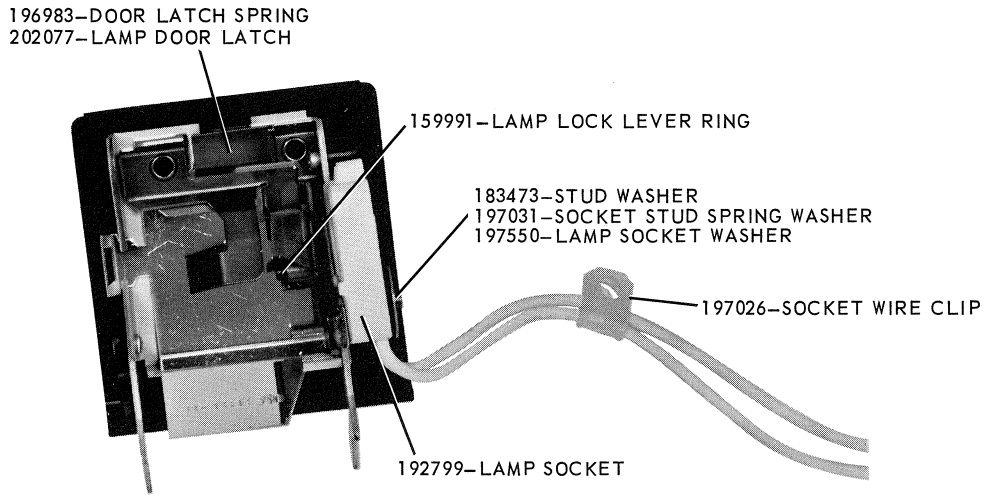


FIGURE 12 197004–LAMP DOOR ASSEMBLY

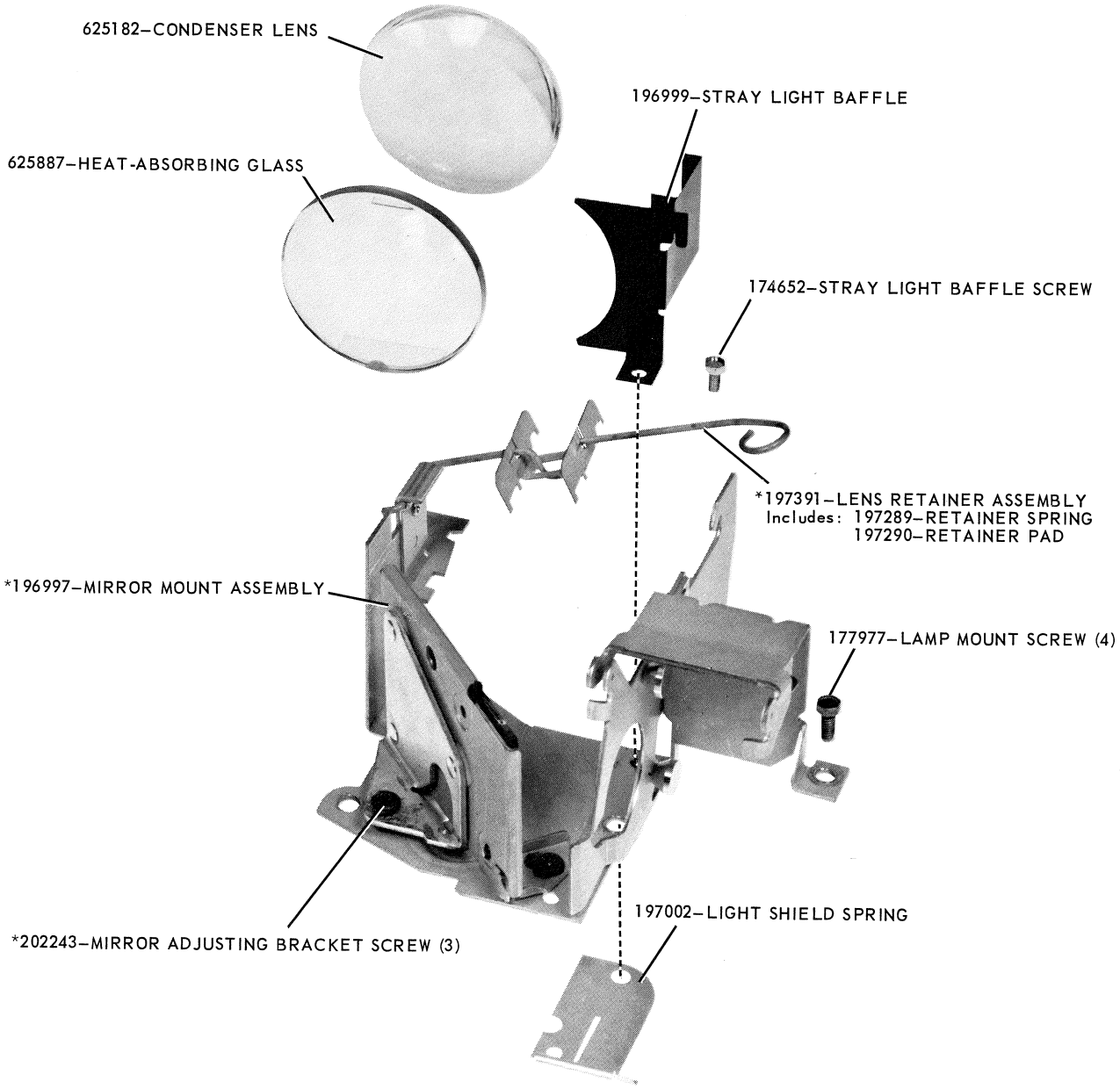


FIGURE 13

*197086–LAMP MOUNT ASSEMBLY

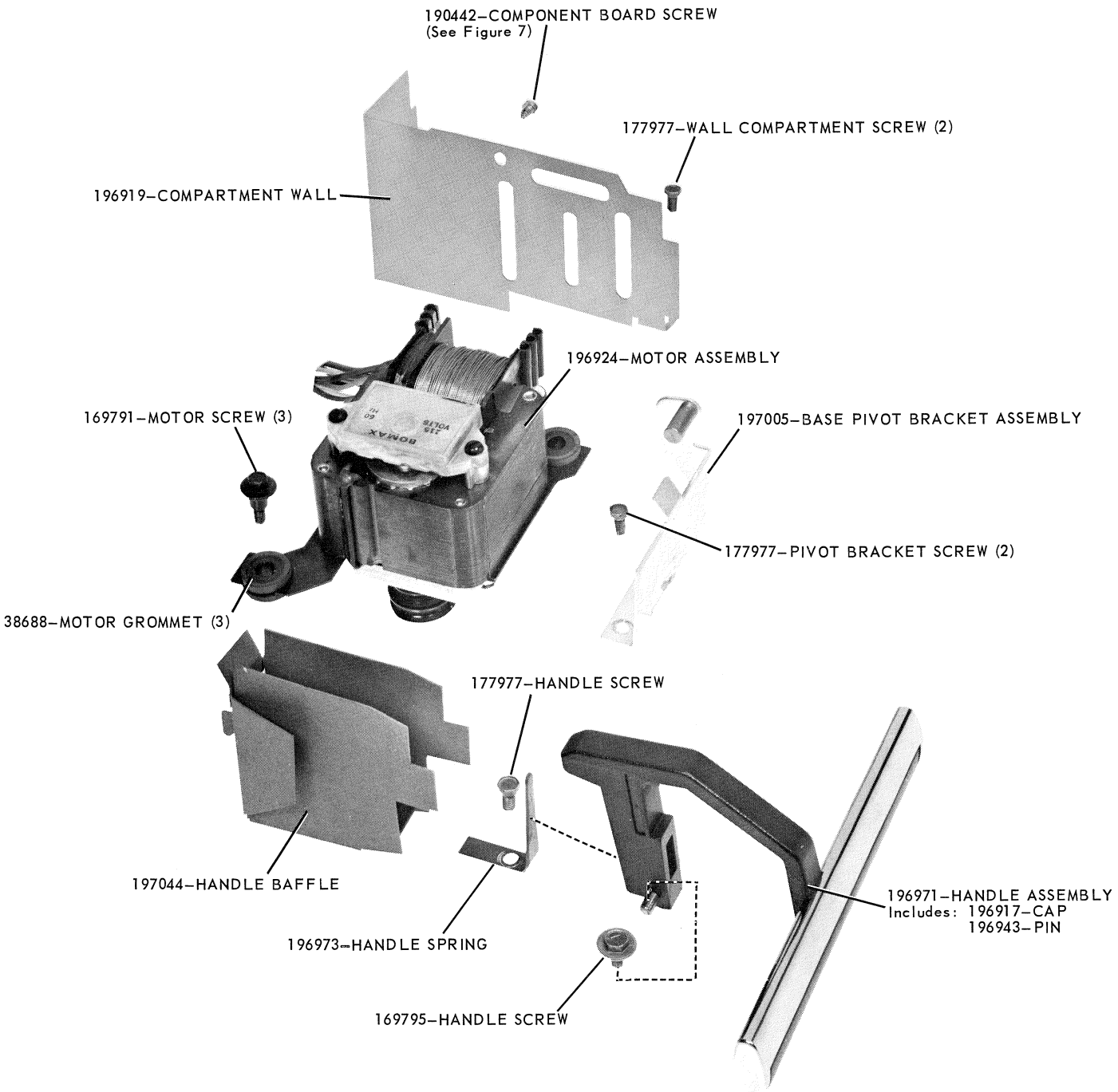

190442–COMPONENT BOARD SCREW
(See Figure 7)
177977–WALL COMPARTMENT SCREW (2)
196919–COMPARTMENT WALL
196924–MOTOR ASSEMBLY
169791–MOTOR SCREW (3)
197005–BASE PIVOT BRACKET ASSEMBLY
177977–PIVOT BRACKET SCREW (2)
38688–MOTOR GROMMET (3)
177977–HANDLE SCREW
197044–HANDLE BAFFLE
196971–HANDLE ASSEMBLY
Includes: 196917–CAP
196943–PIN
196973–HANDLE SPRING
169795–HANDLE SCREW

FIGURE 14

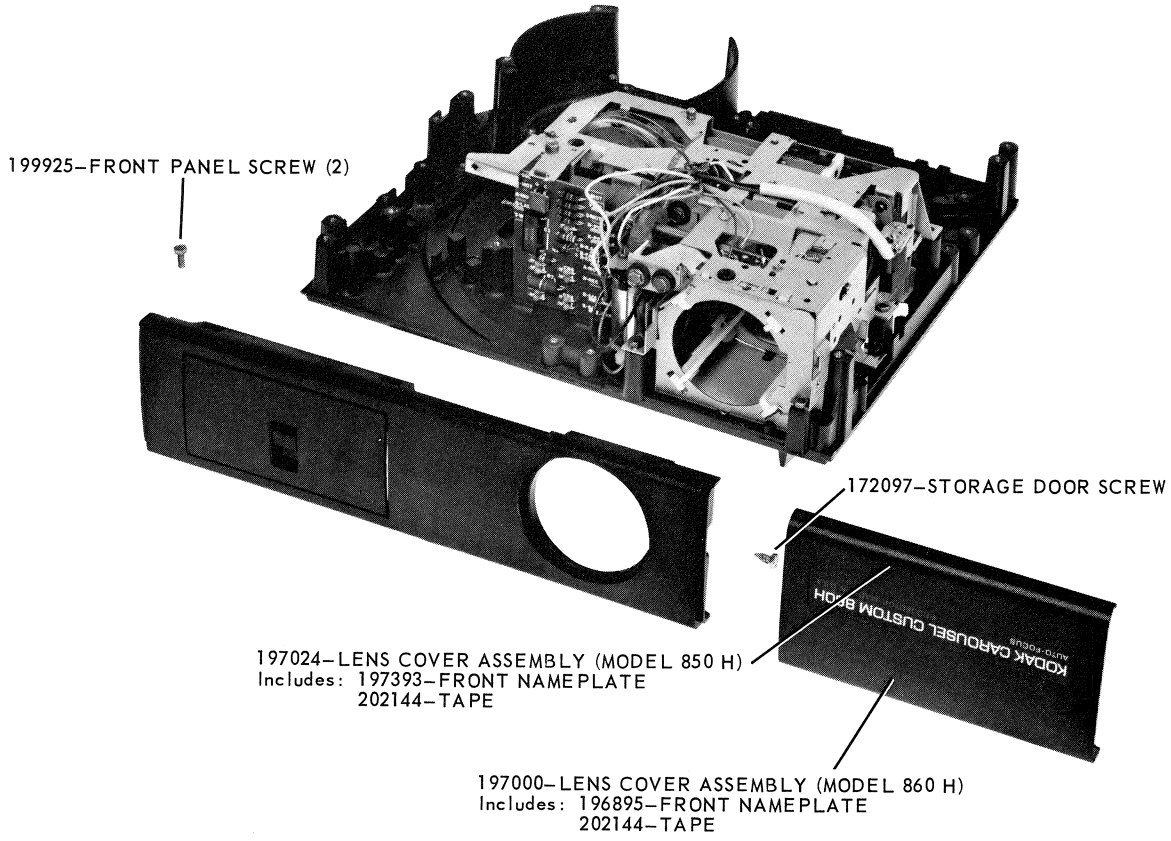


FIGURE 15

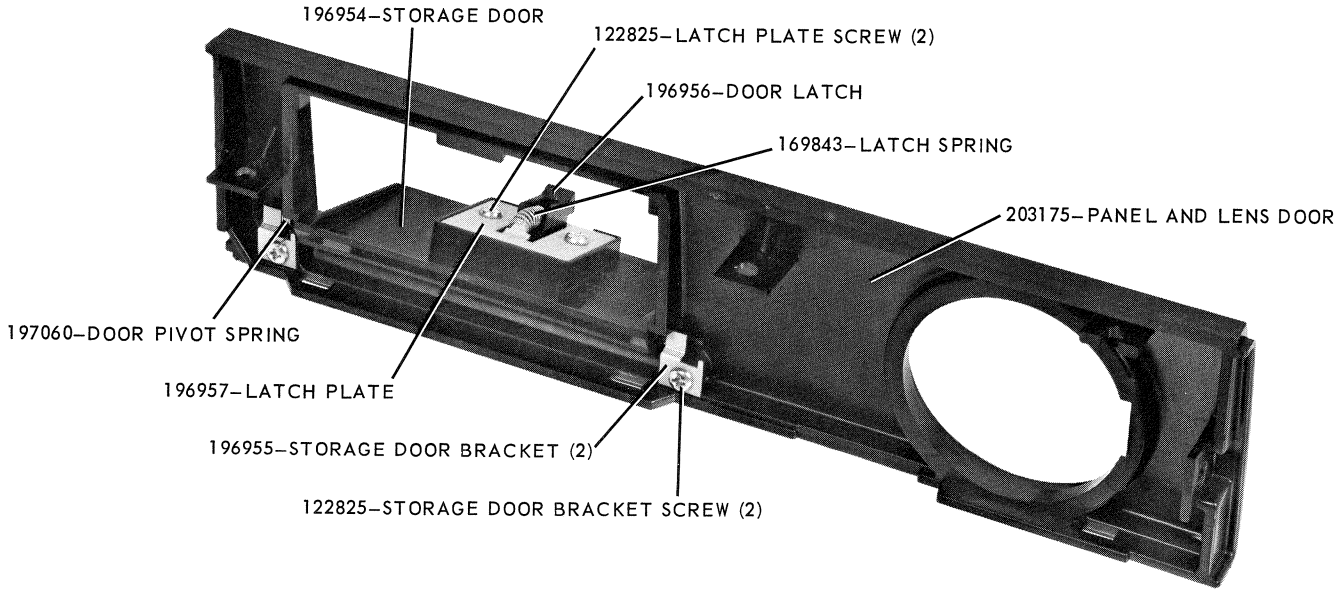


FIGURE 16

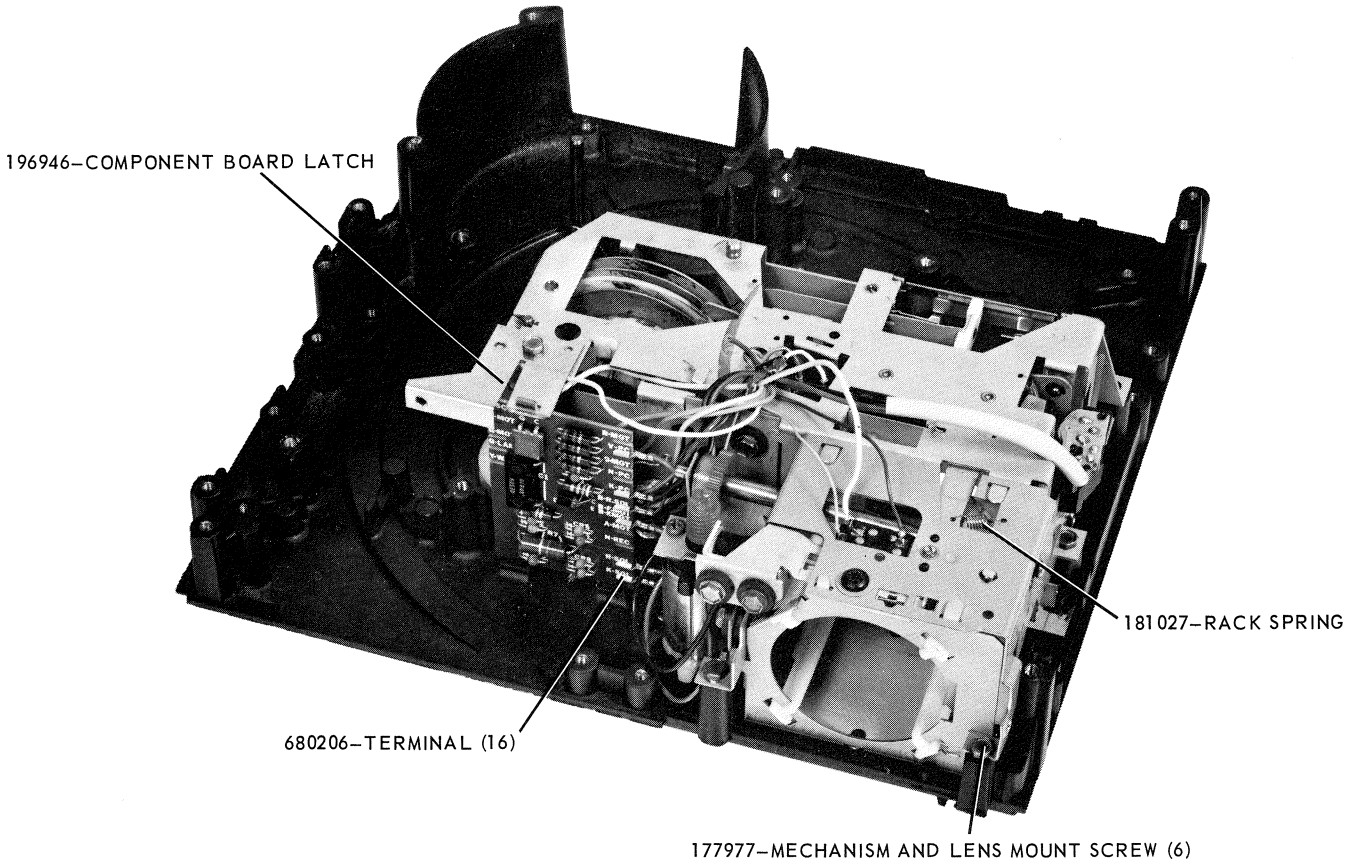


FIGURE 17

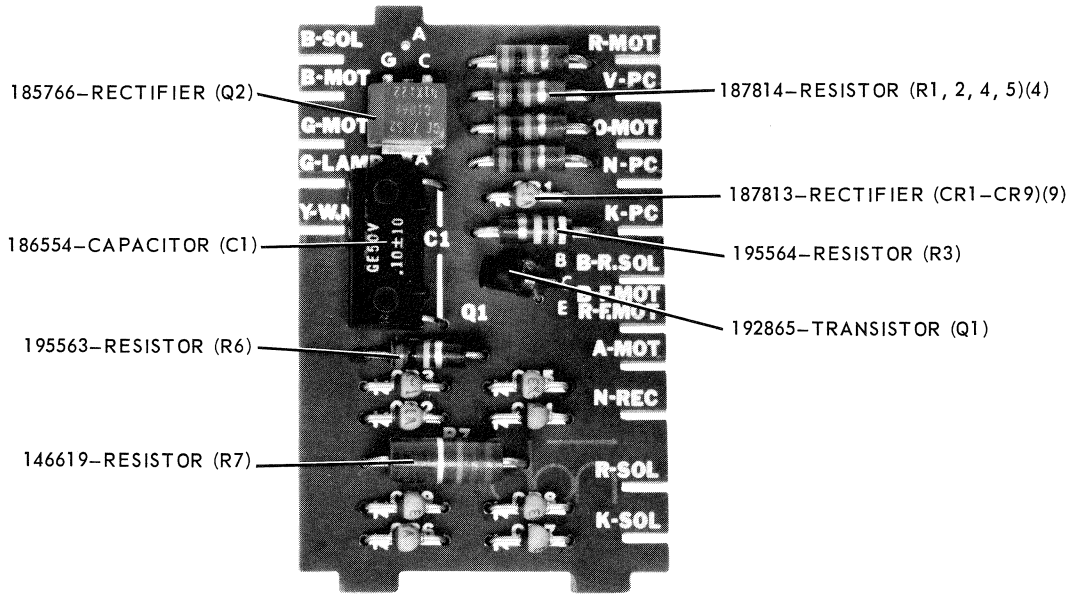


FIGURE 18 197399–COMPONENT BOARD ASSEMBLY (MODEL 850 H ONLY)
197052–COMPONENT BOARD ASSEMBLY (MODEL 860 H ONLY)

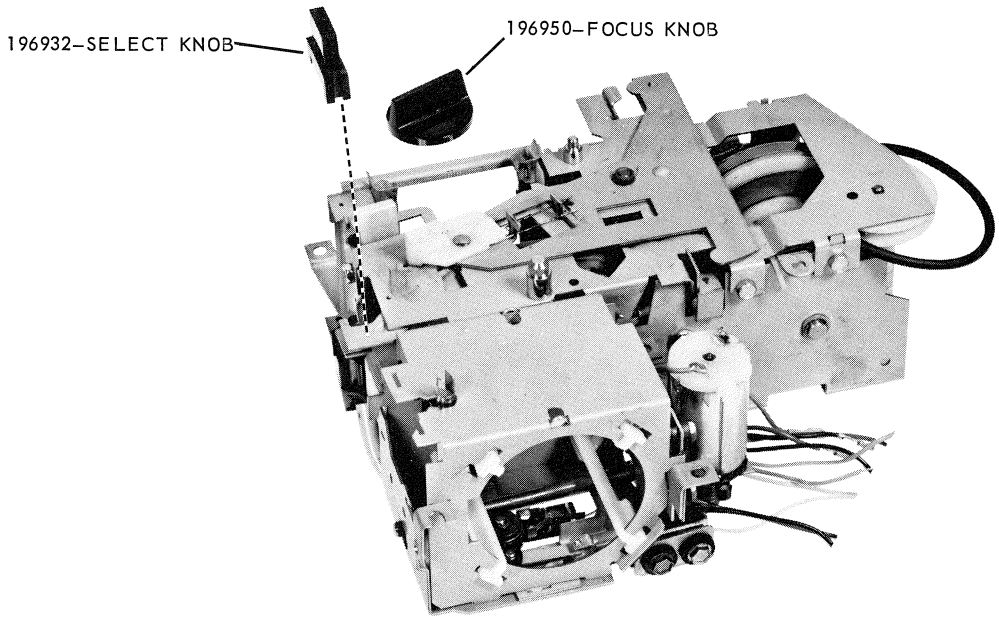


FIGURE 19

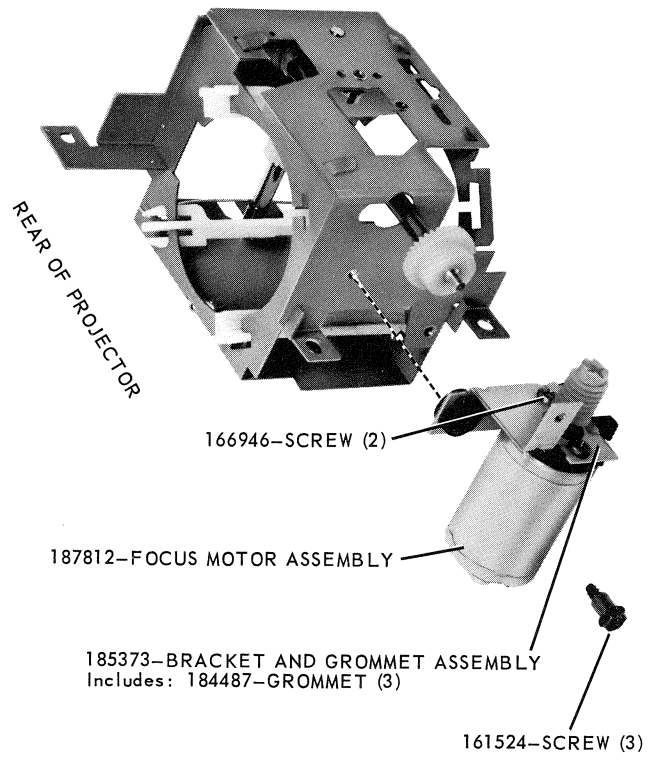


FIGURE 20 MODEL 850 H COMPONENTS

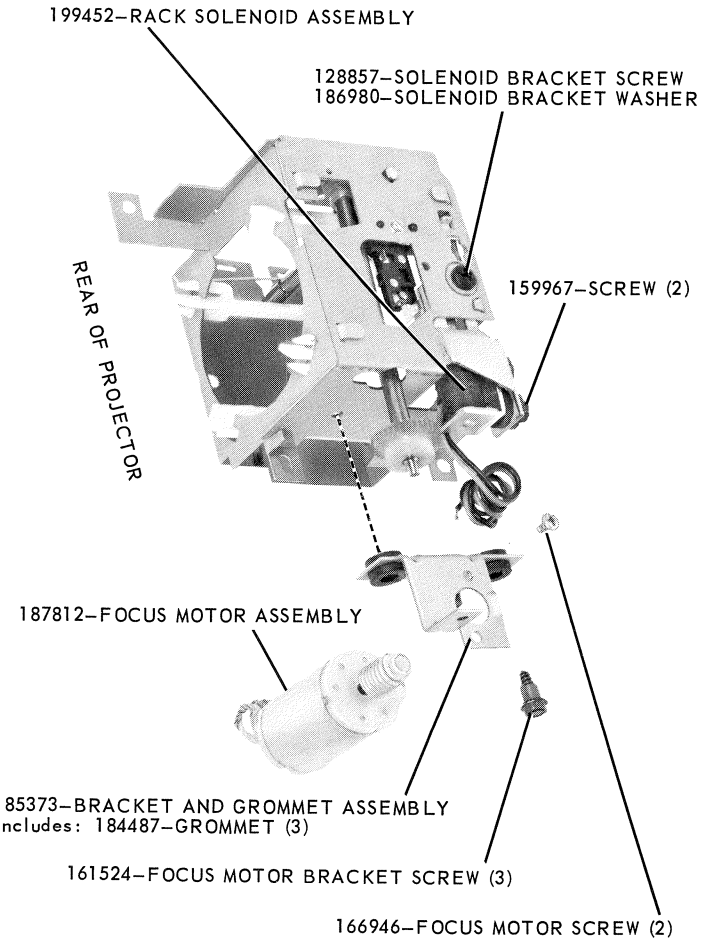


FIGURE 21 MODEL 860 H COMPONENTS

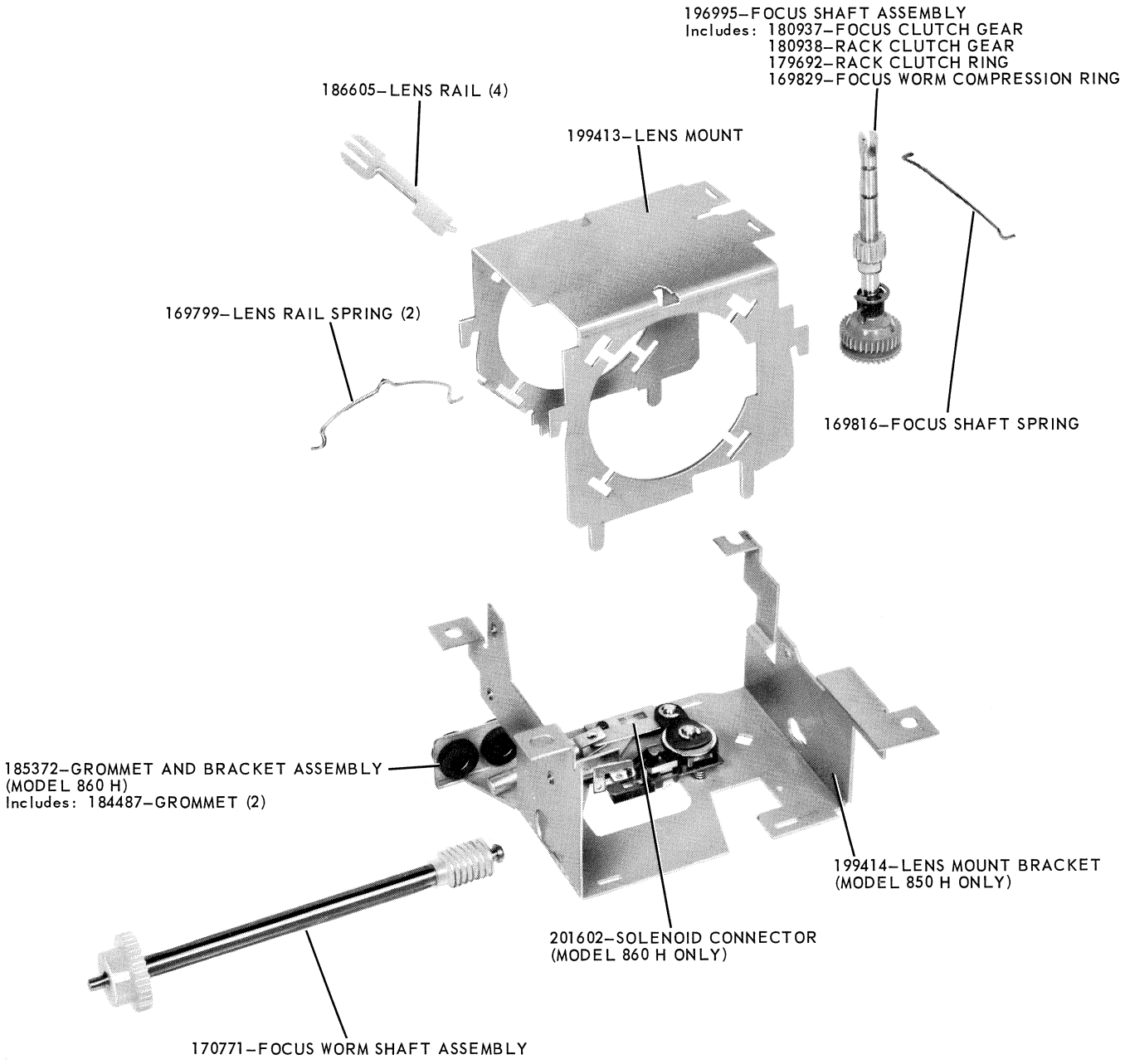

196995–FOCUS SHAFT ASSEMBLY
Includes: 180937–FOCUS CLUTCH GEAR
180938–RACK CLUTCH GEAR
179692–RACK CLUTCH RING
169829–FOCUS WORM COMPRESSION RING
186605–LENS RAIL (4)
199413–LENS MOUNT
169799–LENS RAIL SPRING (2)
169816–FOCUS SHAFT SPRING
185372–GROMMET AND BRACKET ASSEMBLY
(MODEL 860 H)
Includes: 184487–GROMMET (2)
199414–LENS MOUNT BRACKET
(MODEL 850 H ONLY)
201602–SOLENOID CONNECTOR
(MODEL 860 H ONLY)
170771–FOCUS WORM SHAFT ASSEMBLY

FIGURE 22

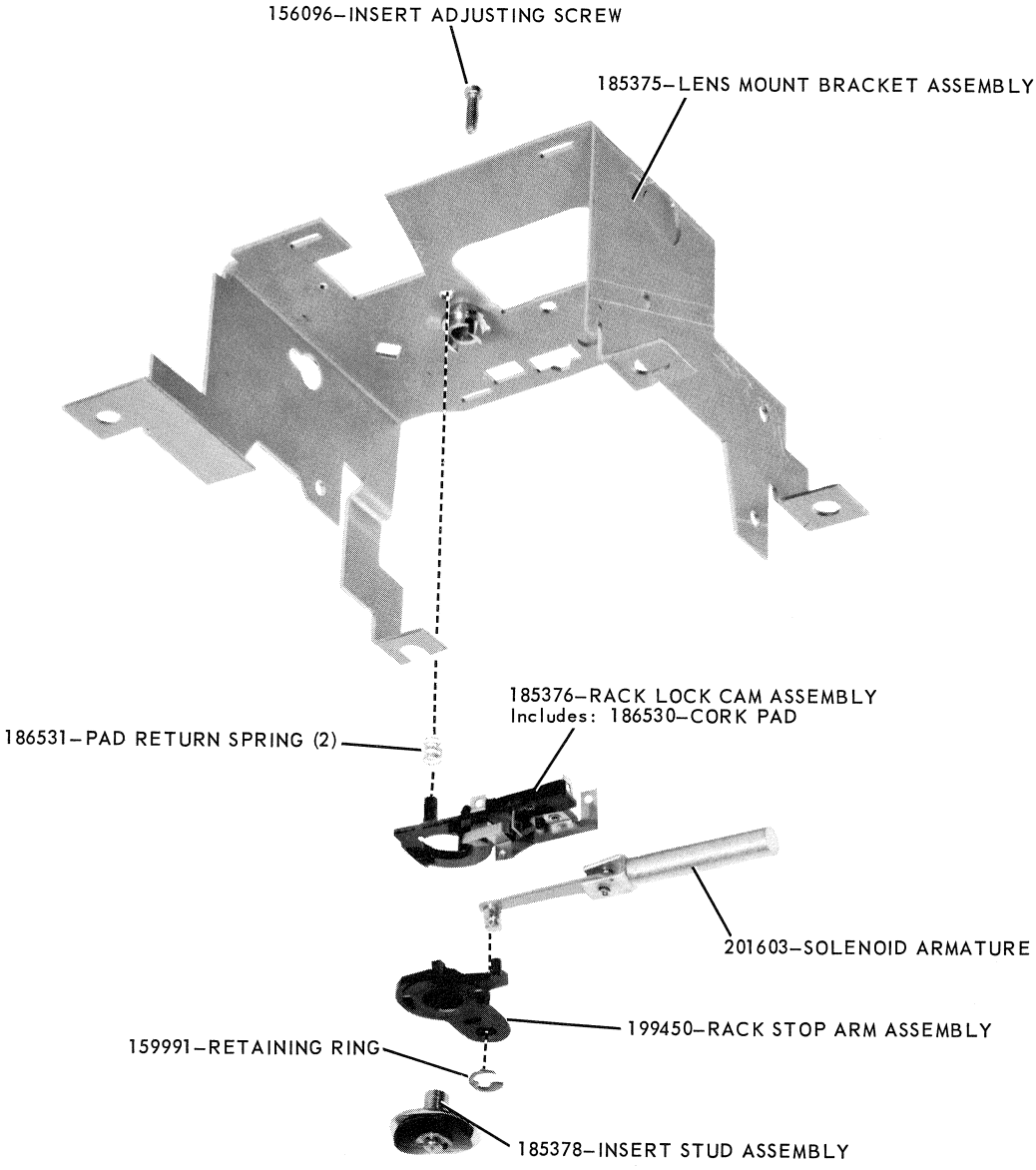


FIGURE 23 MODEL 860 H ONLY

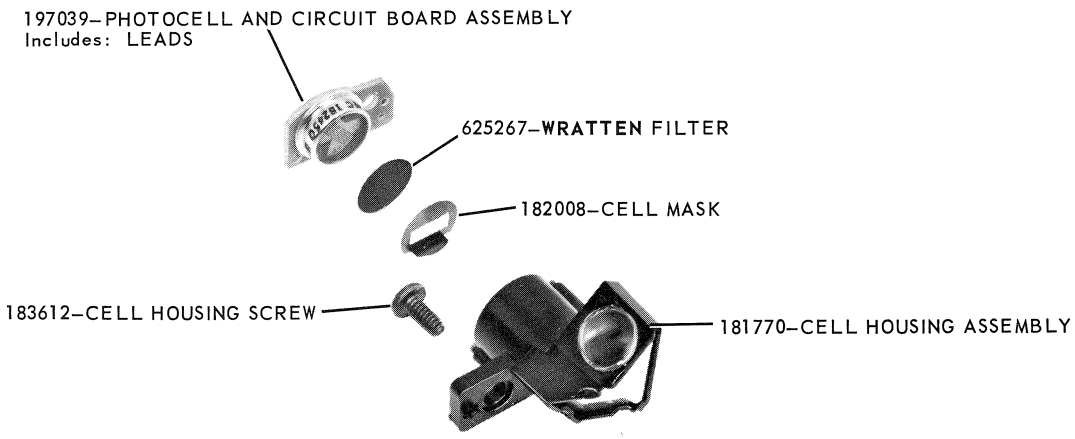


FIGURE 24

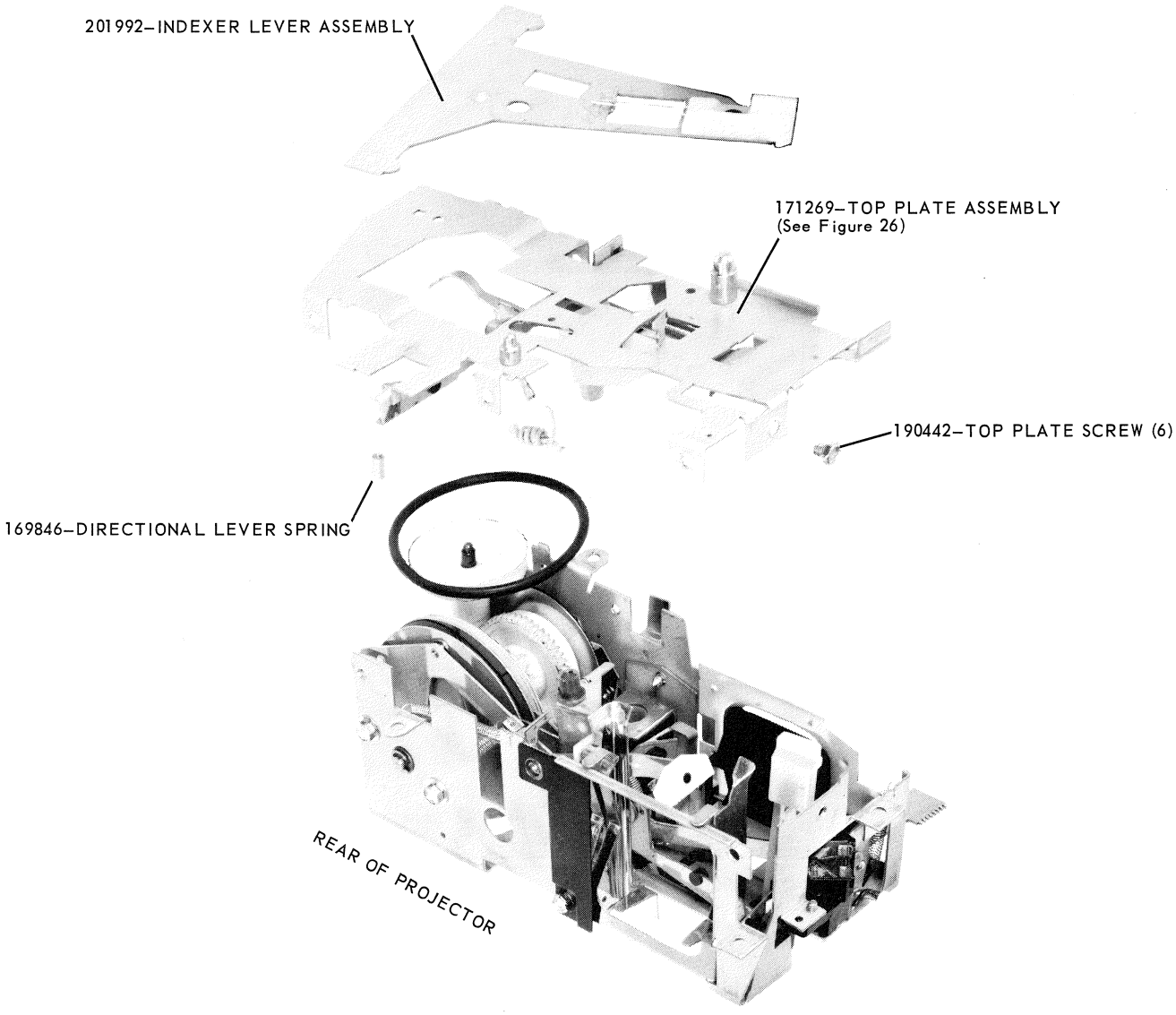


FIGURE 25 196991–MECHANISM ASSEMBLY (NOT AS SHOWN)

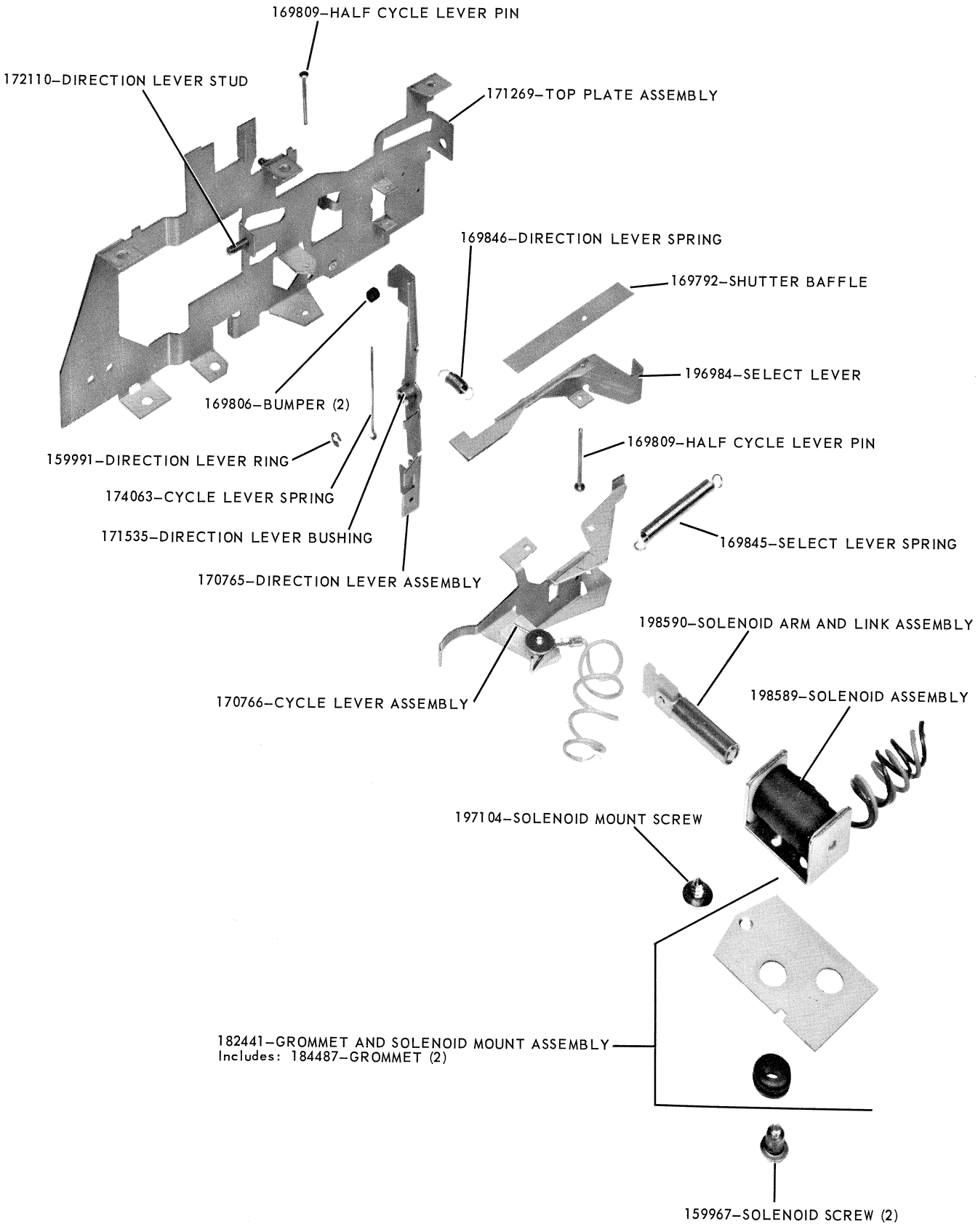

169809–HALF CYCLE LEVER PIN
172110–DIRECTION LEVER STUD
171269–TOP PLATE ASSEMBLY
169846–DIRECTION LEVER SPRING
169792–SHUTTER BAFFLE
196984–SELECT LEVER
169806–BUMPER (2)
159991–DIRECTION LEVER RING
169809–HALF CYCLE LEVER PIN
174063–CYCLE LEVER SPRING
171535–DIRECTION LEVER BUSHING
169845–SELECT LEVER SPRING
170765–DIRECTION LEVER ASSEMBLY
198590–SOLENOID ARM AND LINK ASSEMBLY
170766–CYCLE LEVER ASSEMBLY
198589–SOLENOID ASSEMBLY
197104–SOLENOID MOUNT SCREW
182441–GROMMET AND SOLENOID MOUNT ASSEMBLY
Includes: 184487–GROMMET (2)
159967–SOLENOID SCREW (2)

FIGURE 26

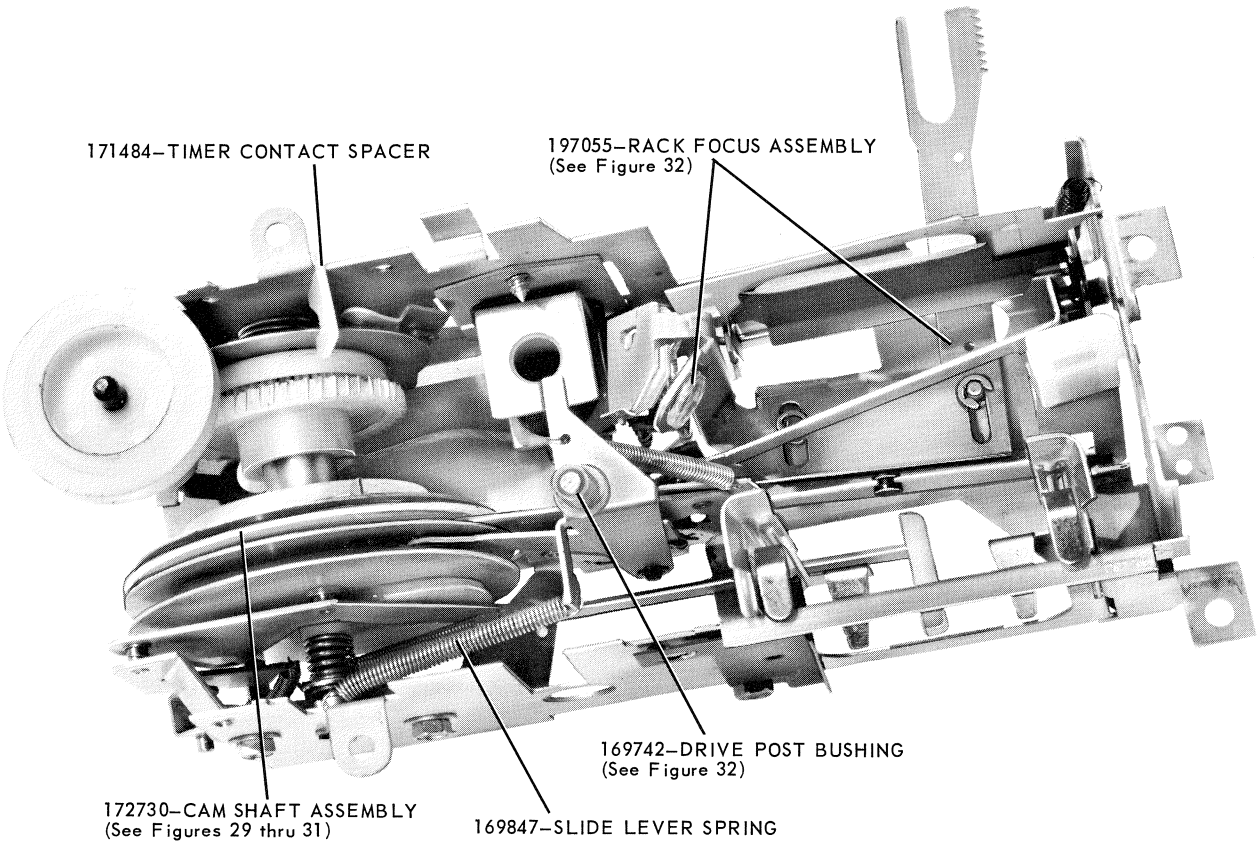


FIGURE 27

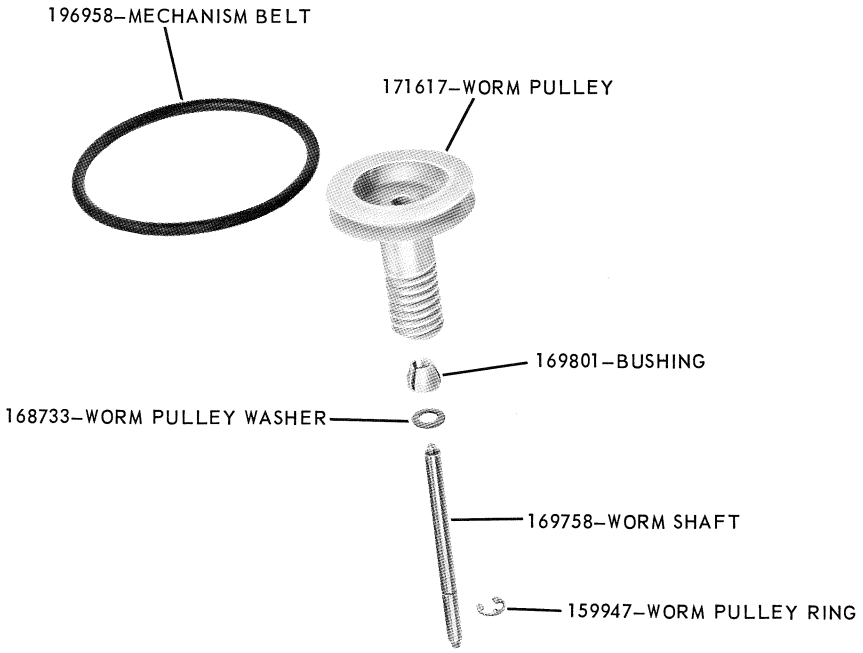


FIGURE 28

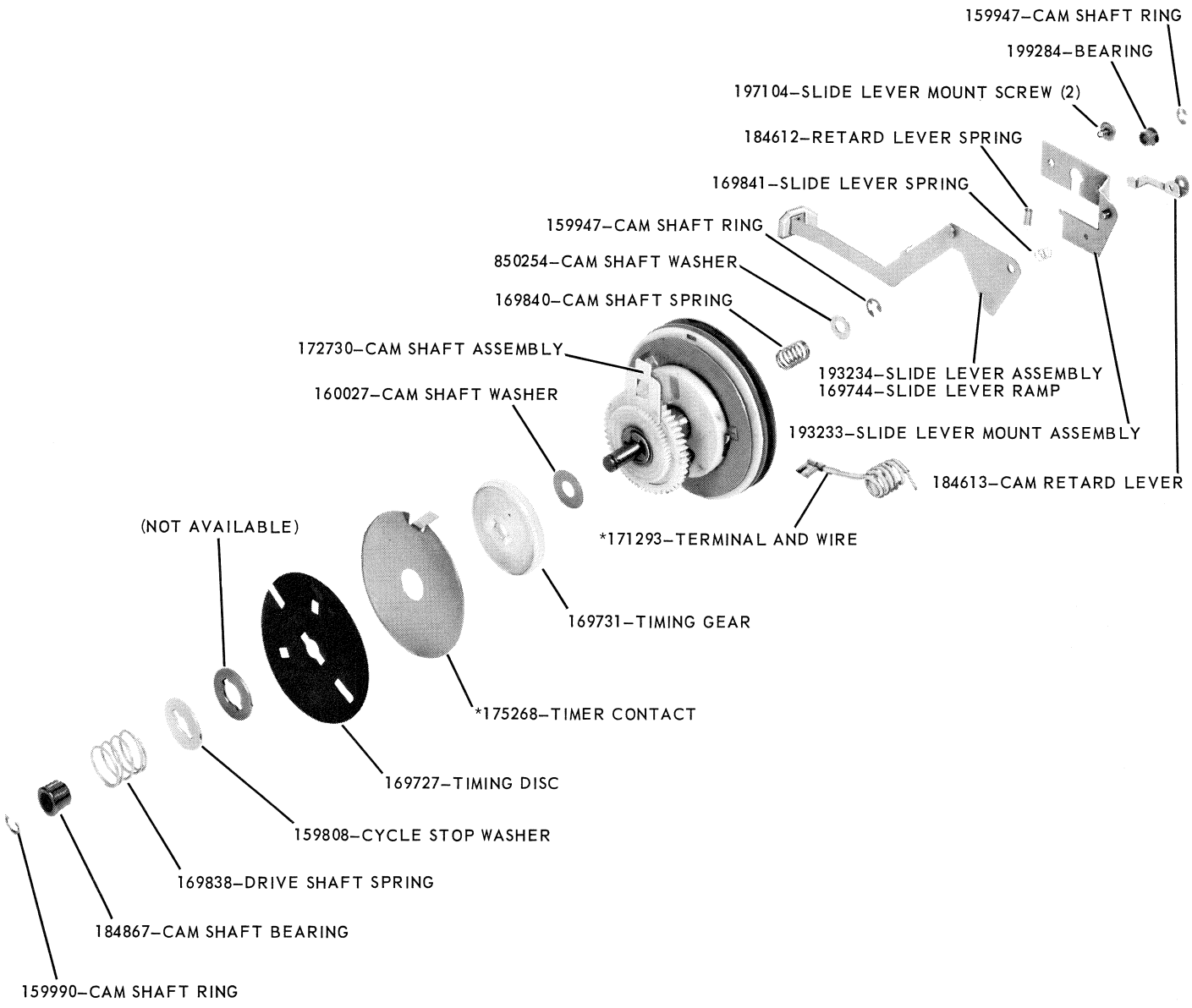


FIGURE 29

*170759–TIMER CONTACT ASSEMBLY

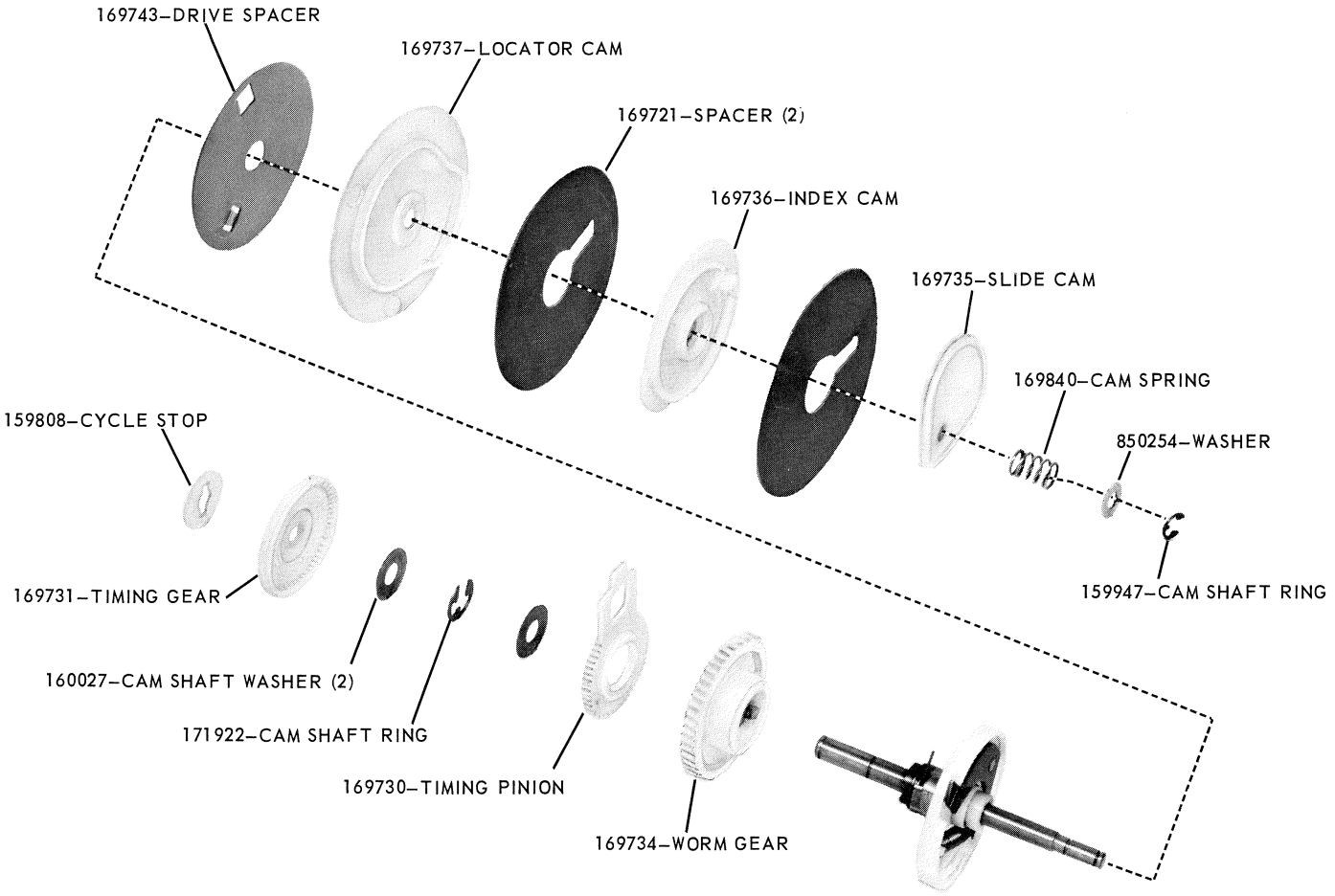


FIGURE 30 172730–CAM SHAFT ASSEMBLY
(See Figure 31)

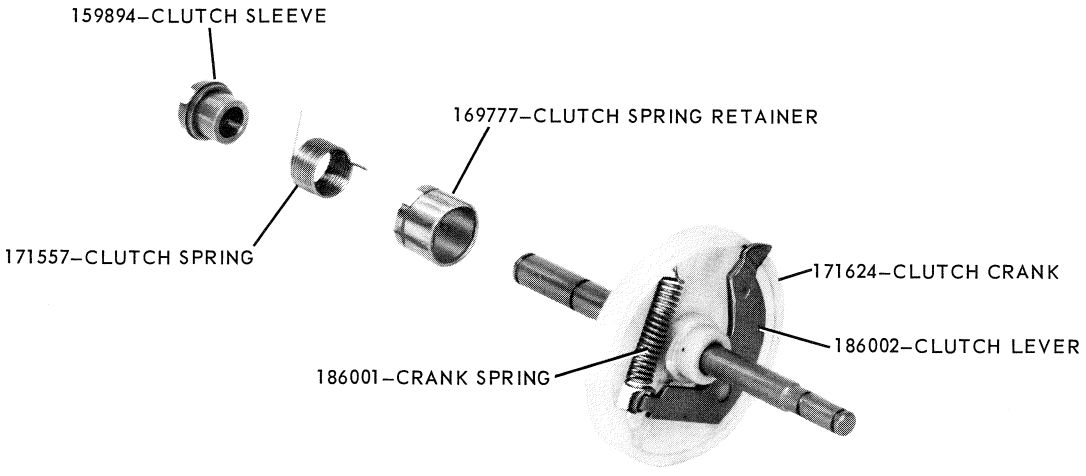


FIGURE 31

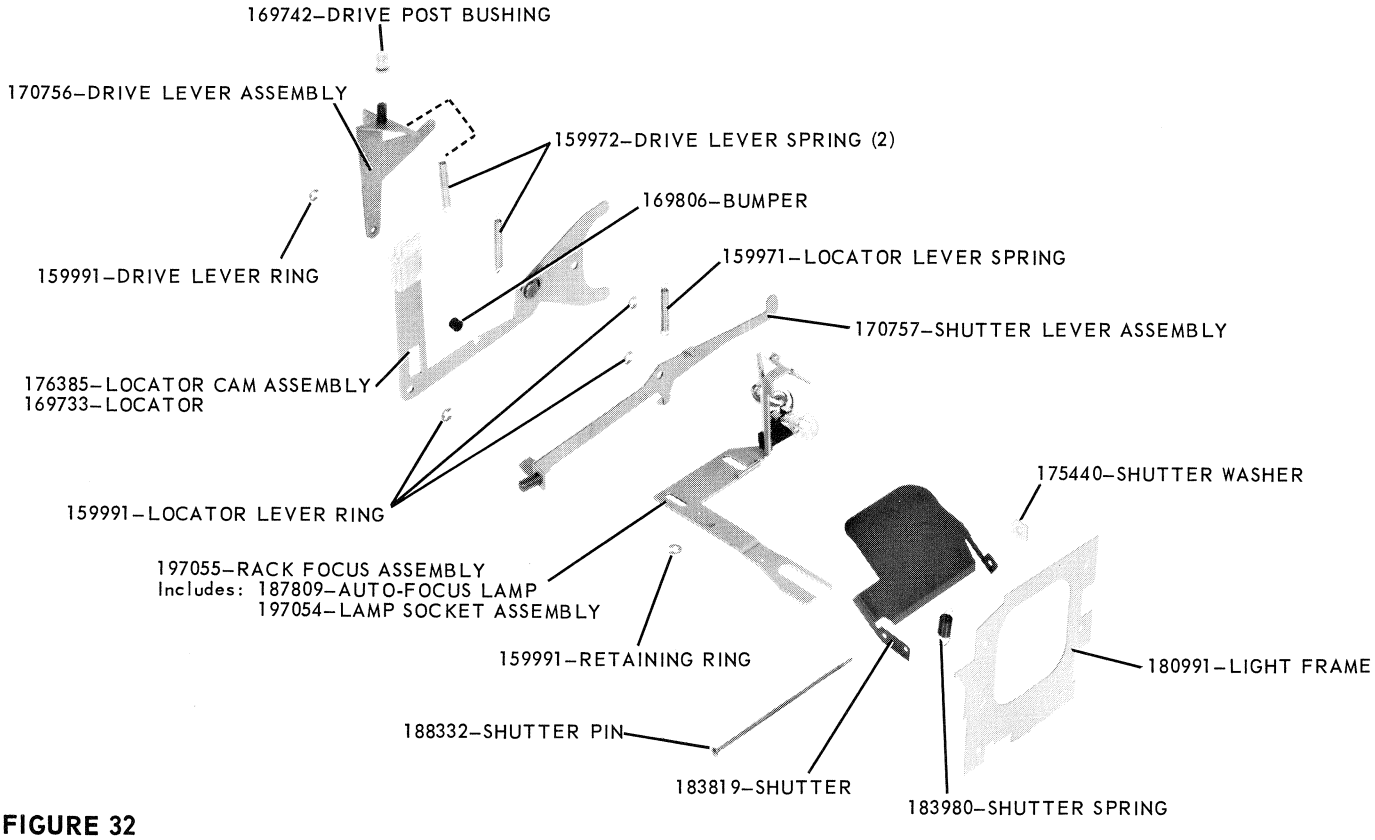


FIGURE 32

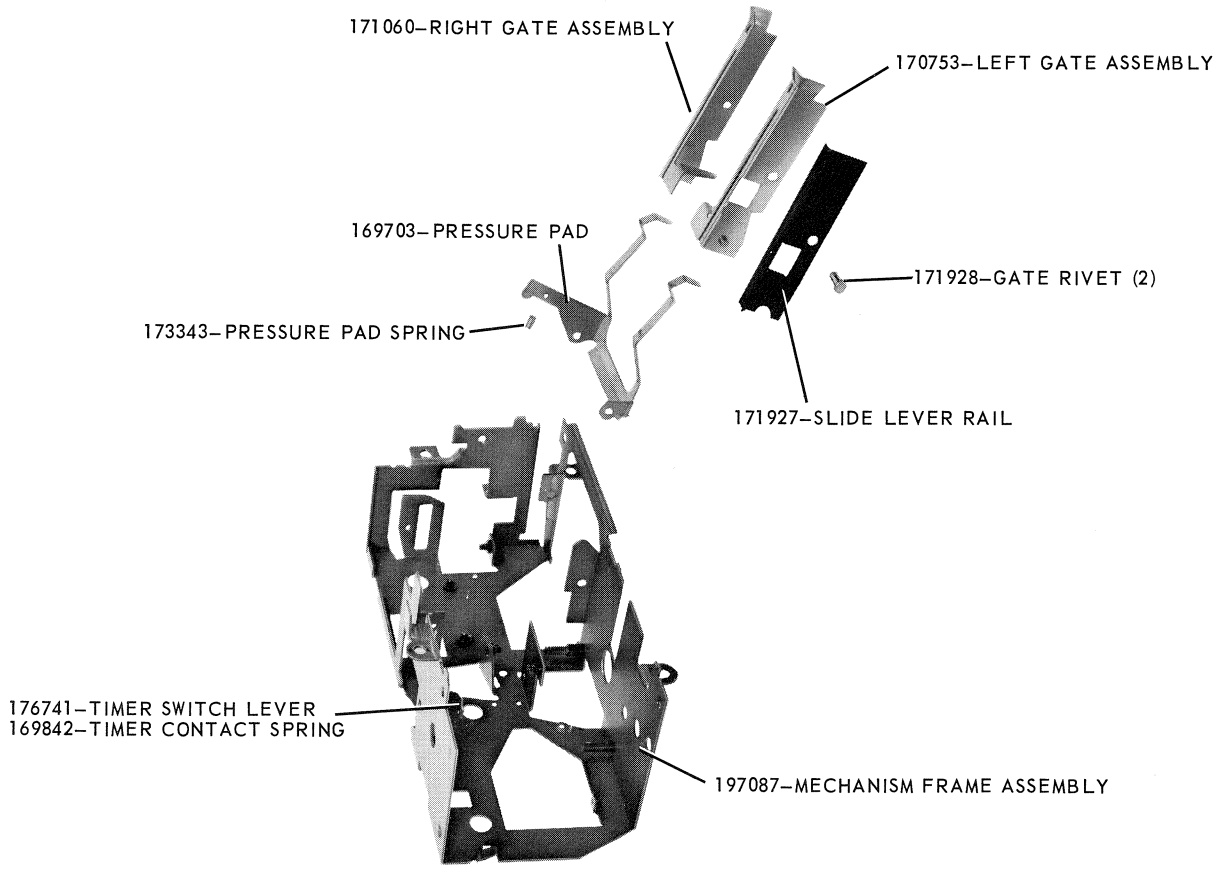


FIGURE 33

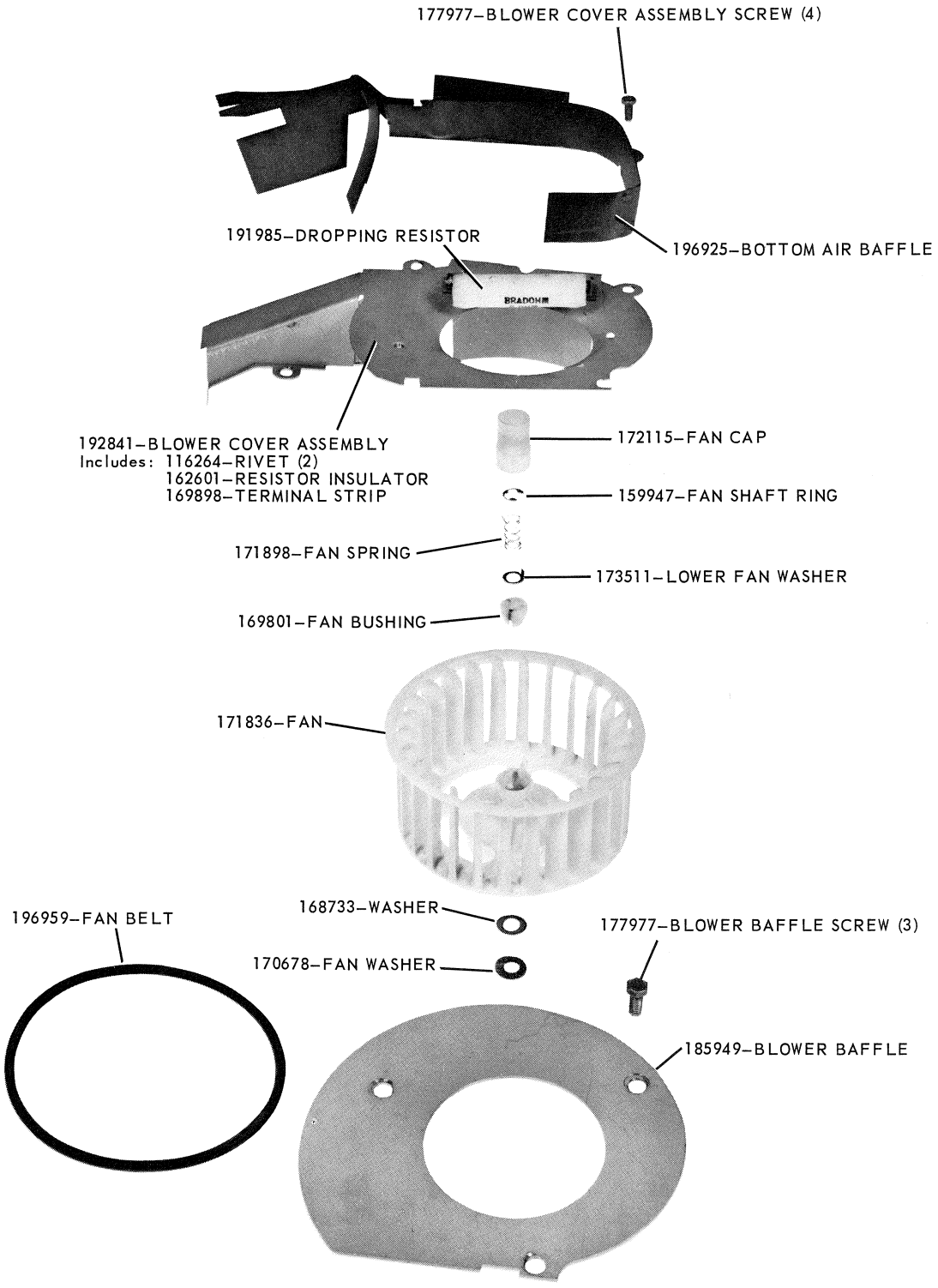

177977–BLOWER COVER ASSEMBLY SCREW (4)
191985–DROPPING RESISTOR
196925–BOTTOM AIR BAFFLE
192841–BLOWER COVER ASSEMBLY
Includes: 116264–RIVET (2)
162601–RESISTOR INSULATOR
169898–TERMINAL STRIP
172115–FAN CAP
159947–FAN SHAFT RING
171898–FAN SPRING
173511–LOWER FAN WASHER
169801–FAN BUSHING
171836–FAN
196959–FAN BELT
168733–WASHER
170678–FAN WASHER
177977–BLOWER BAFFLE SCREW (3)
185949–BLOWER BAFFLE

FIGURE 34

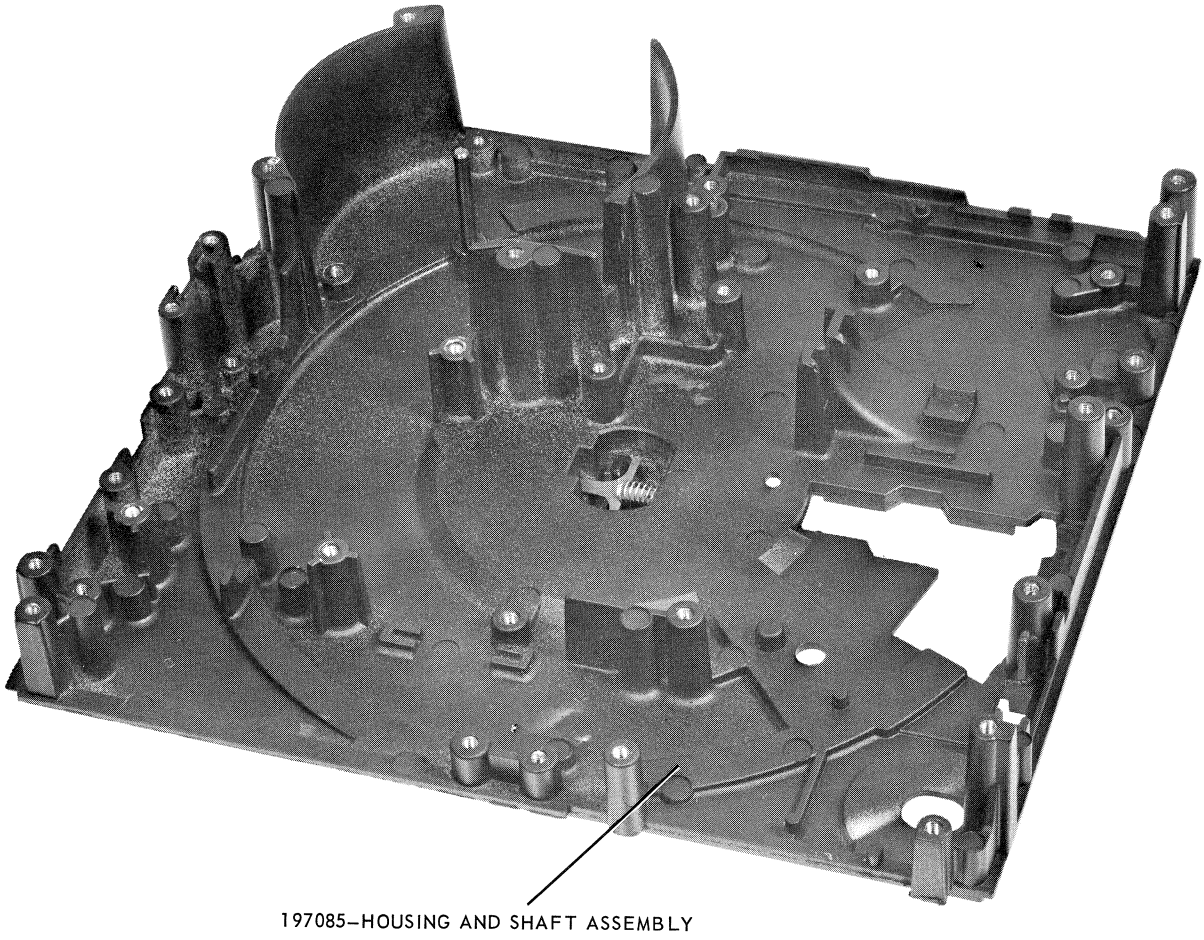


FIGURE 35

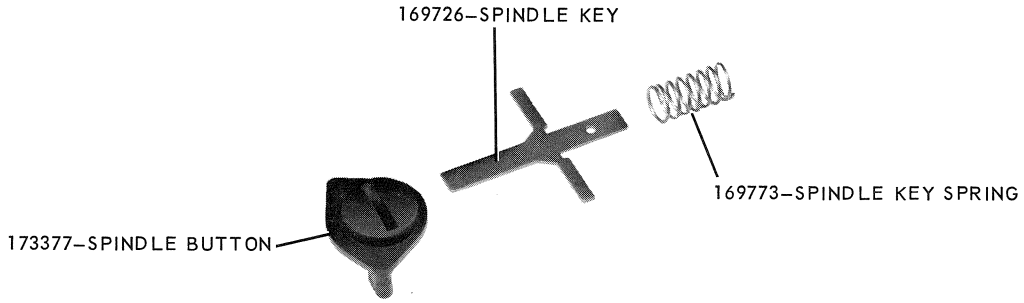


FIGURE 36

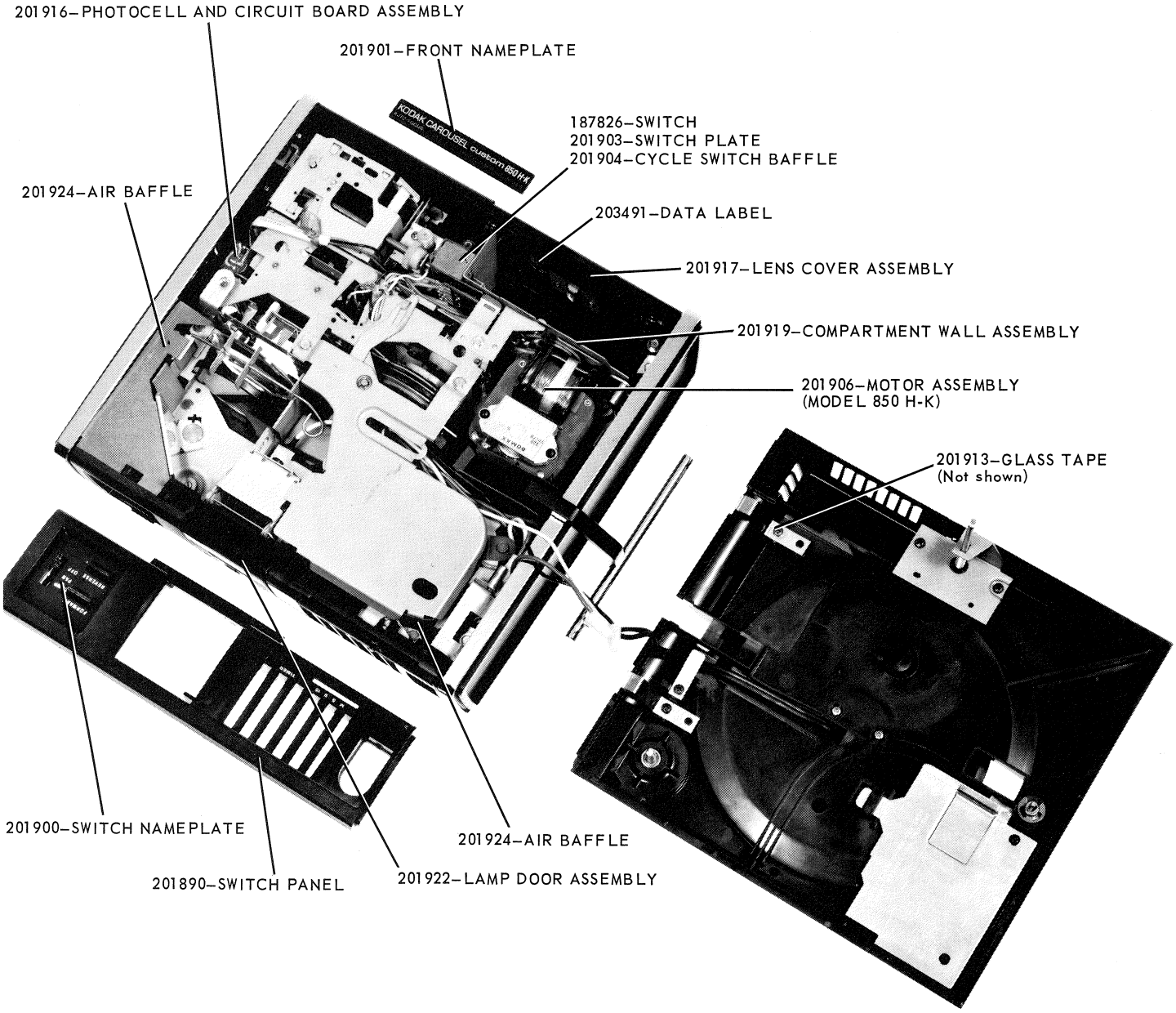
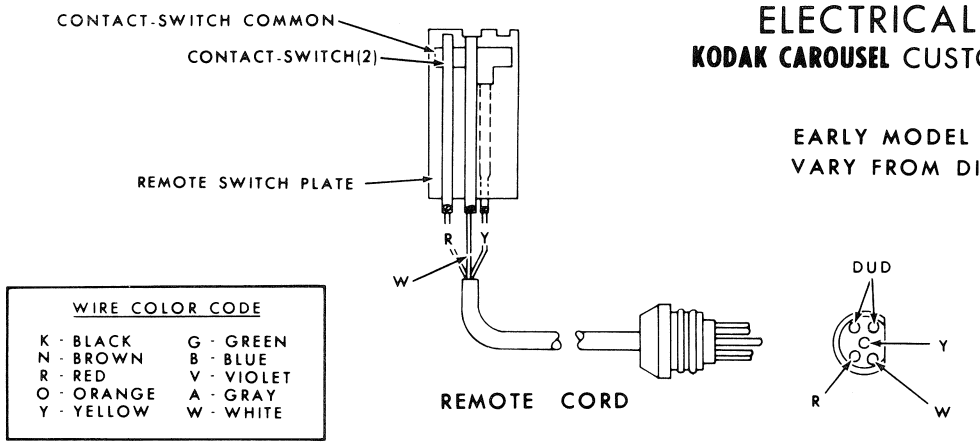


FIGURE 37 ***KODAK CAROUSEL*** **CUSTOM 850-K PROJECTOR**

Part numbers identified are ONLY 850 H-K, remaining part numbers are found in this parts list under 850 H.

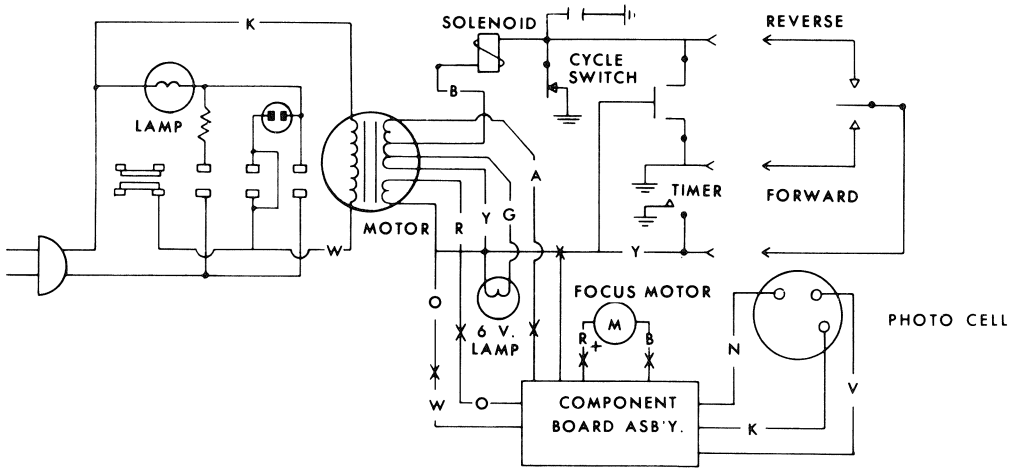
ELECTRICAL DIAGRAMS
KODAK CAROUSEL CUSTOM 850H PROJECTOR

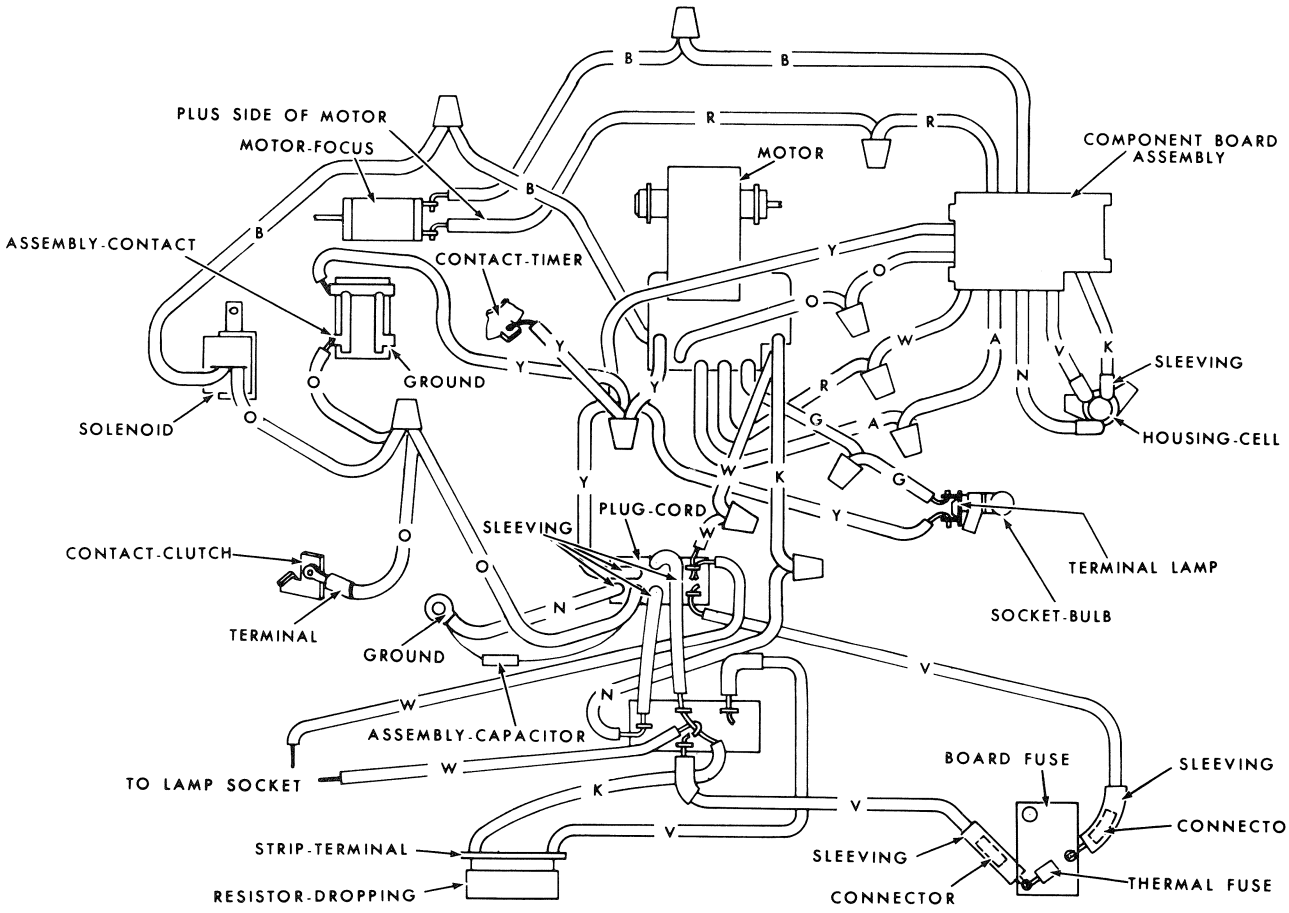
EARLY MODEL PROJECTORS MAY VARY FROM DIAGRAMS SHOWN



WIRE COLOR CODE

K	BLACK	G	GREEN
N	BROWN	B	BLUE
R	RED	V	VIOLET
O	ORANGE	A	GRAY
Y	YELLOW	W	WHITE

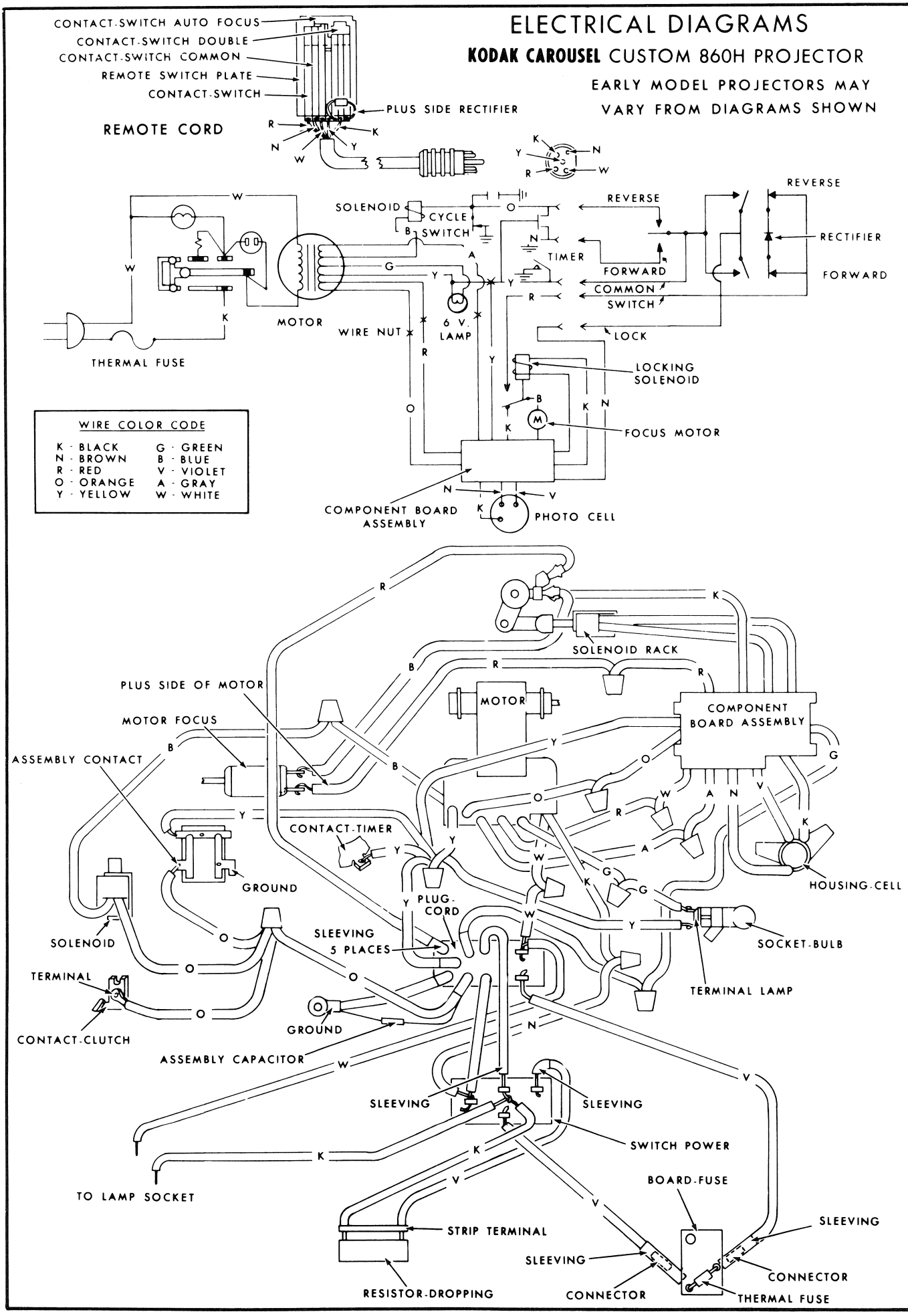




ELECTRICAL DIAGRAMS

KODAK CAROUSEL CUSTOM 860H PROJECTOR

EARLY MODEL PROJECTORS MAY VARY FROM DIAGRAMS SHOWN



PART NO.	MODEL 850H	MODEL 860H	PART NAME	FIG. NO.
4405K	X	X	Kit - Switch replacement	11
36481	X	X	Screw - Tap, Type B, No. 6 x 3/8, Ph, pan head, steel	5
104544	X	X	Screw - Tap, Type B, No. 6 x 7/16, Ph, pan head, steel	6,11
122825	X	X	Screw - Tap, Type B, No. 6 x 1/4, Ph, pan head, steel	16
126870	X	X	Ring - Base cover lock	5,6
128857		X	Screw - Tap, Type F, 8-32 x 5/16, Ph, pan head, steel	21
130321	X	X	Screw - Tap, Type B, No. 6 x 3/8, Ph, pan head, steel	6
138688	X	X	Grommet - Motor	14
144638	X	X	Ring - Timer switch	9
145161	X	X	Connector	6,7
146619	X	X	Resistor - R7	18
146644	X	X	Connector	7
156096		X	Screw - Mach., 2-56 UNC-2A x 5/16, steel	23
159808	X	X	Washer - Cycle stop	29,30
159894	X	X	Sleeve - Clutch	31
159934	X	X	Screw - Tap, Type B, No. 6 x 5/16, Ph, EK min head, steel	11
159947	X	X	Ring - Worm pulley	28,29,30
159967	X	X	Screw - Solenoid	21,26
159971	X	X	Spring - Locator lever	32
159972	X	X	Spring - Drive lever	32
159990	X	X	Ring - Cam shaft	29
159991	X	X	Ring - Lamp lock lever	12,32
160027	X	X	Washer - Cam shaft	29,30
161524	X	X	Screw - Focus motor bracket	20,21
162601	X	X	Insulator - Resistor	34
166946	X	X	Screw - Tap, Type B, No. 5 x 3/16, Ph, pan head, steel	20,21
168514		X	Rectifier	3
168733	X	X	Washer - Worm pulley	28,34
169703	X	X	Pad - Pressure	33
169721	X	X	Spacer	30
169726	X	X	Key - Spindle	35,36
169727	X	X	Disc - Timing	29
169730	X	X	Pinion - Timing	30
169731	X	X	Gear - Timing	29,30
169733	X	X	Locator	32
169734	X	X	Gear - Worm	30
169735	X	X	Cam - Slide	30
169736	X	X	Cam - Index	30
169737	X	X	Cam - Locator	30
169742	X	X	Bushing - Drive post	32
169743	X	X	Spacer - Drive	30
169744	X	X	Ramp - Slide lever	29
169758	X	X	Shaft - Worm	28
169763	X	X	Spring - Timer	9
169773	X	X	Spring - Spindle key	36
169777	X	X	Retainer - Clutch spring	31
169791	X	X	Screw - Motor	14
169792	X	X	Baffle - Shutter	26
169795	X	X	Screw - Handle	14
169799	X	X	Spring - Lens rail	22
169801	X	X	Bushing - Worm	28,34
169806	X	X	Bumper	26,32
169809	X	X	Pin - Half cycle	26
169816	X	X	Spring - Focus shaft	22
169829	X	X	Ring - Focus worm compression	22
169836	X	X	Screw - Remote switch	2,3
169838	X	X	Spring - Drive shaft	29
169840	X	X	Spring - Cam	30
169841	X	X	Spring - Slide lever	29
169842	X	X	Spring - Timer contact	33

PART NO.	MODEL 850H	MODEL 860H	PART NAME	FIG. NO.
169843	X	X	Spring - Latch	16
169845	X	X	Spring - Select lever	26
169846	X	X	Spring - Direction lever	26
169847	X	X	Spring - Slide lever	27
169851	X	X	Housing - Bottom	2,3
169854	X		Housing - Top	2
169898	X	X	Strip - Terminal	34
170678	X	X	Washer - Fan	34
170753	X	X	Left Gate Assembly	33
170756	X	X	Drive Lever Assembly	32
170757	X	X	Shutter Lever Assembly	32
170759	X	X	Timer Contact Assembly	29
170765	X	X	Direction Lever Assembly	26
170766	X	X	Cycle Lever Assembly	26
170771	X	X	Focus Worm Shaft Assembly	22
171054	X		Remote Control Assembly	2
171055	X		Contact Assembly	2
171060	X	X	Right Gate Assembly	33
171269	X	X	Top Plate Assembly	25,26
171293	X	X	Terminal and Wire	29
171484	X	X	Spacer - Timer contact	27
171535	X	X	Bushing - Direction lever	26
171555	X	X	Foot	5
171557	X	X	Spring - Clutch	31
171617	X	X	Pulley - Worm	28
171624	X	X	Crank - Clutch	31
171836	X	X	Fan	34
171898	X	X	Spring - Fan	34
171922	X	X	Ring - Cam shaft	30
171923	X	X	Terminal and Wire Assembly	29
171927	X	X	Rail - Slide lever	33
171928	X	X	Rivet - Gate	33
172097	X	X	Screw - Tap, Type BP, No. 8 x 5/16, upset hex head	15
172110	X	X	Stud - Directional lever	26
172115	X	X	Cap - Fan	34
172730	X	X	Cam Shaft Assembly	29,30,31
172758	X	X	Button	2,3
173343	X	X	Spring - Pressure pad	33
173377	X	X	Button - Spindle	36
173511	X	X	Washer - Lower fan	34
173718		X	Button - Focus	3
174063	X	X	Spring - Cycle lever	26
174652	X	X	Screw - Tap, Type F, 8-32 x 1/4 SL, upset hex head	13
175268	X	X	Contact - Timer	29
175440	X	X	Washer - Shutter	32
176385	X	X	Locator Cam Lever Assembly	34
176741	X	X	Lever - Timer switch	33
177977	X	X	Screw - Tap, Swageform, 8-32 x 3/8, upset hex head	9,10, 14,17
179692	X	X	Ring - Rack clutch	22
180937	X	X	Gear - Focus clutch	22
180938	X	X	Gear - Rack clutch	22
180991	X	X	Frame - Light	32
181027	X	X	Spring - Rack	17
181376	X		Cord - Remote control	2
181770	X	X	Cell Housing Assembly	24
182008	X	X	Mask - Cell	24
182441	X	X	Grommet and Solenoid Mount Assembly	26
183473	X	X	Washer - Lamp stud	12
183612	X	X	Screw - Tap, Swageform, 6-32 x 5/16, Ph, pan head	24

PART NO.	MODEL 850H	MODEL 860H	PART NAME	FIG. NO.
183819	X	X	Shutter	32
183980	X	X	Spring - Shutter	32
184487	X	X	Grommet - Solenoid	21,22,26
184612	X	X	Spring - Retard lever	29
184613	X	X	Lever - Cam retard	29
184867	X	X	Bearing - Cam shaft	29
184927		X	Remote Cord Assembly	3
184929		X	Contact Assembly	3
185230	X	X	Ring - Slide tray	1
185372		X	Grommet and Bracket Assembly	22
185373	X	X	Focus Motor Bracket Assembly	21
185375		X	Lens Mount Bracket Assembly	23
185376		X	Rack Lock Cam Assembly	23
185378		X	Insert Stud Assembly	23
185630		X	Cord - Automatic remote	3
185636		X	Nameplate - Remote control	3
185651	X	X	Plug - Cord	11
185766	X	X	Rectifier - Q2	18
185949	X	X	Baffle - Blower	34
186001	X	X	Spring - Crank	31
186002	X	X	Lever - Clutch	31
186514		X	Housing - Top	3
186530		X	Pad - Rack lock cork	23
186531		X	Spring - Pad return	23
186554	X	X	Capacitor - C1	18
186605	X	X	Rail - Lens	22
186980		X	Washer - Solenoid bracket	21
187809	X	X	Lamp - Auto-focus	32
187812	X	X	Gear - Focus motor worm	20,21
187813	X	X	Rectifier - CR1-9	18
187814	X	X	Resistor - R1, 2, 4, 5	18
188332	X	X	Pin - Shutter	32
190442	X	X	Screw - Tap, Type AB, No. 8 x 5/16, upset hex head	7,9,14, 17,25
191895	X	X	Resistor - Dropping	34
192481	X	X	Blower Cover Assembly	34
192799	X	X	Socket - Lamp	12
192865	X	X	Transistor - Q1	18
193233	X	X	Slide Lever Mount Assembly	29
193234	X	X	Slide Lever Assembly	29
195563	X	X	Resistor - R6	18
195564	X	X	Resistor - R3	18
196914	X	X	Panel - Switch	11
196917	X	X	Cap - Handle	14
196919	X	X	Wall - Compartment	14
196923	X	X	Baffle - Resistor	7
196924	X	X	Motor Assembly	14
196925	X	X	Baffle - Bottom air	34
196931	X	X	Bracket - Elevation	6
196932	X	X	Knob - Select	19
196937	X	X	Pin - Lamp door	7
196940	X	X	Nameplate - Timer	10
196941	X	X	Nameplate - Dust cover	1 Insert
196942	X	X	Nameplate - Switch	10
196943	X	X	Pin - Handle	14
196944	X	X	Button - Cycle	10
196945	X	X	Spring - Base cover	6
196946	X	X	Latch - Component board	17
196947	X	X	Knob - Timer	9
196948	X	X	Link - Timer	9

PART NO.	MODEL 850H	MODEL 860H	PART NAME	FIG. NO.
196949	X	X	Lever - Timer	9
196950	X	X	Knob - Focus	19
196951	X	X	Cord - Power	5,6
196952	X	X	Cover - Cord wrap	6
196954	X	X	Door - Storage	16
196955	X	X	Bracket - Storage door	16
196956	X	X	Latch - Door	16
196957	X	X	Plate - Latch	16
196958	X	X	Belt - Mechanism	28
196959	X	X	Belt - Fan	34
196965	X	X	Pin - Cycle button	11
196970	X	X	Side Panel Assembly	10
196971	X	X	Handle Assembly	14
196972	X	X	Contact Switch Assembly	11
196973	X	X	Spring - Handle	14
196981	X	X	Bracket - Base lock	9
196983	X	X	Spring - Door latch	16
196984	X	X	Lever - Select	19,26
196985		X	Nameplate - Front	15
196990	X	X	Leveling Knob Assembly	5,6
196991	X	X	Mechanism Assembly	25 thru 33
196995	X	X	Focus Shaft Assembly	22
196997	X	X	Mirror Mount Assembly	13
196999	X	X	Baffle - Stray light	13
197000		X	Lens Cover Assembly	15
197002	X	X	Spring - Light shield	10,13
197004	X	X	Lamp Door Assembly	12
197005	X	X	Base Pivot Bracket Assembly	14
197006	X	X	Receptacle Bracket Assembly	11
197009	X	X	Cord Plug Wire Assembly	11
197013	X	X	Fuse Bracket Assembly	8
197024	X		Lens Cover Assembly	15
197026	X	X	Clip - Socket wire	12
197029	X	X	Clamp - Cord	6
197030	X	X	Shield - Switch	7
197031	X	X	Spring - Washer - Socket stud spring	12
197036	X	X	Baffle - Base cover	6
197039	X	X	Photocell and Circuit Board Assembly	7,24
197040	X	X	Capacitor Assembly	11
197043	X	X	Dust Cover Assembly	1, 1 Insert
197044	X	X	Baffle - Handle	14
197052		X	Component Board Assembly	18
197054	X	X	Lamp Socket Assembly	32
197055	X	X	Focus Rack Assembly	32
197060	X	X	Spring - Door pivot	16
197065	X	X	Plate - Dust cover	1 Insert
197068	X	X	Baffle - Switch	11
197084	X	X	Base Cover Assembly	6
197085	X	X	Housing and Shaft Assembly	35
197086	X	X	Lamp Mount Assembly	13
197087	X	X	Mechanism Frame Assembly	33
197104	X	X	Screw - Solenoid	26,29
197289	X	X	Spring - Lens retainer	13
197290	X	X	Pad - Lens retainer	13
197325	X	X	Plate - Symbol housing	4
197326	X	X	Screw - Dust cover	1 Insert
197391	X	X	Lens Retainer Assembly	13
197392	X	X	Elevation Shaft Assembly	6
197393	X		Nameplate - Front	15
197395	X		Cord Plug Wire Assembly	11

PART NO.	MODEL 850H	MODEL 860H	PART NAME	FIG. NO.
197399	X		Component Board Assembly	18
197550	X	X	Washer - Lamp socket	12
198589	X	X	Solenoid Assembly	26
198590	X	X	Solenoid Arm and Link Assembly	26
199284	X	X	Bearing	29
199413	X	X	Mount - Lens	22
199414	X		Bracket - Lens mount	22
199450		X	Rack Stop Arm Assembly	23
199452		X	Rack Solenoid Assembly	21
199925	X	X	Screw - Base lock bracket	9,10
201602		X	Connector - Solenoid	22
201603		X	Armature - Solenoid	23
201923	X	X	Baffle - Air, mechanism	7
201992	X	X	Indexer Lever Assembly	25
202077	X	X	Latch - Lamp door	12
202105	X	X	Screw - Base cover	6
202106	X	X	Spring - Dust cover	1 Insert
202107	X	X	Latch - Dust cover	1 Insert
202144	X	X	Tape - Sliding cover	15
202243	X	X	Screw - Mirror adjusting bracket	8,13
202258	X	X	Button - Lamp door latch	5
202264	X	X	Baffle - Top housing	10
203175	X	X	Panel - Lens door	16
625182	X	X	Lens - Condenser	13
625267	X	X	Filter - WRATTEN	24
625887	X	X	Glass - Heat-absorbing	13
680206	X	X	Terminal	17
850254	X	X	Washer - Cam shaft	29
871469	X	X	Wire - Tie	7

KODAK CAROUSEL Custom 850H-K Projector

187826			Switch - 50 and 60 Hz	37
201890			Panel - Switch	37
201900			Nameplate - Switch	37
201901			Nameplate - Front	37
201903			Plate - Switch	37
201904			Baffle - Cycle switch	37
201906			Motor Assembly	37
201913			Tape - Glass	37
201916			Photocell and Circuit Board Assembly	37
201917			Lens Cover Assembly	37
201919			Wall Compartment Assembly	37
201922			Lamp Door Assembly	37
201924			Baffle - Air	37
203491			Label - Data	37

Order by PART NUMBER, NAME, and EQUIPMENT MODEL.

Customer Equipment Services Division

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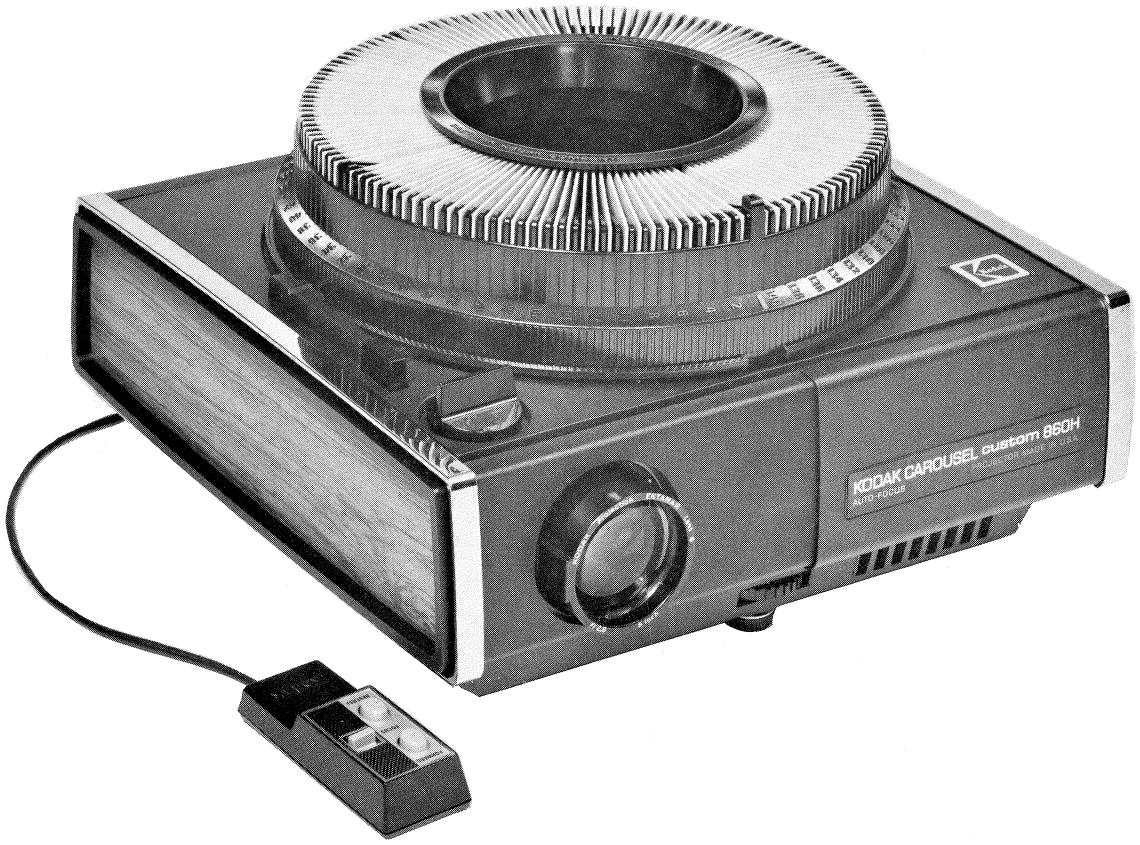
Servicing the

KODAK CAROUSEL
CUSTOM 850H & 860H PROJECTORS



EASTMAN KODAK COMPANY • CUSTOMER EQUIPMENT SERVICES DIVISION
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TABLE OF CONTENTS

		PAGE
1.	GENERAL INFORMATION	
1.1	ELECTRICAL SPECIFICATIONS	4
1.2	OPTICAL SYSTEM	4
1.3	SLIDE TRAY	4
1.4	SELECT BUTTON	5
1.5	AUTOMATIC TIMER	5
1.6	REMOTE CONTROL CORD	5
1.7	THERMAL FUSE	5
1.8	CAPACITOR	5
2.	SEQUENCE OF OPERATION	
2.1	FULL CYCLE, FORWARD	6
2.2	HALF-CYCLE	6
2.3	REVERSING	7
2.4	AUTO-FOCUS	8
2.5	REMOTE FOCUS (CUSTOM 860H MODEL)	11
3.	DISASSEMBLY	
3.1	REMOVAL OF BASE COVER	12
3.2	REMOVAL OF THERMAL FUSE ASSEMBLY	12
3.3	REMOVAL OF GRILLE ASSEMBLY	12
3.4	REMOVAL OF THE LAMP AND MIRROR MOUNT BRACKET	13
3.5	REMOVAL OF MAIN DRIVE MOTOR	13
3.6	FAN REPLACEMENT AND/OR FAN BELT REPLACEMENT	14
3.7	REMOVAL OF MECHANISM ASSEMBLY AND LENS MOUNT ASSEMBLY	14
3.8	DISASSEMBLY OF LENS MOUNT ASSEMBLY	15
3.9	DISASSEMBLY OF MECHANISM ASSEMBLY	16
3.10	DISASSEMBLY OF CAM SHAFT	16
3.11	AUTOMATIC TIMER	17
3.12	WORM PULLEY REPLACEMENT AND/OR MECHANISM BELT REPLACEMENT	17
3.13	REMOVAL OF SLIDE LEVER RAMP	18
3.14	DISASSEMBLY OF REMOTE CONTROL	18
3.15	REMOVAL OF CARRYING HANDLE	18
3.16	REMOVAL OF COMPONENT BOARD ASSEMBLY	18
3.17	REMOVAL OF REMOTE FOCUSING SOLENOID IN CUSTOM 860H MODEL	18
3.18	REMOVAL OF REMOTE FOCUSING SWITCH IN CUSTOM 860H MODEL	19
3.19	REMOVAL AND INSTALLATION OF PHOTOCELL ASSEMBLY	20
3.20	REMOVAL OF LEVELING FOOT ASSEMBLY	21
3.21	REMOVAL OF FRONT NAMEPLATE	21

PAGE

4. ADJUSTMENTS

4.1 CYCLE SOLENOID 22
4.2 LOCATOR LEVER 22
4.3 SLIDE LEVER 23
4.4 NULL ADJUSTMENT 23
4.5 CELL ALIGNMENT 24
4.6 TARGET SLIDE ADJUSTMENT 25
4.7 SWITCH ADJUSTMENT FOR AUTO-FOCUS MODE OF CUSTOM 860H MODEL 26
4.8 SWITCH AND SOLENOID ADJUSTMENT FOR REMOTE FOCUS MODE OF CUSTOM 860H MODEL 26
4.9 MIRROR ALIGNMENT 27

5. TROUBLESHOOTING 28-32

6. TOOLS, CEMENT, AND LUBRICANTS

6.1 SPECIAL SERVICE TOOLS 33
6.2 CEMENT 33
6.3 LUBRICANTS 33
6.4 LUBRICATION 33

WIRING DIAGRAM 34-35

PLEASE NOTE

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1. GENERAL INFORMATION

1.1 ELECTRICAL SPECIFICATIONS

1.1.1 OPERATING VOLTAGE
105-125 volts, 60 Hz

1.1.2 PROJECTION LAMP
300-watt horizontal burning, ANSI Code ELH lamp, 115-120 volts

1.1.3 DROPPING RESISTOR
Extends lamp life when power switch is in "Low" position.
Resistance -- 5 ohms

1.1.4 DIELECTRIC STRENGTH TEST:

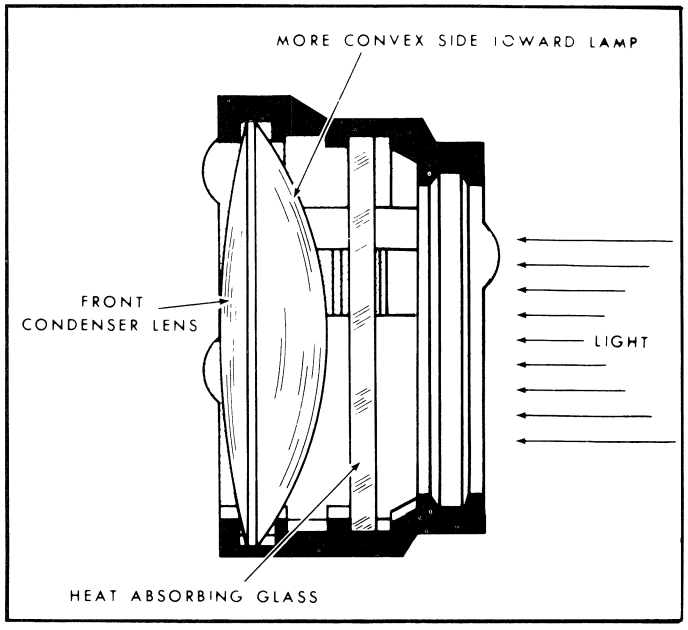
A dielectric strength test should be performed on the projector and meet the following requirements:

Leakage current must not exceed 2.5 milliamperes with 900 volts, 60 Hz, applied for one minute between the shorted prongs of the power plug and the frame with the power switch in the lamp or high position.

1.2 OPTICAL SYSTEM

1.2.1 The current line of *KODAK* Projection *EKTANAR* and *EKTANON* Lenses may be used with both models.

1.2.2 The condenser system contains the front condenser lens and the heat-absorbing glass. Install as indicated in sketch.



1.3 SLIDE TRAY

1.3.1 The slide tray is high-quality molding with one index position and either eighty or one hundred and forty slide positions (depending on the tray).

1.3.2 There are four models of the tray that may be used: the *KODAK CAROUSEL* Slide Tray (black), *KODAK CAROUSEL* Universal Slide Tray (gray), the *KODAK CAROUSEL* 140 Slide Tray, and *KODAK CAROUSEL* Slide Tray for the *KODAK CAROUSEL* S Slide Projector.

1.3.3 Emergency release of the slide tray: Insert a coin in wide slot in center spindle. Turn coin left or right and lift tray from projector.

1.4 SELECT BUTTON

The select button is not designed to advance the tray, but when DEPRESSED ALL THE WAY AND HELD will advance the mechanism to HALF-CYCLE or SELECT position (see 2.2). When the select button is depressed, the tray is free to rotate to any position or to move to the indexed area for tray removal.

1.5 AUTOMATIC TIMER

Automatic slide change is accomplished by setting the timer knob to 5, 8, or 15 seconds. The remote cord is not required for automatic operation, but may be used for either forward or reverse actuation to override the automatic operation. The built-in forward and reverse switch will also override the automatic operation.

1.6 REMOTE CONTROL CORD

1.6.1 The Custom 850H model includes "FOR." button for forward operation and "REV." button for reverse operation.

Forward operation is controlled by momentary pressure all the way down on the "FOR." button, followed by immediate release.

Reverse operation requires a slightly longer hold all the way down on the "REV." button, followed by immediate release.

If pressure and release on the reverse button is quick, or if it is not pushed all the way down, the slide tray may be "tricked" into advancing instead of reversing.

1.6.2 In addition to the forward and reverse buttons described in 1.6.1 above, the remote control cord used on the Custom 860H model has a focus button for remotely adjusting focus in addition to the automatic focus feature of the projectors (2.5).

1.7 THERMAL FUSE

The thermal fuse is a safety device which protects the projector from overheating and possible damage caused by overheating within the projector housing.

There is no visible change in the appearance of the fuse when it burns out. The most obvious symptoms are: projector will stop running or cannot be turned on.

1.8 CAPACITOR

The capacitor suppresses electrical noise which otherwise might be picked up by either an associated tape recorder or a public address system.

2. SEQUENCE OF OPERATION

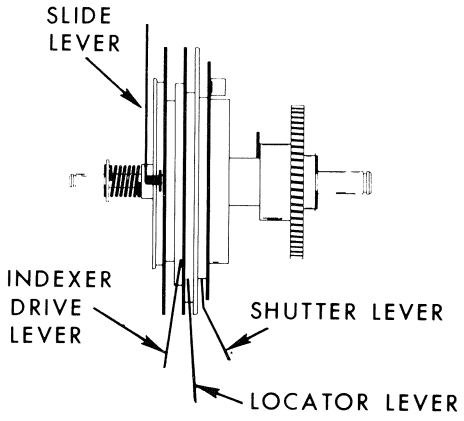
2.1 FULL CYCLE, FORWARD (See foldout from page 7.)

2.1.1 When projector is turned on, main drive motor runs continuously. Power is transferred to the fan by a belt and to the worm pulley by a second belt.

2.1.2 The worm pulley (10) rotates worm gear and clutch sleeve driver (11) continuously. The clutch spring (9) is held in relaxed position by clutch contact lever (4) which allows cam stack and shaft (8) to remain stationary.

2.1.3 A forward cycle is started when solenoid (5) momentarily pulls cycle lever (17) away from clutch spring (9). This action simultaneously breaks electrical contact to solenoid and allows clutch spring (9) to tighten on revolving clutch sleeve, starting cam shaft rotation. The cams move mechanism levers, and one revolution accomplishes one cycle.

2.1.4 As shutter (13) closes, drive lever (6) and indexer (1) begin to move and slide lever (7) begins to eject slide from gate (16).



2.1.5 As slide lever ejects slide from gate, shutter lever (12) continues moving and, in turn, opens pressure pads (15).

2.1.6 When slide lever lifts slide completely into tray, locator (14) disengages tray lugs and indexer (1) continues its movement to rotate slide tray forward.

2.1.7 Indexer completes moving tray forward, then withdraws, and locator moves to engage tray lugs, which accurately aligns tray over gate.

2.1.8 As slide lever descends, slide drops by gravity into open gate. When slide lever hits bottom, pressure pads close, indexer returns to starting position, and shutter (13) opens.

2.1.9 The clutch spring (9) contacts clutch contact lever (4), clutch begins to slip, and cam shaft (8) ceases to rotate.

2.2 HALF-CYCLE

2.2.1 The purposes of half-cycle or use of SELECT button are to:

a. Return slide from gate to tray for editing.

b. Allow tray to be rotated manually to any numbered slide position, or to "0" position for removal of tray from projector.

c. Allow slide opposite gate index to drop and be shown when button is released.

2.2.2 When SELECT button is pressed ALL THE WAY DOWN and HELD, the select lever (18) moves cycle lever (17) to disengage clutch spring (9). The clutch spring tightens on rotating clutch sleeve (11) and cam shaft (8) starts to rotate.

2.2.3 The drive lever (6) is pushed off its cam by select lever (18) blocking its movement.

2.2.4 All other levers operate as in first half of full cycle forward. Shutter closes, slide lever pushes slide into tray and locator pulls out of contact with lugs of tray.

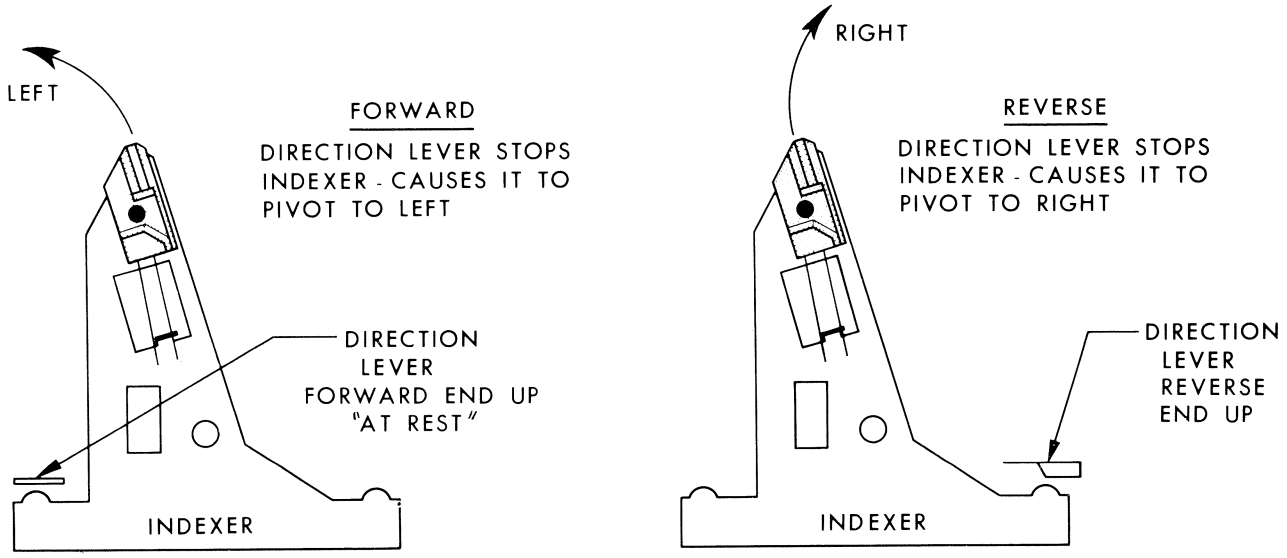
2.2.5 With SELECT button still depressed ALL THE WAY DOWN, the clutch spring is stopped by half-cycle arm (3) of cycle lever, approximately 180 degrees from its starting position. The cam shaft stops rotating and all lever action stops at this point.

2.2.6 When SELECT button is released, the half-cycle arm of cycle lever releases clutch spring and remaining half-cycle is performed as in full cycle; locator positions tray, slide lever descends, pressure pads close and shutter opens.

2.3 REVERSING

2.3.1 Forward or reverse is determined by the position of the direction lever (2). Normal or "At Rest" position is forward operation.

2.3.2 When reverse button is pushed and held for a slightly longer time than required for forward operation, cycle lever (17) pivots "reverse" end of direction lever (2) up for a long enough time to trap indexer (1) as it moves. Indexer then pivots in opposite (or reverse) direction from forward operation. Cycle switch does not open solenoid circuit during reverse operation.



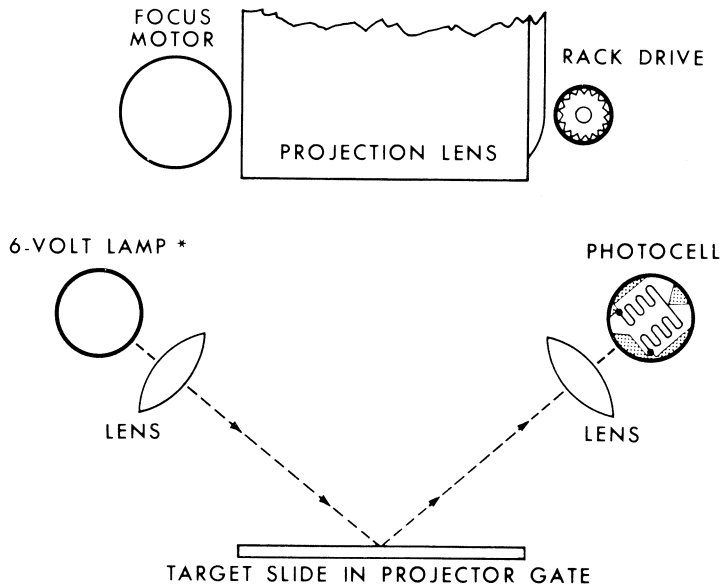
2.4 AUTO-FOCUS

The purpose of the auto-focus feature is to make sure that the front surface of each slide will be the same distance from mounting rack of projection lens and, therefore, from lens itself. It will accomplish this whether or not image on screen is in focus, or even when there is no projection lens in projector.

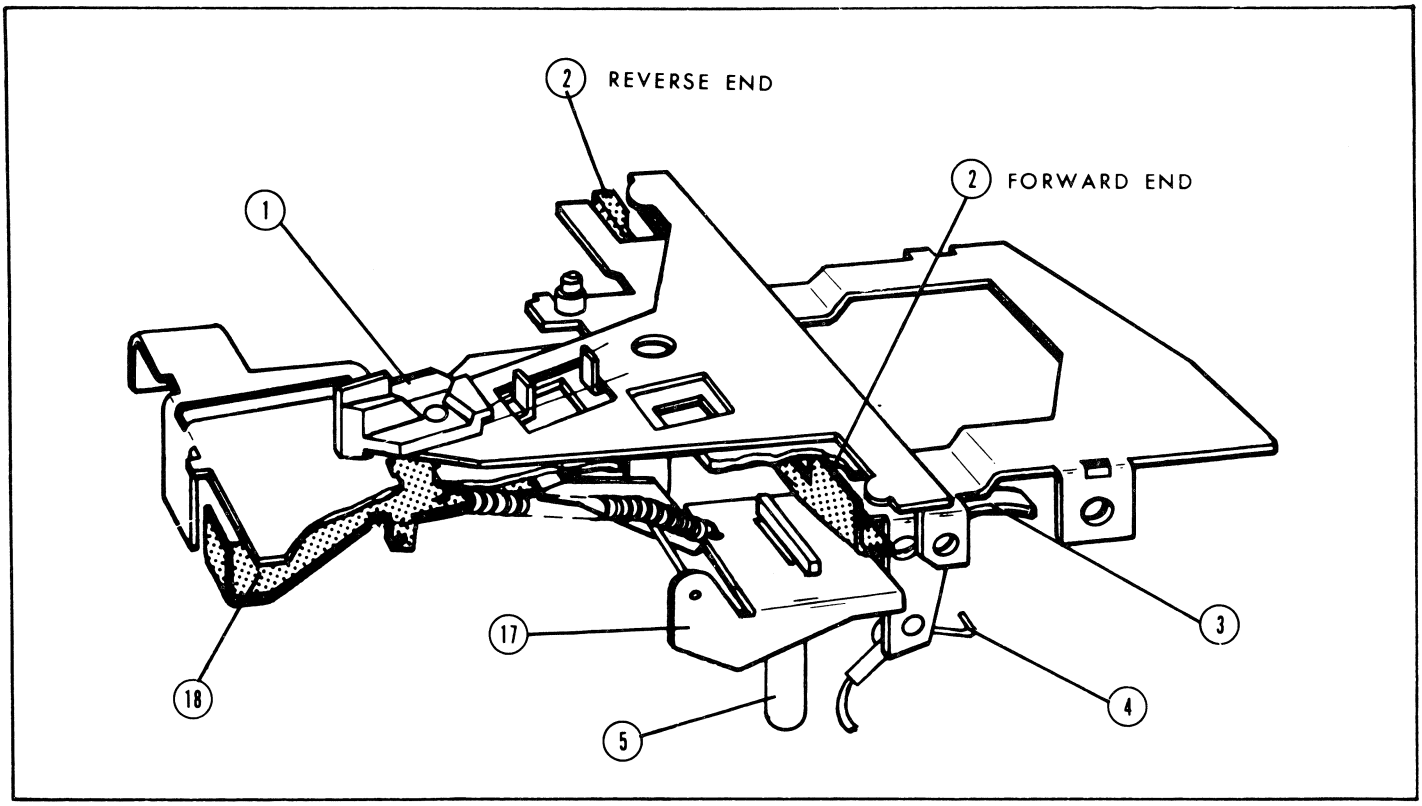
For normal operation, first slide is placed in gate and auto-focus mechanism allowed to position rack relative to the front surface of that slide. The operator then focuses image on screen by moving projection lens with the focus knob on projector, or on Custom 860H model, with focus knob on projector or button on remote control. Thereafter, each succeeding slide's front surface will be at the same distance from rear of lens. If slides are similar (all glass- or all cardboard-mounted, etc), each screen image will be brought into focus, automatically adjusted for reasonable warpage.

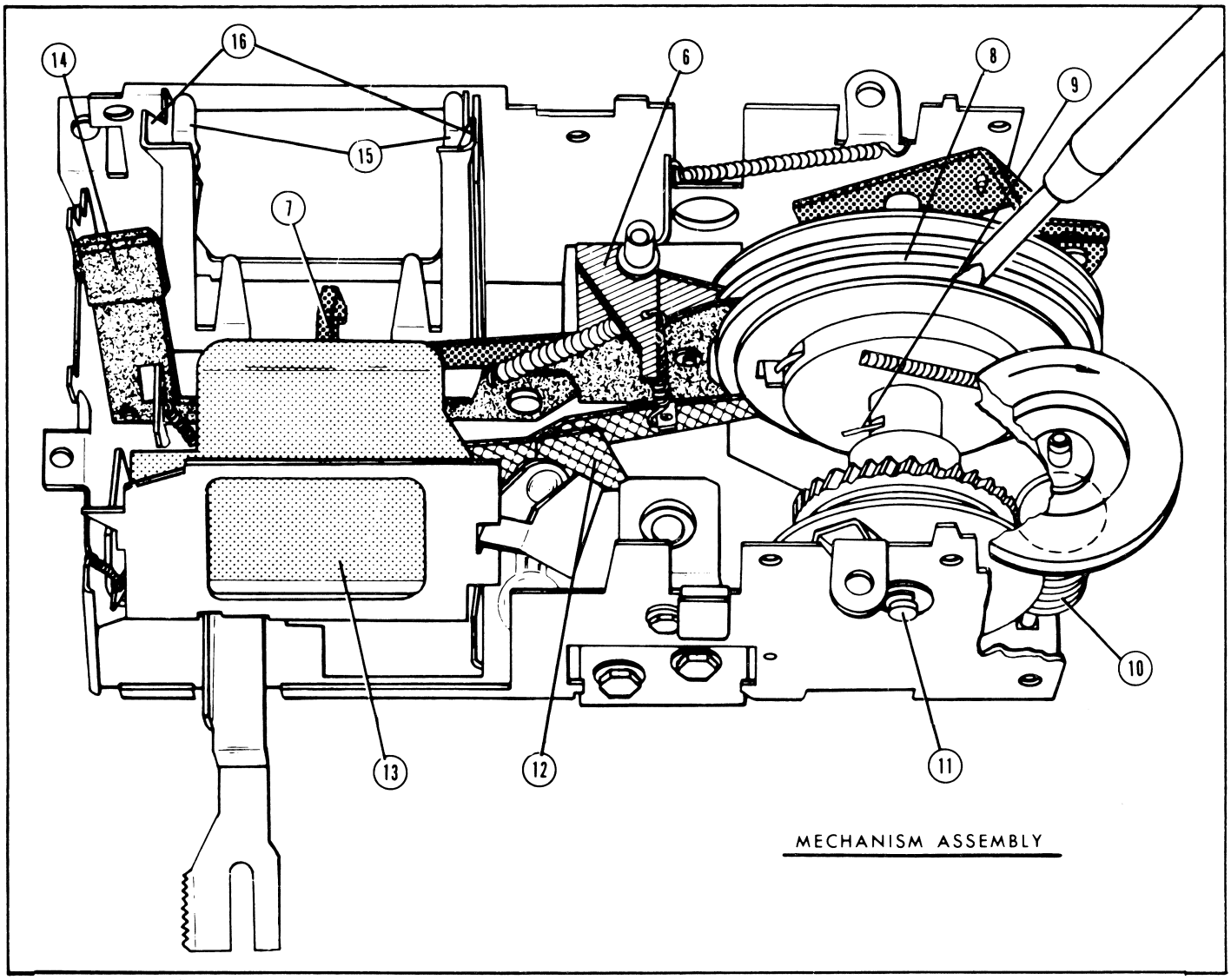
2.4.1 Auto-focusing is accomplished by directing the filament image of a 6V lamp through a lens and onto the center of a slide in the gate. This image is reflected from the slide through a collecting lens and onto the photocell. The projection lens does not need to be turned on for the auto-focus to function.

2.4.2 The auto-focus rack, with 6V lamp, will be driven forward or backward, depending on where light (filament image) strikes the photocell. As rack moves, the image will move toward center of cell. Movement of the auto-focus rack also moves the projection lens through the focus shaft assembly.

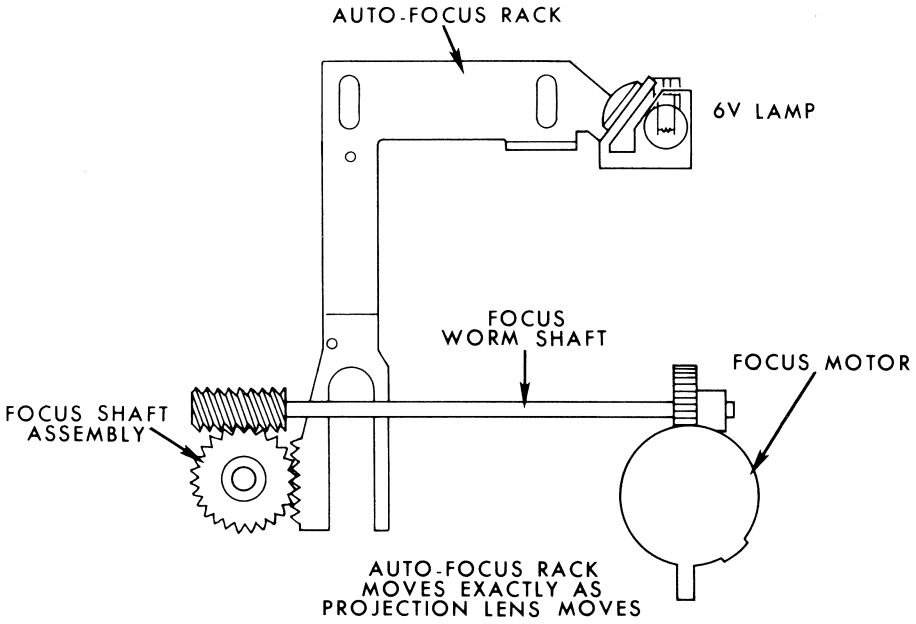


*Lamp is actually lower; a mirror brings it to position shown in sketch.

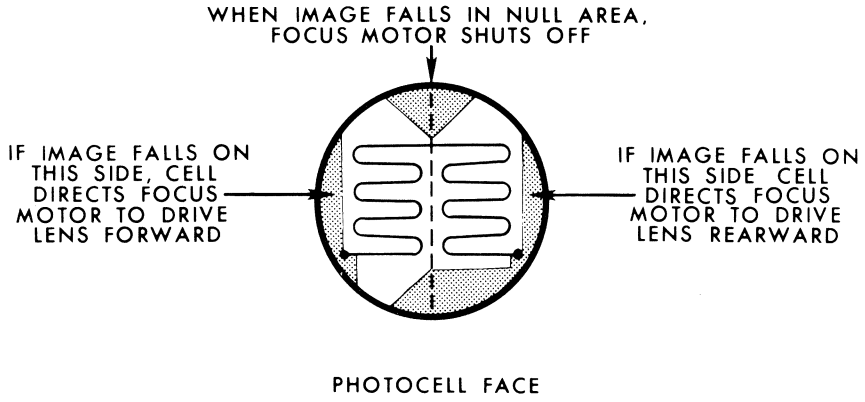




MECHANISM ASSEMBLY

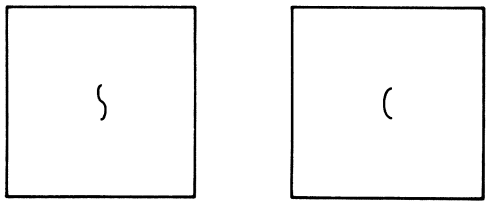


2.4.3 Auto-focus rack movement continues until the filament image falls within the center or null area of the photocell.

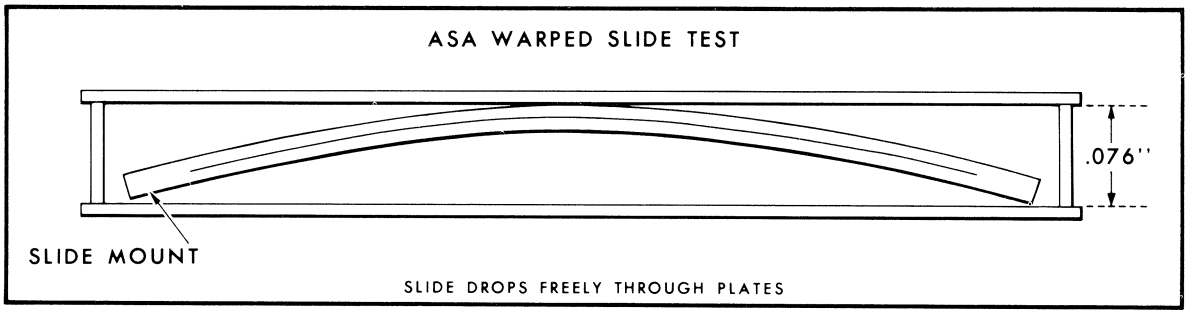


2.4.4 As image moves across cell, it also moves on surface of slide. For proper auto-focus operation, null position must occur when image on slide is within a rather limited area at center of slide. Adjustment, therefore, consists of positioning the 6V lamp and/or cell so as to bring the image within tolerance on slide.

2.4.5 The filament image will appear as a flat "S" or a flat "C" on surface of slide when viewed from front with projection lens removed.



2.4.6 In a properly adjusted projector, and after first slide has been focused on the screen, succeeding slides will be brought into focus provided they are not warped more than .076-inch. Slides warped more than .076-inch will cause the reflected filament's image to be beyond the face of the photocell.



2.4.7 Do not mix glass-mounted and cardboard-mounted slides. Reflection is off first surface light source strikes. Glass-mounted slides put reflection surface .030-inch ahead (thickness of one glass panel) of transparency surface of a cardboard-mounted slide.

If first slide is glass-mounted, only glass-mounted slides will be in focus in a mixed tray. If first slide is cardboard-mounted, only cardboard-mounted slides will be in focus in a mixed tray.

2.5 REMOTE FOCUS (CUSTOM 860H MODEL)

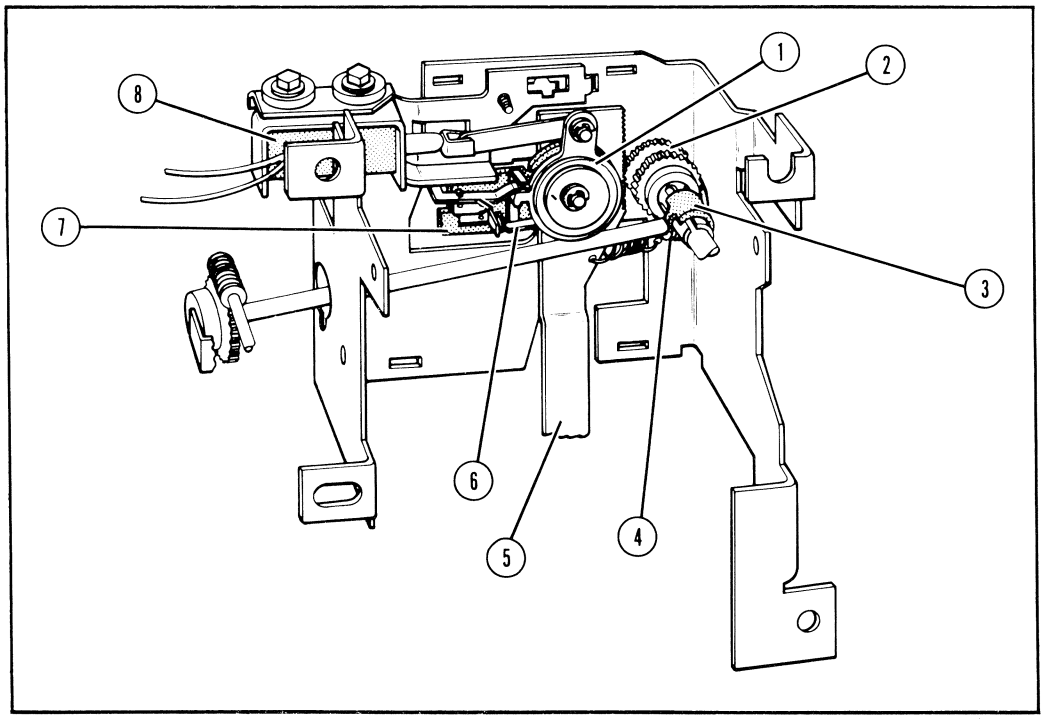
2.5.1 Remote focusing on the Custom 860H model is accomplished by the following sequence:

a. Actuating remote focusing button backward or forward causes locking solenoid (8) to pull rack stop arm assembly (1) which clamps focus rack (5) between rack stop arm assembly and rack lock cam assembly (7).

b. Further travel of rack stop arm assembly actuates switch (6) which disconnects auto-focus control circuit and connects focus motor to remote switch circuit.

c. A light slip clutch (not shown) between two lower gears (2) permits focus motor to drive projection lens to any position for best focus on screen.

d. Releasing remote focus button restores automatic focus system. For manual focus, a firm clutch (3) slips when focus knob on projector is turned. The worm gear (4) on cross shaft prevents lower gears from turning.



3. DISASSEMBLY

3.1 REMOVAL OF BASE COVER

3.1.1 Turn projector upside down; loosen the coin-slotted screw. Hinged cover can now be opened.

3.1.2 Grasp cover and pull to release from two spring-held hinge pivot posts.

NOTE: When reassembling the base cover, make sure all electrical wires are dressed and in their proper positions. This will avoid their being pinched by the cover.

3.2 REMOVAL OF THERMAL FUSE ASSEMBLY

3.2.1 Remove base cover (3.1).

3.2.2 Remove dropping resistor baffle cover held by three 1/4-inch hex head screws.

3.2.3 Remove Phillips head screw holding thermal fuse assembly to lamp bracket.

3.2.4 Disconnect thermal fuse leads by removing two Wire-Nuts and remove thermal fuse assembly.

3.3 REMOVAL OF GRILLE ASSEMBLY

3.3.1 Remove base cover (3.1).

3.3.2 Remove dropping resistor baffle cover held by three 1/4-inch hex head screws.

3.3.3 Disconnect timer lever link from the actuating lever by removing one 1/4-inch hex head screw.

3.3.4 Expose back of power switch by lifting up paper insulator. Remove electrical leads to power switch and forward-reverse switch by pulling them off terminals.

3.3.5 Remove pin holding lamp door to lamp and mirror bracket assembly.

3.3.6 Remove side panel adjacent to the carrying handle by removing three 1/4-inch screws.

3.3.7 Remove louvered heat baffle (under lamp); one 1/4-inch hex head screw.

3.3.8 Remove the four remaining 1/4-inch hex head screws holding the grille in place. One is located next to the power control switch; one adjacent to the lamphouse door opening and two hold the base cover hinge post bracket to the housing. Pull grille straight out and guide lamp door through opening in grille.

3.3.9 Remove remote control receptacle and hinge post bracket by removing two Phillips head screws.

3.4 REMOVAL OF THE LAMP AND MIRROR MOUNT BRACKET

3.4.1 Remove base cover (3.1).

3.4.2 Remove condenser lens and heat-absorbing glass by disengaging the wire clamp assembly from under the hook and swinging it out of the way. Lift the two pieces of glass out of the projector.

3.4.3 Remove paper insulator over the power switch area. Remove electrical leads to the power switch by pulling them off terminals.

3.4.4 Remove side panel adjacent to projection lens, three 1/4-inch hex head screws.

3.4.5 Remove lamphouse door assembly by removing pin from hinge.

3.4.6 Remove thermal fuse bracket assembly from the lamp mirror bracket assembly by removing one Phillips head screw.

3.4.7 Remove 1/4-inch hex head screw from wire clamp holding lamp leads to blower housing cover to allow slack. Guide door through the grille.

3.4.8 Remove five 1/4-inch hex head screws. One is in front of the lamp opening; the second is behind the mirror; the third is toward the outer edge of the projector under the hinge point for the lens clamp assembly. The fourth screw is toward the front of the projector and fastens the base locking bracket, mechanism, and lamp and mirror bracket assembly to the housing. The fifth screw is behind the lamp and adjacent to the blower housing.

NOTE: The two 1/4-inch hex head screws closest to the lamp opening are nickel-plated.

3.4.9 Form mechanism tab slowly to allow clearance for removal of lamp and mirror bracket assembly, or spring the lamp and mirror bracket out from under the mechanism tab by pushing it inward.

3.4.10 Guide the lamp and mirror mount assembly out of the projector over the two locating lugs in the housing.

NOTE: When reassembling, be sure that the forward-reverse switch ground tab is on the top side of the lamp and mirror bracket, not below it.

3.5 REMOVAL OF MAIN DRIVE MOTOR

3.5.1 Remove base cover (3.1).

3.5.2 Remove storage wall assembly; three 1/4-inch hex head screws.

3.5.3 Remove three 1/4-inch hex head motor-mounting screws.

3.5.4 Disengage fan belt and worm pulley belt as motor is lifted out of projector housing.

3.5.5 Electrically disconnect motor by removing all Wire-Nuts securing motor wires.

3.5.6 To reassemble, the worm pulley belt should be positioned first, then fan belt.

CAUTION: Take care not to nick or cut belts as this will cause belts to tear.

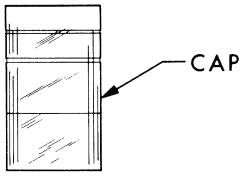
3.6 FAN REPLACEMENT AND/OR FAN BELT REPLACEMENT

3.6.1 In order to remove the fan, the grille must be moved back to provide clearance for removal of the blower housing cover. Follow procedure for removal of grille assembly (3.3) but do not disconnect any of the electrical leads.

3.6.2 Removal of timer lever link is accomplished by removing "E" ring from brass pivot and lifting timer off pivot. Then, disengage from lug end on contact arm and timer link.

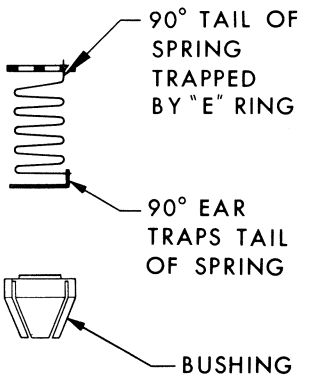
3.6.3 Remove four 1/4-inch hex head screws from the blower housing cover. Remove the paper baffle and cover.

3.6.4 Remove plastic fan cap, "E" ring, spring, washer, fan bushing; next disengage fan belt and remove fan. This leaves a plain washer and a cork washer on fan shaft.



3.6.5 Loosen three hex head mounting screws holding main drive motor, lift motor, and remove belt.

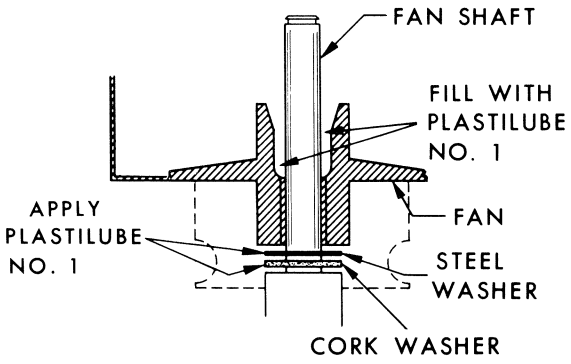
3.6.6 To reassemble, place belt over fan shaft; then lubricate shaft with Plastilube #1.



3.6.7 Place fan over shaft; then fill its cavity with Plastilube #1.

3.6.8 Reassemble remaining fan mounting parts.

3.6.9 Position belt on fan pulley, lift motor, stretch belt and position around motor pulley, reposition motor, and tighten motor mounting screws.



NOTE: Fan belt must be placed on fan pulley first, then motor pulley. Otherwise, belt may be nicked or cut when stretched past upper blower baffle cover.

3.7 REMOVAL OF MECHANISM ASSEMBLY AND LENS MOUNT ASSEMBLY

3.7.1 Remove focus knob by pulling straight off.

3.7.2 Remove the following: base cover (3.1), dropping resistor cover (three 1/4-inch hex head screws), and main drive motor without disconnecting the 120V leads (3.5).

NOTE: When replacing motor, belt from mechanism is driven by pulley closer to motor, and belt from fan is driven by other pulley.

3.7.3 Disconnect low-voltage system leading to mechanism assembly, focus motor, component board, and the remote focus switch in the Custom 860H model.

3.7.4 Remove cord compartment wall with component board bracket; three 1/4-inch hex head screws. On Custom 860H model, remove remote focus solenoid (two 1/4-inch hex head screws).

3.7.5 Remove spring hooked between auto-focus rack and lens mount.

3.7.6 Remove side panel adjacent to the projection lens (three 1/4-inch hex head screws).

3.7.7 Remove the front panel (three 1/4-inch hex head screws).

3.7.8 Remove six 1/4-inch hex head screws holding lens mount and mechanism assemblies.

3.7.9 Grasp lens mount and mechanism assemblies with both hands and carefully lift out of housing. After removal from housing, very carefully separate assemblies.

NOTE: It is possible to operate mechanism assembly by hand, duplicating all the functions of the projector related to cycling.

3.7.10 In reassembling, nest lens mount and mechanism assemblies together; then locate both in housing. Make sure that the auto-focus rack properly engages the lower focus shaft gear.

3.7.11 Reassemble the balance of components in the reverse order of disassembly.

3.8 DISASSEMBLY OF LENS MOUNT ASSEMBLY

3.8.1 Remove lens mount assembly (3.7).

3.8.2 Remove focus motor.
- a. Remote two Phillips head screws which secure motor to motor bracket.
- b. When reassembling motor, position ear on end bell in recess in bracket and replace screws.

3.8.3 Remove lower lens barrel rails by grasping tines of rail with thumb and forefinger; squeeze together and push out.

3.8.4 Remove upper lens barrel rails by first removing two lens rail springs; then remove rails as in 3.8.3.

3.8.5 Remove focus shaft by disengaging focus shaft spring and then tip and pull from square bearing hole.

3.8.6 Remove focus motor bracket (three 1/4-inch hex head screws through rubber grommets) and then the focus worm shaft assembly.

3.9 DISASSEMBLY OF MECHANISM ASSEMBLY

3.9.1 Remove mechanism assembly (3.7).

3.9.2 Remove six 1/4-inch hex head screws and disconnect direction lever spring; then carefully lift off top plate assembly.

3.9.3 Remove one 1/4-inch hex head screw and slide solenoid mount assembly out of mechanism assembly.

3.9.4 Cam shaft assembly: remove two bronze bearings from ends of cam shaft (one "E" ring and one "C" ring). Remove spring between index lever and mechanism frame; disconnect spring between slide lever and mechanism frame, then remove timer contact spacer.

3.9.5 Remove slide lever bracket (two 1/4-inch hex head screws) and slide lever with its spring; then spread sides of mechanism assembly frame and lift out cam shaft.

3.10 DISASSEMBLY OF CAM SHAFT

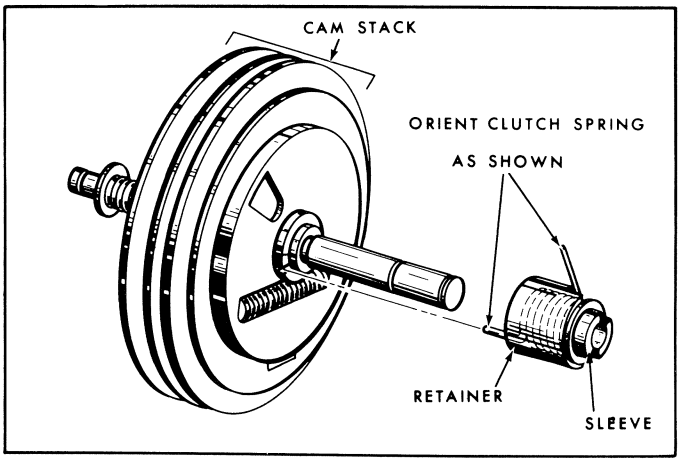
3.10.1 Remove cam shaft (3.9).

3.10.2 Remove components: "E" ring, washer, worm gear, clutch spring, and sleeve.

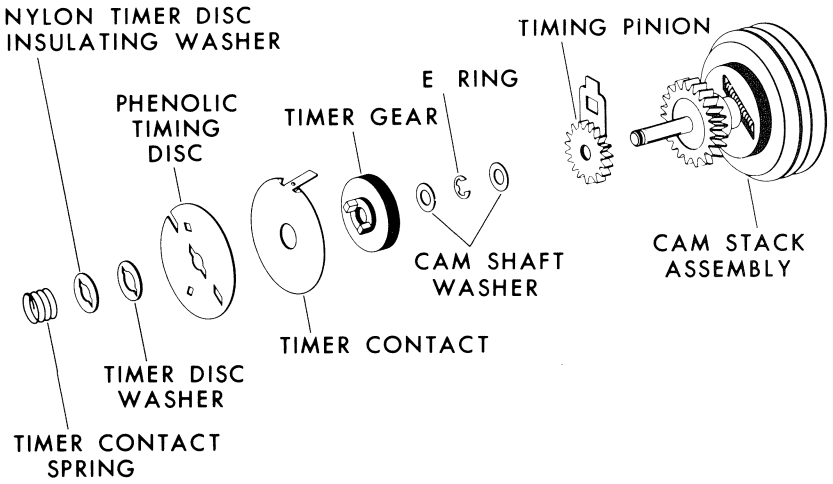
a. Replace any defective parts and lubricate clutch spring shaft and sleeve.

b. Reassemble in reverse order.

NOTE: Clutch spring must be assembled as shown for correct timing.



3.11 AUTOMATIC TIMER



The parts comprising the timer are mounted on the cam shaft as shown, but are not part of the cam shaft assembly. The phenolic timer disc may become torn or the timer contact disc tab broken; otherwise, no replacements are likely.

3.12 WORM PULLEY REPLACEMENT AND/OR MECHANISM BELT REPLACEMENT

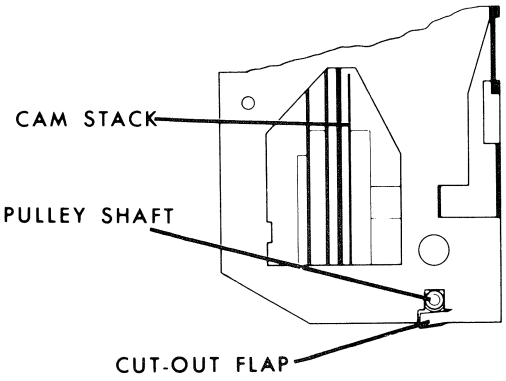
3.12.1 Remove base cover (3.1) and main drive motor (3.5). Lift motor out and set aside without disconnecting wires.

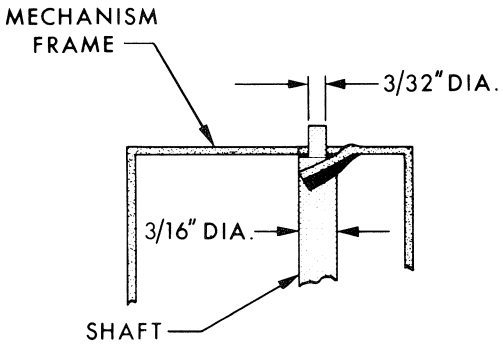
3.12.2 Bend flap of mechanism frame down to release shaft.

3.12.3 Lift out entire shaft and worm pulley. Replace worm pulley; lubricate shaft with light coat of Plastilube #1; replace mechanism belt and reassemble.

NOTE: Bend flap in mechanism frame slowly and easily so it will not break off.

3.12.4 When repositioning shaft, make sure that flap presses against 3/16-inch diameter with enough force to keep shaft from rotating. Worm pulley rotates on shaft.





3.13 REMOVAL OF SLIDE LEVER RAMP

3.13.1 Remove the retaining rivet by any suitable means (hand file, punch, or small electric grinder).

NOTE: In all instances, be sure not to bend the slide lever and keep the filings out of the mechanism.

3.13.2 When replacing the new ramp, insert the screw (part No. 171244) through the ramp and drive the screw into the metal. Be sure the screw is fully seated.

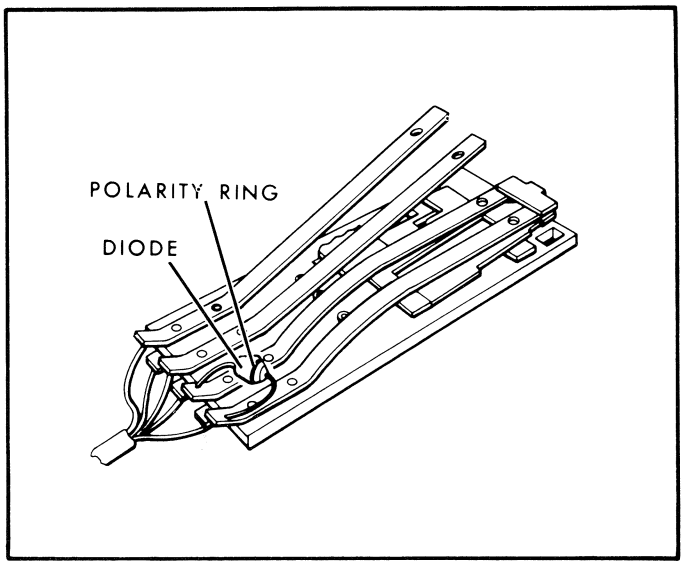
3.14 DISASSEMBLY OF REMOTE CONTROL

3.14.1 Remove three Phillips head screws and lift half of switch housing.

3.14.2 Remove cycle button and focus lever (focus lever on Custom 860H model only).

3.14.3 Disengage remote cord from switch housing and lift out cord with contact assembly attached.

3.14.4 Diode may be removed in Custom 860H model by unsoldering leads.



NOTE: Observe polarity of diode when removing (indicated by ring), and replace new diode in same direction.

3.15 REMOVAL OF CARRYING HANDLE

3.15.1 Remove base cover (3.1).

3.15.2 Remove handle by removing two 1/4-inch hex head screws at pivot point.

3.16 REMOVAL OF COMPONENT BOARD ASSEMBLY

3.16.1 Remove base cover (3.1).

3.16.2 Remove component board by removing bracket assembly which supports the storage wall compartment (two 1/4-inch hex head screws).

3.16.3 Component board may now be removed by disconnecting electrical leads and removing cell (3.19).

3.17 REMOVAL OF REMOTE FOCUSING SOLENOID IN CUSTOM 860H MODEL

3.17.1 Remove base cover (3.1).

3.17.2 Disconnect the two leads from component board to solenoid.

3.17.3 Remove solenoid by removing two screws.

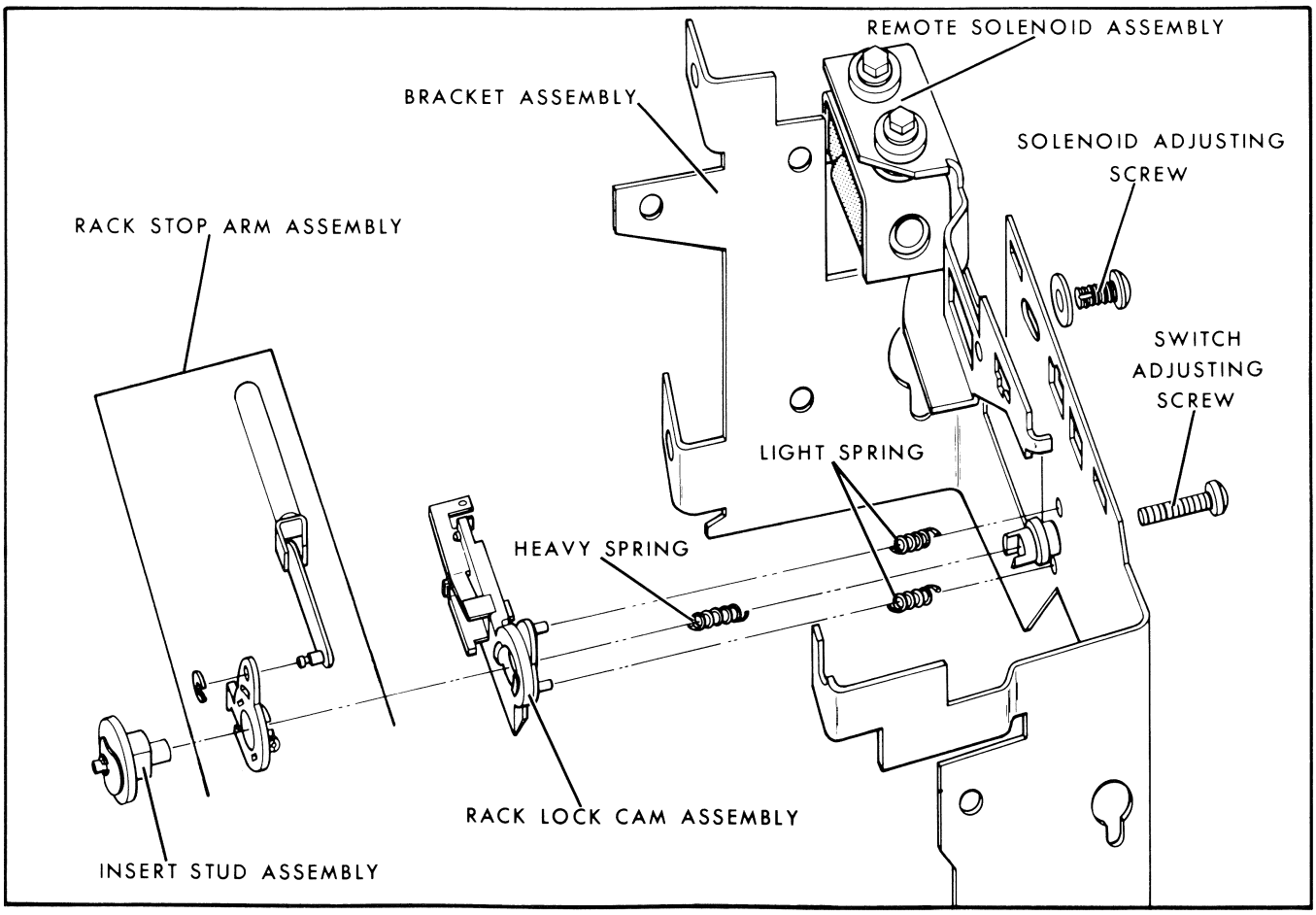
3.18 REMOVAL OF REMOTE FOCUSING SWITCH IN CUSTOM 860H MODEL

3.18.1 Remove base cover assembly (3.1).

3.18.2 Remove main projection lens.

3.18.3 Unsolder three leads to switch.

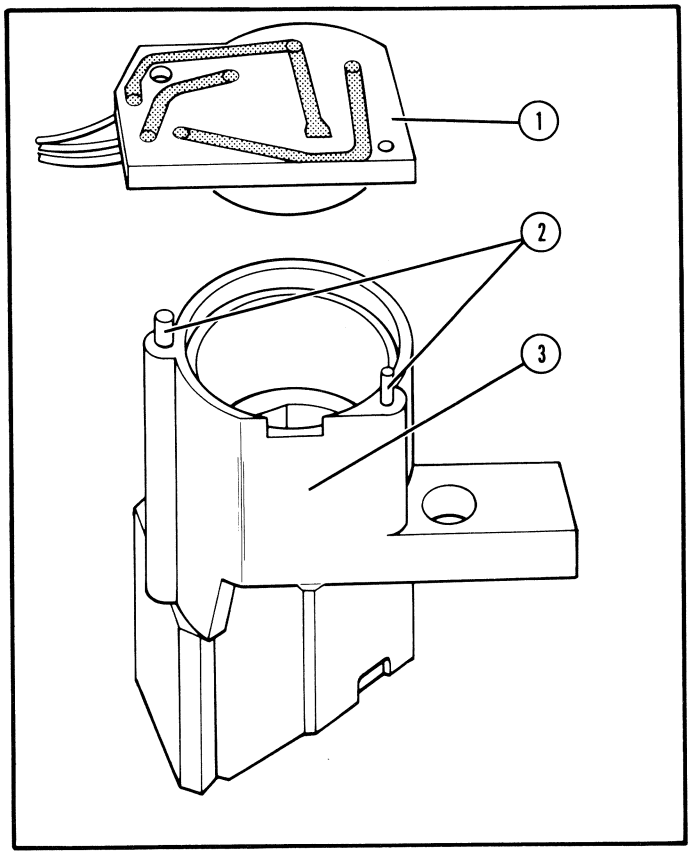
3.18.4 Break cement seal and remove adjusting screw holding switch to lens mount housing.



3.19 REMOVAL AND INSTALLATION OF PHOTOCELL ASSEMBLY

3.19.1 Remove base cover (3.1).

3.19.2 Remove cell circuit board and cell (1) by applying a fine-tipped soldering iron to the two polystyrene posts (2) which fasten the circuit board to the black plastic cell housing. When the plastic flows, lift the cell from its housing (3).



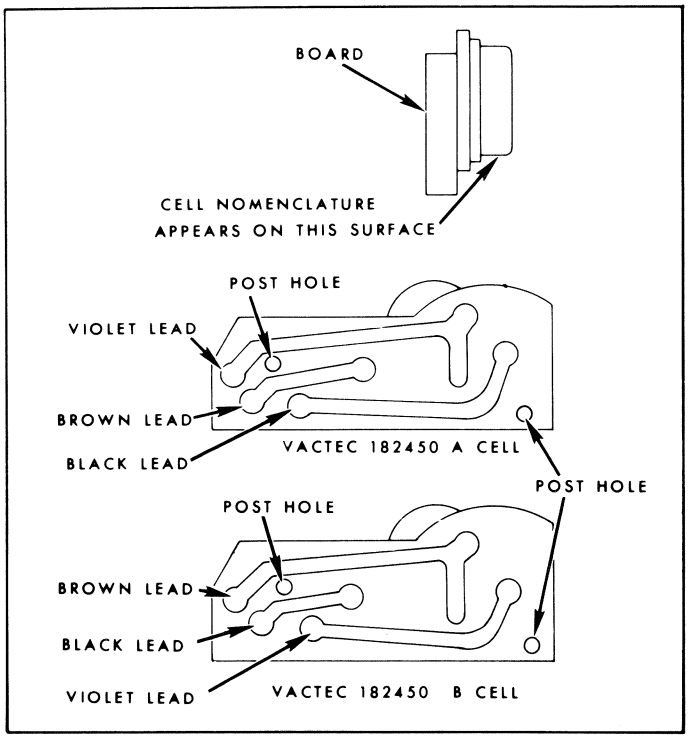
3.19.3 Unsolder the three wires which are attached to the circuit board.

3.19.4 Reassemble in the reverse order.

NOTE: If there is not sufficient post (2) material to heat-seal the circuit board, replace the cell housing (remove one Phillips head screw).

3.19.5 When replacing the cell circuit board (part No. 182450), check the cell number and letter, which appear on the outside diameter of the cell housing (see illustration). There are two cell board assemblies, "A" and "B", which look alike but must be wired differently. Failure to wire as illustrated (i.e., "A" cell wired like "B" cell or vice versa) will cause the focus motor to drive continuously.

NOTE: When installing a new photocell or cell housing, align the cell following the procedure in 4.5.



3.20 REMOVAL OF LEVELING FOOT ASSEMBLY

3.20.1 Remove base cover (3.1).

3.20.2 Grasp leveling foot and unscrew past the bind until removed. If the plastic knob is broken, use pliers to grasp leveling foot.

3.20.3 Install new leveling foot.

3.20.4 Crimp the top three or four threads perpendicular to the thread using a pair of diagonal cutters.

3.20.5 Replace base cover.

3.21 REMOVAL OF FRONT NAMEPLATE

3.21.1 Remove base cover (3.1).

3.21.2 Remove side panel adjacent to projection lens (three 1/4-inch hex head screws, one of which is hidden under the power switch paper insulator).

3.21.3 Slide combination projection lens cover and nameplate off of the front panel guides.

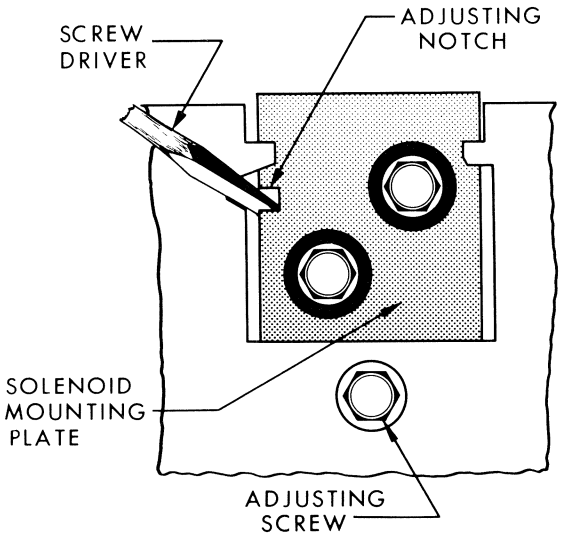
4. ADJUSTMENTS

4.1 CYCLE SOLENOID

4.1.1 Solenoid should operate without chattering.

4.1.2 To adjust for minimum noise, loosen adjusting screw slightly, insert screwdriver into notch, and raise or lower solenoid mount as necessary. Tighten screw. If solenoid stroke is too short, reverse cycle will not work.

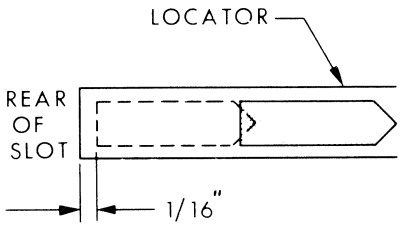
NOTE: This adjustment may be done with only the base cover removed.



4.2 LOCATOR LEVER

4.2.1 Locator should withdraw from lugs of slide tray and stop within 1/16-inch of, but not touching, rear of slot in the mechanism frame.

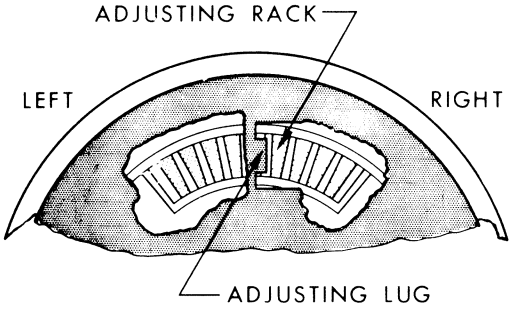
When locator moves again, any movement to rear indicates that the cam is "out of time".



4.2.2 Erratic or jerky movement of the slide tray is an indication that the cam shaft is "out of time".

4.2.3 Disengage clutch spring from contact. Rotate cam shaft with thumb, so top moves toward main motor until the cam has rotated approximately 180 degrees.

4.2.4 Insert screwdriver in cam shaft and spread spacer and cam as indicated in Mechanism Assembly drawing.



4.2.5 Adjusting lug will probably be found in or near center of adjusting rack.

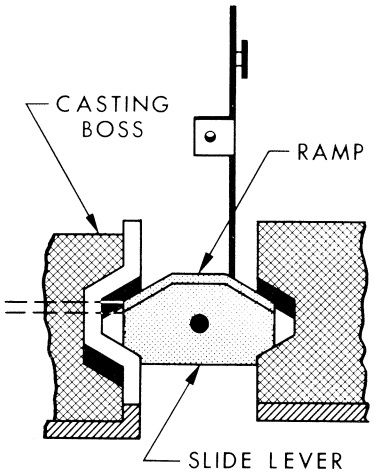
4.2.6 Moving lug to the left (toward motor) will cause locator to move closer to rear of slot.

NOTE: This adjustment may be done with base cover removed.

4.3 SLIDE LEVER

4.3.1 Slide lever must raise slides fully into tray so tray may rotate to the next slide. It must not raise slide so high that tray is raised by slide going into its compartment.

4.3.2 Loosen the inner screw on slide lever bracket, and with a small adjustable wrench, grasp bracket and move it to change pivot location of slide lever. Tighten screw.



4.3.3 This adjustment may be made with mechanism in projector housing and only base cover removed. Turn projector over and observe ramp of slide lever; at half-cycle position, its lower shoulder should be roughly level with surrounding casting boss of projector.

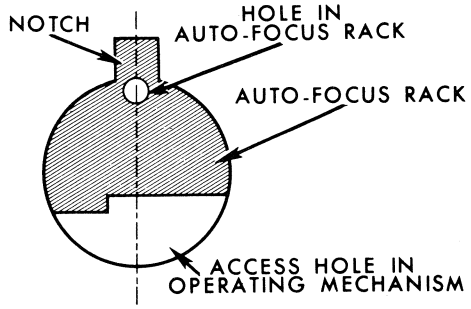
4.4 NULL ADJUSTMENT

4.4.1 Remove base cover (3.1) and projection lens.

4.4.2 Plug projector into a normal 110-120-voltage supply; turn projector upside down.

WARNING: DANGEROUS VOLTAGE

4.4.3 With projector switch on "Fan" and a glass slide in projector gate, observe action of auto-focus rack as you move the slide forward and backward in gate. Each time slide is "At Rest" or in a projection position, small hole in auto-focus rack should line up in center of access hole and notch in mechanism frame. This is the "Null Alignment".

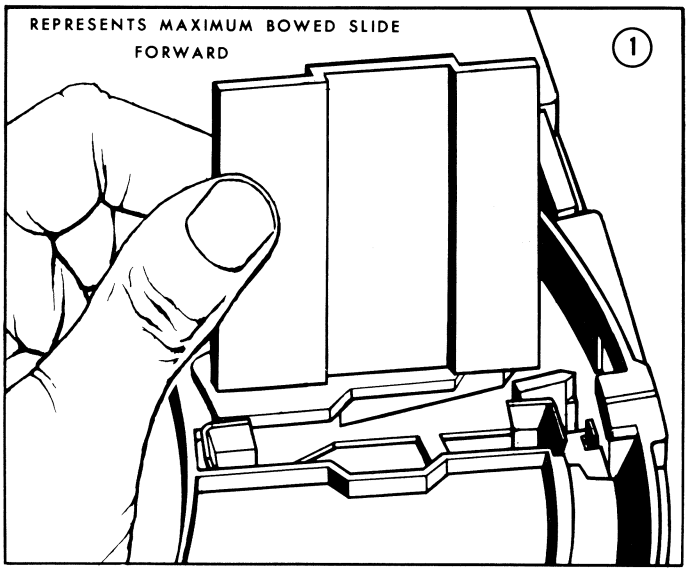


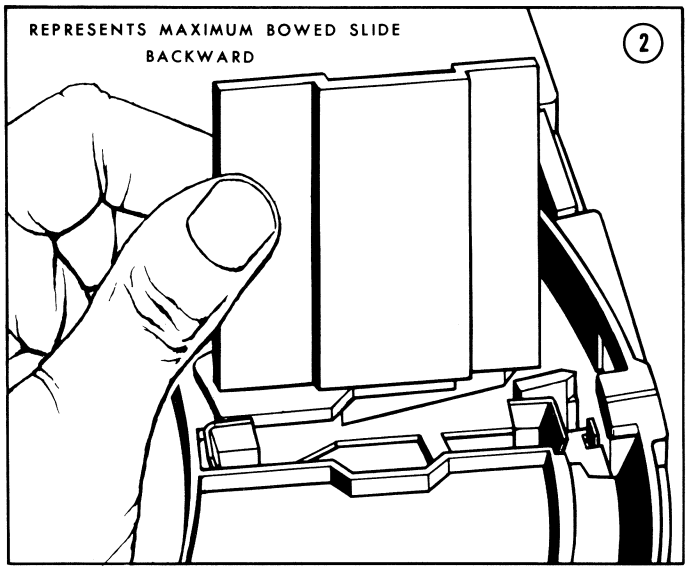
NULL ADJUSTMENT

4.4.4 If it does not line up, proceed with null adjustment; loosen cell housing screw and move cell housing in or out for correct null. Tighten screw and cement screw head to cell housing.

NOTE: Correct null adjustment will fix most projectors wherein lens drives in or out continuously with a slide in the gate.

4.4.5 Check accuracy of the null position by inserting Tool #TL1744 in the gate as shown in illustration No. 1 below, and allow the focus motor time to drive the lens forward. Reverse the tool as shown in illustration No. 2, and allow the focus motor to drive the lens backward.





4.4.6 If the focus motor does not come to a stop with the tool in the gate in either of the directions, the null position requires further adjustment. If the focus motor fails to stop in the forward direction, be sure the rack is not being stopped by the shutter pin.

4.5 CELL ALIGNMENT

4.5.1 Place a glass-mounted slide in gate. (It may be Tool #TL1298 mounted as currently supplied.)

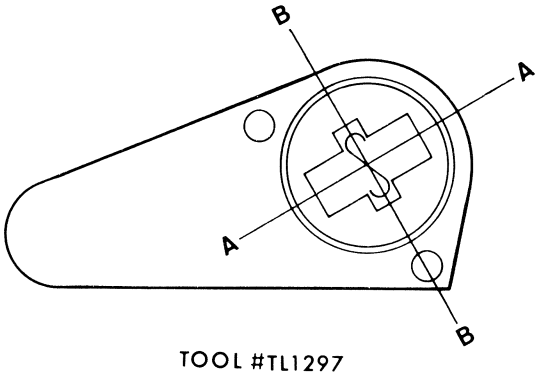
4.5.2 Check to see that null position of the auto-focus rack is as pictured in null adjustment section (4.4).

4.5.3 Disconnect focus motor.

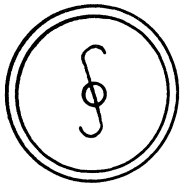
4.5.4 Remove filter and mask.

4.5.5 Position cell adjusting Tool #TL1297 over posts of cell housing or use fan cap (part No. 172115) placed in cell housing (closed end in).

4.5.6 After making sure auto-focus is in proper null position, "S" or "C" image should fall as pictured when using Tool #TL1297, or centered on center dot when using fan cap.



TOOL #TL1297



FAN CAP

4.5.7 If image is not centered, loosen cell housing mounting screw and bring image in along B-B axis by moving cell housing back and forth. Snug down screw.

4.5.8 With two screwdrivers, one in back of cell housing for support, form ear on which housing is mounted, up or down, until image is centered in the A-A axis.

4.5.9 Reassemble mask, filter, and photocell assembly; heat-seal two posts and reconnect focus motor.

4.5.10 Make fine readjustment for correct null positioning, if necessary. Tighten and cement screw.

NOTE: This adjustment (4.5) is necessary if new cell or cell housing is installed. This may also be necessary if cell housing tab has been deformed.

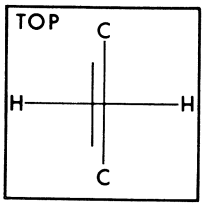
4.6 TARGET SLIDE ADJUSTMENT

NOTE: This entire adjustment (4.6) should not be performed unless a new rack assembly is installed in an old mechanism. This is a factory adjustment and should not be disturbed.

4.6.1 Place projector on bench upside down; remove base cover, place switch in "Fan" position, disconnect focus motor, and plug projector in normal 110-120-volt supply.

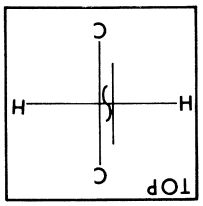
WARNING: DANGEROUS VOLTAGE

4.6.2 Insert glass-mounted target slide, Tool #TL1298, into gate. "Top" indicates top of projector when projector is right side up. Lock rack in null position.



TOOL #TL1298

4.6.3 Look through the empty projection lens opening in the projector; the 6V lamp filament image should fall on the target slide as pictured.



4.6.4 The short line denotes a tolerance of .050-inch. Images should fall within this tolerance, or an additional .050-inch, and be equally spaced above and below horizontal line H-H, as illustrated.

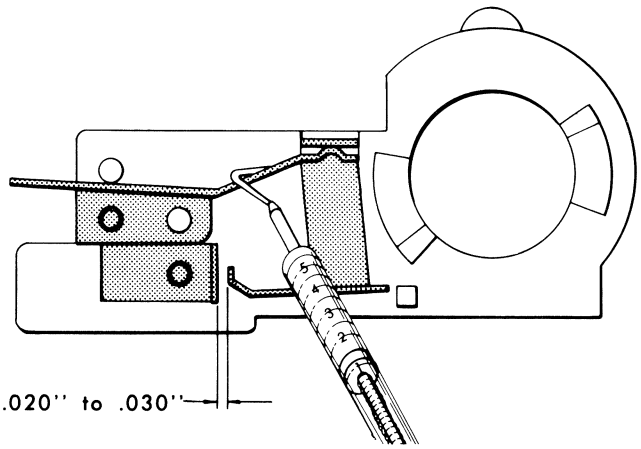
4.6.5 If it does not appear as illustrated, it can be brought into alignment by forming the lamp mounting end of the auto-focus rack.

4.6.6 Focus rack may be adjusted with Tool #TL1299 (revised) by reaching through opening in mechanism base plate near 6V lamp.

4.6.7 The null adjustment may be relaxed to aid in engaging tool to auto-focus rack. Once engaged, and while re-forming, null adjustment must be mechanically maintained by inserting a pointed tool into hole in rack and locked into notch in plate. Form (bend) rack as necessary to obtain correct alignment. To disengage tool, relax null adjustment again. Remember to check null position after performing this procedure.

4.7 SWITCH ADJUSTMENT FOR AUTO-FOCUS MODE OF CUSTOM 860H MODEL

4.7.1 Remove switch (3.18), if normally closed contact is not providing a reliable circuit for auto-focus.



4.7.2 Check switch for proper contact settings.

a. Normally closed contacts should break between 1 1/2 ounces to 4 ounces.

b. Normally open gap between contacts should be between .020-inch and .030-inch.

4.7.3 Reassemble adjusted switch.

4.8 SWITCH AND SOLENOID ADJUSTMENTS FOR REMOTE FOCUS MODE OF CUSTOM 860H MODEL

4.8.1 Projector should be plugged into normal 110-120-volt line, and remote control cord plugged into projector.

4.8.2 Loosen solenoid adjusting screw. Place flat-blade screwdriver into slot, and move solenoid bracket back and forth until it just operates switch in both directions while actuating remote switch back and forth (focus motor operates). Now move bracket toward solenoid the thickness of the tab that protrudes through the lens mount plate.

4.8.3 Tighten solenoid adjusting screw to lock solenoid bracket in position.

4.9 MIRROR ALIGNMENT

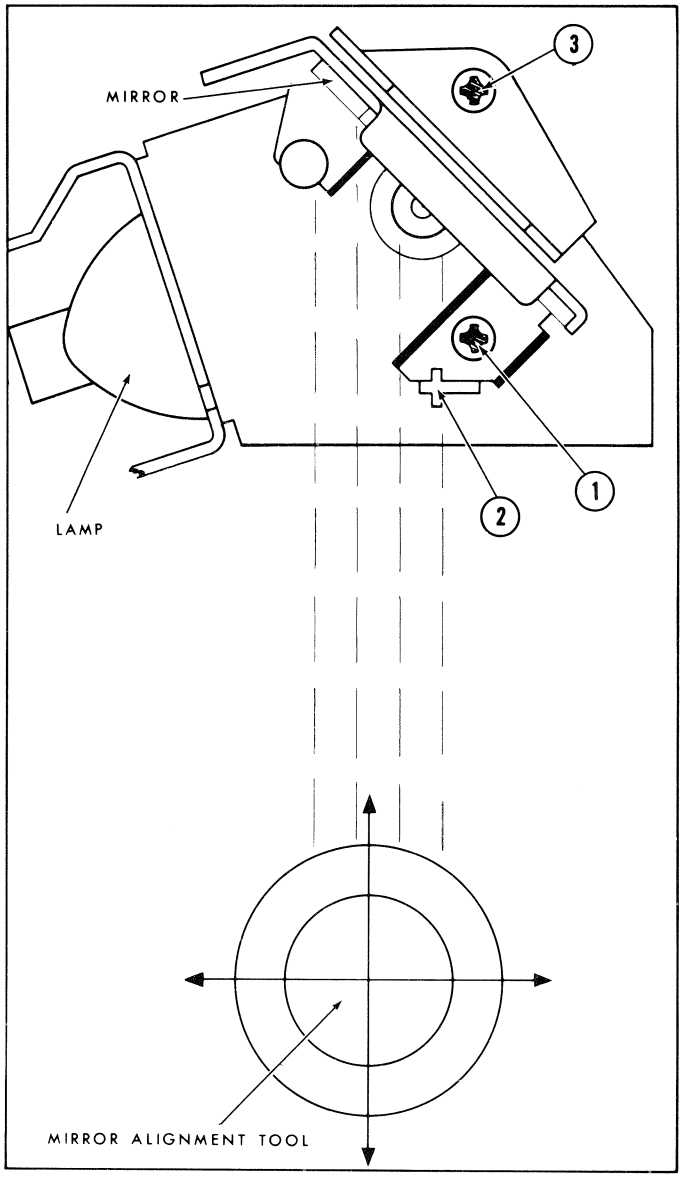
4.9.1 Remove projection lens and replace with mirror alignment lens (Tool #TL1759).

4.9.2 Insert tool into the rear end of a 5-inch, *f*/2.7 *KODAK* Projection *EKTANAR* Lens similar to the one shown in the illustration. Position the lens into projector as follows:

a. Invert lens with alignment tool facing out and insert into projector.

b. Rack the lens all the way into the projector.

NOTE: Mirror alignment tool should be almost flush with the front of the projector.



4.9.3 Plug the projector into a variable voltage source (Variac) set at 40V ac. If you do not have a variable voltage supply, you may use either a neutral density slide to reduce light intensity or a cardboard slide with a 1/4-inch hole at center.

WARNING: 40V ac or a special slide is used so that the lamp filament image on the mirror alignment tool can be looked at without doing harm to your eyes.

4.9.4 Place the power switch in the "Low" position. Alignment is proper when the circle of light is centered on the alignment tool. [If the circle is left or right of center, loosen screw (1), place a flat-blade screwdriver in the adjustment slot (2) and twist to align.] Tighten screw.

4.9.5 If the circle is up or down from center, adjust by turning screw (3) clockwise to move up and counterclockwise to move down.

4.9.6 After adjustment is complete, cement screw heads.

5. TROUBLESHOOTING

	SYMPTOM	POSSIBLE CAUSE	REMEDY
5.1	Projector will not cycle (forward).	1. Cycle solenoid failure.	1. Check 24V supply. If 24V ac ± 4V ac is not present, replace main motor. If present, replace solenoid.
		2. Clutch spring may be bent.	2. Replace spring (3.10) or replace cam shaft assembly (3.9).
		3. Check for bind in cycle lever.	3. Remove bind.
		4. Check for clearance between clutch contact arm of cycle lever and TIP of clutch spring.	4. Form cycle lever.
5.2	Continuous cycling.	1. Clutch spring bent or broken.	1. Replace spring (3.10) or replace cam shaft (3.9).
		2. Short in remote cord.	2. Check cord (3.14); replace if necessary.
		3. Bind in select, cycle, or direction lever.	3. Re-form levers for bind and lubricate.
		4. Clutch spring not being stopped by contact arm of cycle lever.	4. Replace spring (3.10), replace cam shaft (3.9) or re-form contact arm of cycle lever.
		5. 6V lamp terminal contacting mechanism frame.	5. Add glass or electrical tape to mechanism frame at contact point.
5.3	Projector will not index (forward or reverse).	1. Select lever interfering with movement of index lever, as in half-cycle operation.	1. Check for binds in select lever.
		2. Index lever not shifting to low side of cam.	2. Check for burr on index lever.
5.4	Projector will not reverse.	1. Cycle solenoid out of adjustment.	1. Readjust (4.1).
		2. Bind in cycle lever and/or direction lever.	2. Check and remove bind; lubricate if necessary.
		3. Direction lever hairspring missing or bent.	3. Remove mechanism (3.7) and replace spring.

SYMPTOM	POSSIBLE CAUSE	REMEDY
	4. Clutch spring bent.	4. Replace spring (3.10) or replace cam shaft assembly (3.9).
	5. Reverse button of remote control cord not held long enough.	5. Customer error.
	6. Cycle solenoid does not operate.	6. Check 24V supply. If 24V ac $\pm$ 4V ac is not present, replace main motor. If present, replace solenoid.
5.5 Projector always reverses.	1. Bind between direction lever and mechanism frame.	1. Remove bind and lubricate if necessary.
	2. Defective remote cord.	2. Check for bind between reverse and forward contacts (3.14).
5.6 Noisy operation.	1. Broken or malformed ribs on fan causing "fluttering" noise.	1. Replace fan (3.6).
	2. Lack of lubrication on fan shaft.	2. Lubricate shaft (3.6).
	3. Fan cap not fully seated.	3. Seat with thumb.
	4. Worm pulley with a high spot will cause a "fluttering" noise.	4. Replace worm pulley (3.12).
	5. Gear noise from focus motor.	5. Increase backlash between gears or install new motor (3.8.2).
5.7 Tray cannot be rotated when "Select" button is held down.	1. Projector not on.	1. Projector must be turned on.
	2. Locator does not withdraw from tray lugs.	2. Check locator adjustment (4.2).
	3. Slide lever not raising slide fully into tray.	3. Check slide lever adjustment (4.3).
5.8 Shutter "hang-up"	1. Shutter spring unhooked or missing.	1. Remove mechanism (3.7) and replace spring.

SYMPTOM	POSSIBLE CAUSE	REMEDY
	2. Shutter may be striking cycle lever.	2. Remove mechanism (3.7); file cycle lever at point of contact with shutter. Do not file shutter or light leak on projection screen may result.
5.9 Projection lens drifts on "High". No slide in gate.	1. Stray light.	1. Check front condenser lens for proper orientation (flatter side of lens toward gate). See illustration in 1.4.3.
	2. Null position incorrect.	2. Adjust null-cell alignment (4.4 and 4.5).
	3. Cell housing filter(s): steel mask missing or defective, or mirror missing or defective.	3. Add or replace items which are missing or defective. If mirror in cell housing is at all questionable, replace cell housing.
	4. If drift continues after steps 1-3 at 130V.	4. Replace cell and component board (3.16).
5.10 Projection lens drifts on "Fan". Slide in gate.	1. Focus rack off or under drive gear.	1. Reposition focus rack. Replace rack spring if off or missing.
	2. Rack binding.	2. Remove bind. NOTE: Check for slack in 6V lamp leads.
	3. Main drive motor.	3. Disconnect orange and red wires from secondary of main drive motor. If focus motor stops, check secondary for short with continuity checker. If there is no continuity between orange and red leads, install new main drive motor (3.5). NOTE: Orange and red are <u>isolated</u> secondaries and should show no continuity to gray, yellow, green, and blue secondaries.

SYMPTOM	POSSIBLE CAUSE	REMEDY
		If orange and red wires show continuity to yellow, install new main drive motor (3.5). CAUTION: Make all continuity checks with power cord disconnected. If orange and red leads show continuity, replace cell and component board. If focus motor does not stop with orange and red leads disconnected, replace cell and component board.
	4. If drift continues.	4. Adjust null alignment (4.4).
5.11 Focus motor drives in one direction.	1. Null alignment.	1. Adjust null alignment. Add missing filters and mask. Replace cell housing if mirror is questionable.
	2. Cell filter(s).	2. See section 5.9.3. If the above does not correct condition, replace cell and component board (3.16).
5.12 Focus motor dead.	1. Possible loose Wire-Nuts on focus motor or 6V lamp.	1. Tighten Wire-Nuts.
	2. 6V lamp burned out.	2. Replace rack assembly lamp.
	3. Null-cell alignment.	3. Adjust as necessary (4.4 and 4.5).
	4. Dead spots in focus motor.	4. Replace focus motor (3.8.2).
5.13 Focus motor oscillates with slide in gate and lamp on "High".	Defective focus motor.	Replace focus motor. Be sure to dress Wire-Nuts away from worm gear (3.8.2).
5.14 Focus motor runs continuously.	1. Transistor defective.	1. Replace circuit board (3.16).
	2. Photocell wired incorrectly.	2. Rewire correctly (3.19.5).

SYMPTOM	POSSIBLE CAUSE	REMEDY
	3. Rack strikes shutter pin.	3. Remove base cover. Remove 6V lamp and socket from the focus rack assembly (pops out). Clean the divider wall area adjacent to the bent-over end of the shutter pin. Turn the end of the bent shutter pin toward the front of the projector and tape the pin to the divider wall in this position, using tape (part No. 186560), or equivalent. Replace 6V lamp assembly and base cover.
5.15 Remote focus fails.	1. Diode in remote control defective. 2. Main motor 24V winding burned out. 3. Focus motor dead. 4. Switch and solenoid adjustments incorrect.	1. Replace diode (3.14). 2. Replace motor (3.5) and circuit board (3.16). 3. Replace focus motor (3.8.2). 4. Adjust as necessary (4.8).
5.16 Fails to focus on warped slides.	Check null and cell alignment.	Adjust null and cell alignment as necessary (4.4 and 4.5).
5.17 Slides jam.	Gate not properly aligned.	Align gate by forming plated gate assembly (right and left) to be in contact with tabs on the top plate of mechanism.
5.18 Projector stops running or will not turn on.	1. No power to projector. 2. Thermal fuse open.	1. Check power supply. 2. Check fuse with continuity checker. If it shows open, replace fuse (3.2).
5.19 Illumination uneven.	Mirror alignment incorrect.	Adjust mirror alignment (4.9).

6. TOOLS, LUBRICANTS, CEMENTS

6.1 SPECIAL SERVICE TOOLS

Tool #TL 862	Glass-mounted test slide
Tool #TL 972	*KODAK READY-MOUNT* Test Slide
Tool #TL1031	1/4-inch hex socket wrench with 6-inch shank and plastic handle
Tool #TL1115	Mechanism operating fixture (optional)
Tool #TL1297	Cell adjusting tool (no longer available) Use fan cap.
Tool #TL1298	Target slide
Tool #TL1299	Rack forming tool (revised)
Tool #TL1744	Auto-focus gauge
Tool #TL1759	Mirror alignment tool

6.2 CEMENT

G-135 Glyptal Cement

Adjustment screw on cell housing
Adjustment screw on remote solenoid
Adjustment screw rack lock cam assembly
Adjustment screws on mirror bracket

6.3 LUBRICANTS (Application -- See 6.4.)

763001	(A&O 61-3686)	SAE #20 Oil
763002	(A&O 61-3655)	Plastilube #1
763003	(A&O 10-592)	Plastilube #1 Grease plus 12% Moly

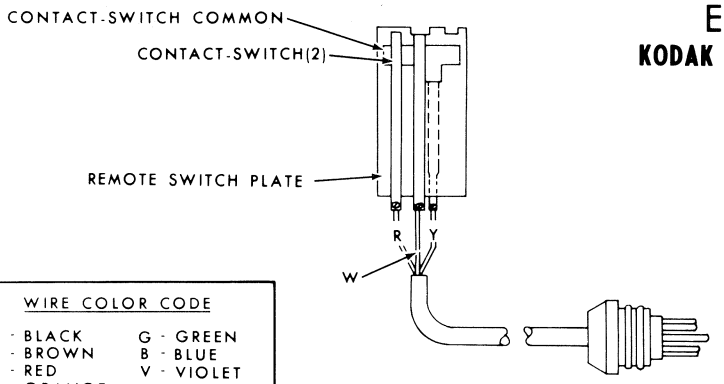
6.4 LUBRICATION

LUBRICATION POINTS	AMOUNT	LUBRICANT
Bearings of main drive motor when motor has been removed for other repairs	2 drops	763001
Bearing of clutch shaft	2 drops	"
All worms and gears	Light coat	763002
Nylon cam surfaces	Light coat	"
Fan and fan shaft	Light coat	"
Steel and cork fan washer	Heavy coat	"
Pivot point of levers and cam levers	Generous	763003
Nylon bushing on drive lever	Medium	"
Dimples on indexer lever (underside)	Medium	"
Slot at end of shutter lever	Medium	"
Clutch assembly	Generous	"

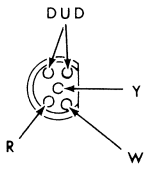
Lubricate all points with a light coat. A little lubrication applied frequently is better than overlubrication. The serviceman should use his judgment and lubricate points as needed.

ELECTRICAL DIAGRAMS
KODAK CAROUSEL CUSTOM 850H PROJECTOR

EARLY MODEL PROJECTORS MAY VARY FROM DIAGRAMS SHOWN

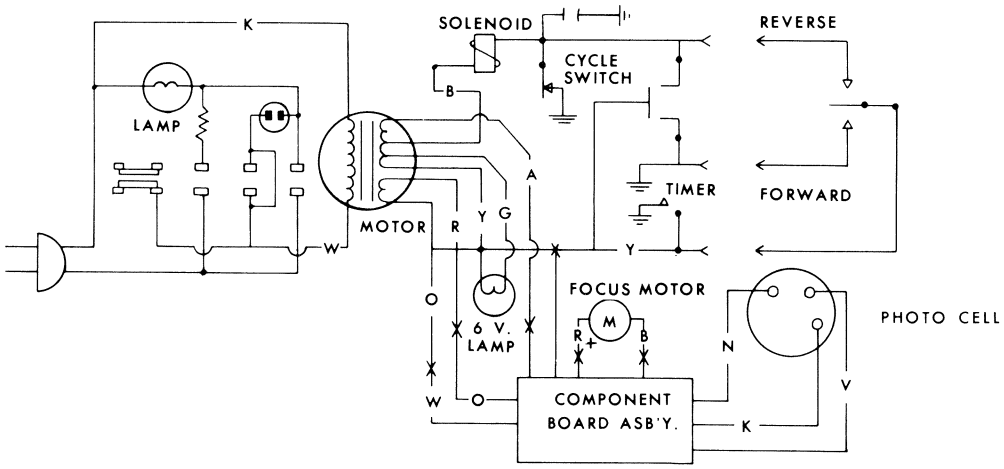


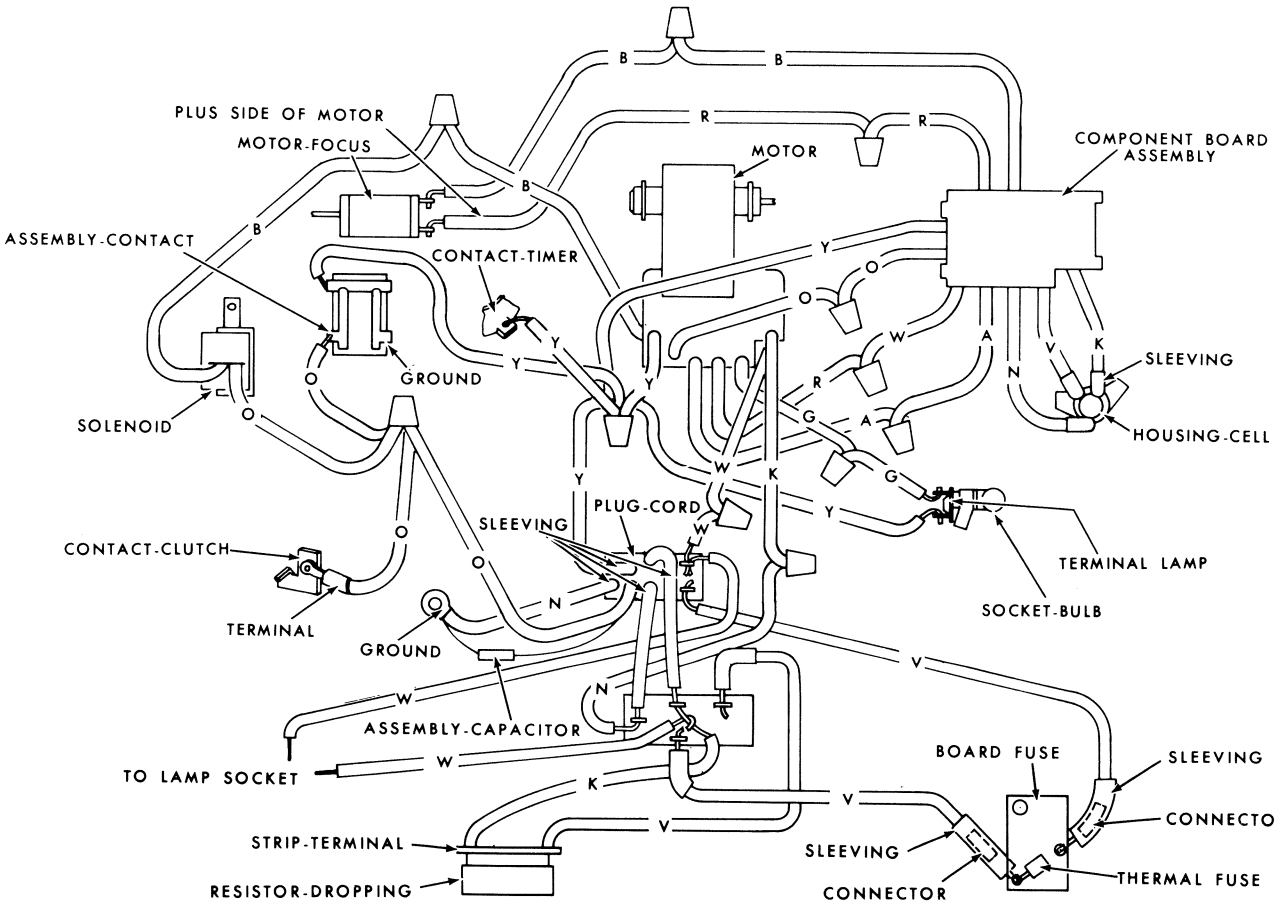
REMOTE CORD



WIRE COLOR CODE

K - BLACK	G - GREEN
N - BROWN	B - BLUE
R - RED	V - VIOLET
O - ORANGE	A - GRAY
Y - YELLOW	W - WHITE

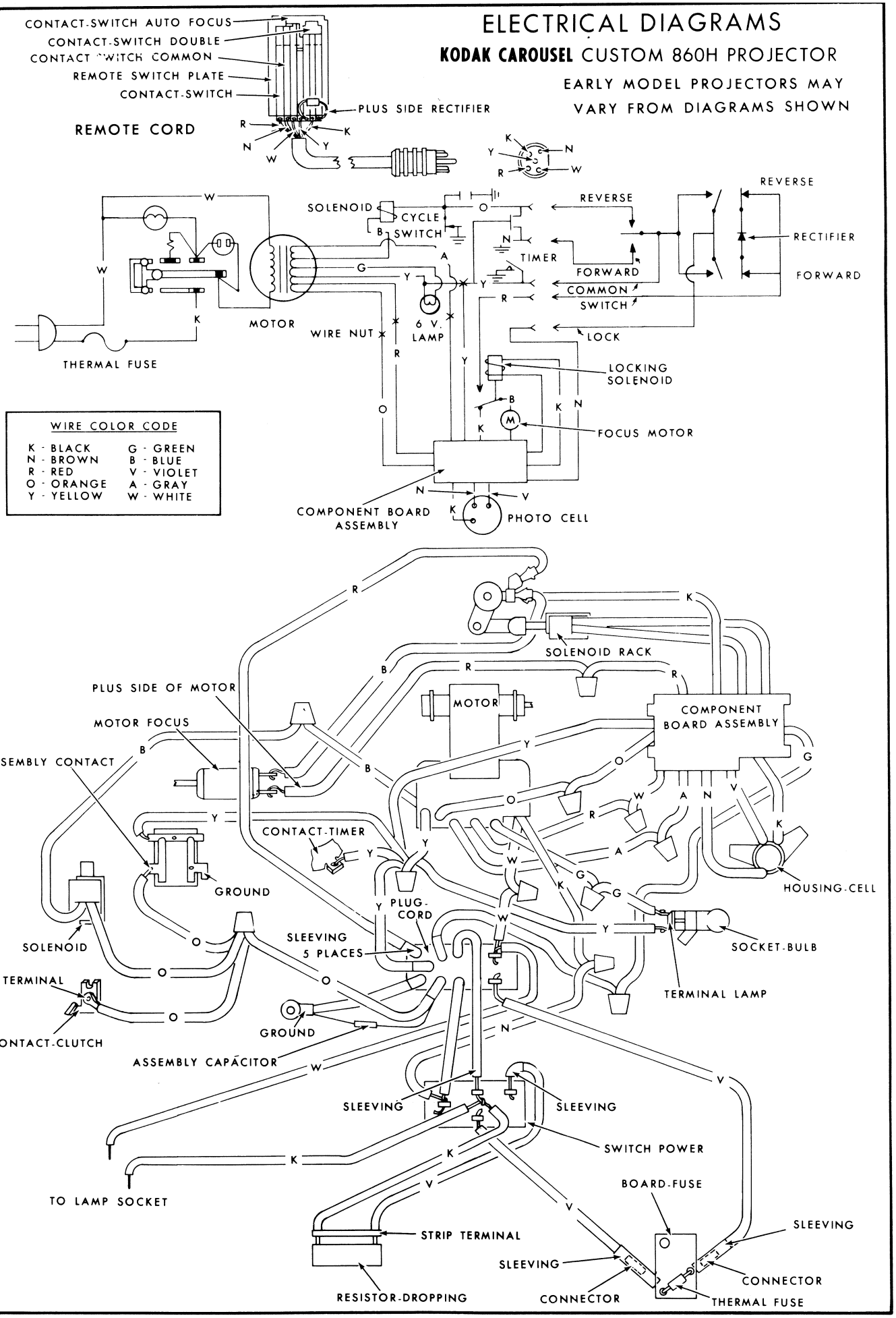




ELECTRICAL DIAGRAMS

KODAK CAROUSEL CUSTOM 860H PROJECTOR

EARLY MODEL PROJECTORS MAY VARY FROM DIAGRAMS SHOWN



Kodak Service Bulletin

Eastman Kodak Company... Customer Equipment Services Division... Rochester, New York 14650

768671

KODAK CAROUSEL SLIDE PROJECTORS,
MODELS 600, 650, 700, 750, 800, 850 AND AV-900
AND
KODAK EKTAGRAPHIC SLIDE PROJECTOR AND
KODAK EKTAGRAPHIC SLIDE PROJECTOR, MODEL E

Simplified Replacement Procedure for
Thermal Fuse Part No. 183910

All *KODAK CAROUSEL* and *KODAK EKTAGRAPHIC* Slide Projectors are now equipped with a thermal fuse. This is a safety device which protects the projector from overheating and fire damage caused by overheating within the projector housing. It also provides protection against abnormal surges in electrical current supplied to the projector.

There is no visible change in the appearance of the fuse when it burns out. The most obvious symptom - projector will stop running or will not turn on if it has been off.

The thermal fuse will open only when the operating temperature is too high or because of abnormal electrical current surges. We therefore urge that the entire projector and the conditions in which projector is operating (such as a poorly ventilated, rear-screen projection cabinet) be checked to determine the cause of burn-out, and the condition corrected before the projector is returned to service.

To replace a burned-out thermal fuse:

1. Unplug projector from power source, turn projector upside down.
2. Remove base cover, 5 Phillips head screws.
3. Remove the screw holding the burned-out fuse.
4. Lift out fuse and cut leads at sleeving. Remove sleeving and strip wire for 1/2".
5. Cut leads on replacement fuse to approximately 3". Strip wire for 1/2". Join old leads to new leads with wire connectors (145161).
6. Install new thermal fuse, secure phenolic mounting board with hex-head screw. Dress wires and connectors into space between lamp house door hinge post and rear nameplate. Be sure everything is clear. Try lamphouse door and other moving parts for clearance.

Publication No. 768671
2/69

(over)

7. Replace base cover.

Thermal fuses may be added to non-fused *KODAK CAROUSELS* (except the 550 series) by following the Installation Instructions furnished with each fuse.

Order: Part No. 183910 Thermal Fuse

From: Eastman Kodak Company, Central Parts Services,
800 Lee Road, Rochester, New York 14650.

This Service Bulletin supersedes Service Bulletin #768659.

Kodak Service Bulletin

Eastman Kodak Company... Customer Equipment Services Division... Rochester, New York 14650

768672

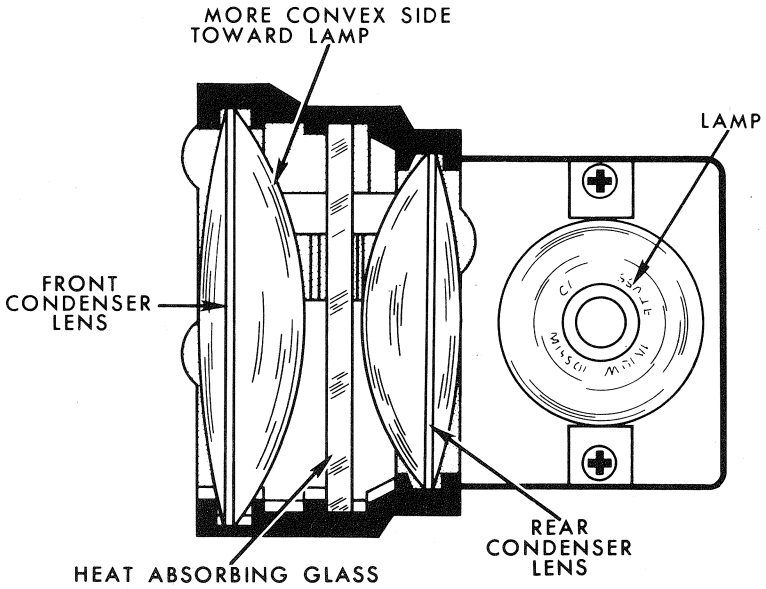
KODAK CAROUSEL PROJECTORS, MODELS 600, 750, 800 AND 850
KODAK EKTAGRAPHIC SLIDE PROJECTOR
AND
KODAK EKTAGRAPHIC SLIDE PROJECTOR, MODEL E

Front Condenser Lenses

All currently produced slide projectors noted above now have the nonsymmetrical front condenser lens.

In the *KODAK CAROUSEL* Slide Projectors and the *KODAK EKTAGRAPHIC* Slide Projector, Model E, lens Part Number is 625182 and in the *EKTAGRAPHIC* Slide Projector the lens Part Number is 625634. The reason for the difference in the part number is the lens (Part No. 625634) used in the *KODAK EKTAGRAPHIC* Slide Projector is a coated lens.

The correct placement of the nonsymmetrical front condenser lens is essential for proper screen illumination and is expecially important on the *KODAK CAROUSEL* Projector, Model 850 due to the sensitivity of the automatic focus feature, which also prevents use of the coated condenser lens in this model.



Publication No. 768672
3/69

Kodak Service Bulletin

Eastman Kodak Company... Customer Equipment Services Division... Rochester, New York 14650

768681

KODAK CAROUSEL PROJECTOR,
MODELS 600, 650, 700, 750, 800 AND 850

Jammed Slides

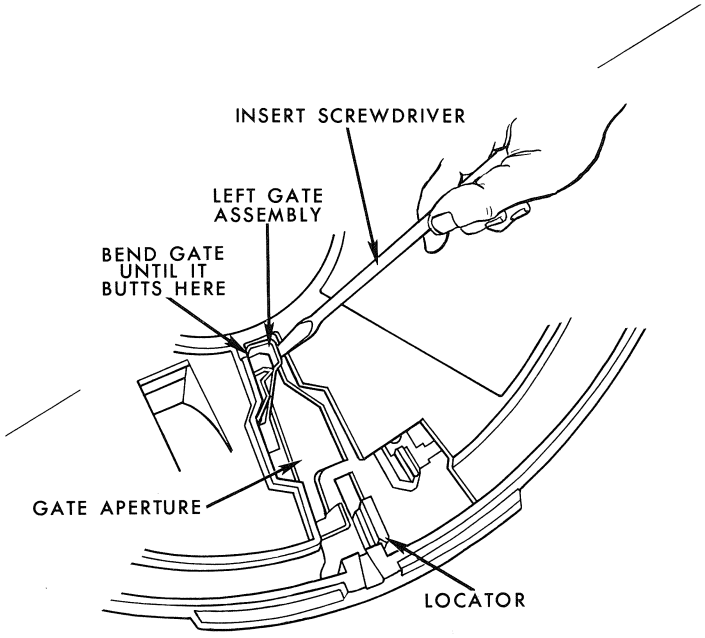
As the projected slide is raised back up into slide tray, the cardboard mount strikes the compartment wall dividers and jams projector. The trouble may be in the location of the inboard (left) gate assembly, Part No. 170753. It misdirects the slides as they move back up into the slide tray. The damage is done as each slide strikes the knife-like divider wall between tray compartments. It splits and peels back a small portion of the top inboard corner of the slide mount.

If this condition is not corrected immediately, all the cardboard mounts will eventually become dog-eared. Even though they do not jam at first, soon they will start jamming.

If you have a customer complaint of jamming slides, adjust the left gate assembly as follows:

1. Determine that it is the inboard (left) gate assembly; it usually is.

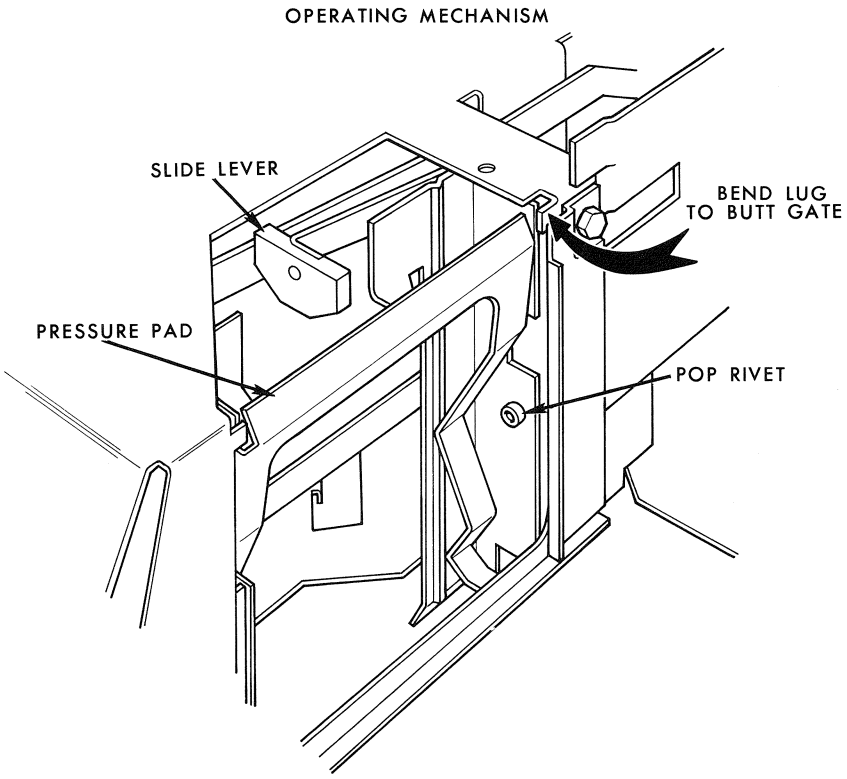
2. Insert screwdriver and really bend that gate to the rear. You may go all the way until the gate butts the housing. It will spring out a little when pressure is released.



Publication No. 768681
5/69

(Continued on reverse side)

3. Test with tray of slides, repeat (2) if necessary.
4. Remove base cover and go to the bottom of the left gate assembly. Note that gate is positioned by a pop-rivet and a small lug of the mechanism frame. Now that the left gate assembly has been moved, there is a gap between it and the lug.



5. Tap lug with screwdriver and small lightweight hammer. Tap lug just enough to again butt it against the edge of left gate assembly. This anchors the gate assembly against movement.

Eastman Kodak Company
Customer Equipment Services Division
Services Engineering Department
800 Lee Road
Rochester, New York 14650

Kodak Service Bulletin

Eastman Kodak Company... Customer Equipment Services Division... Rochester, New York 14650

768747

KODAK CAROUSEL 850 AND 860 PROJECTORS

Focus Motor

If the focus motor needs to be replaced on the subject projectors, use focus motor Part No. 182740; do not use focus motor assembly, Part No. 184750.

The use of Part No. 184750 will result in erratic action and short focus motor life. It is not made for use on the auto-focus type projectors.

Publication No. 768747
8/69

Kodak Service Bulletin

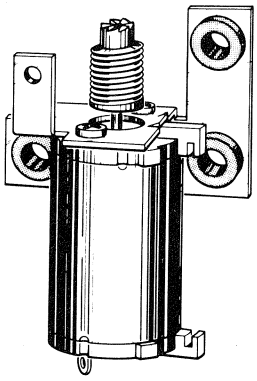
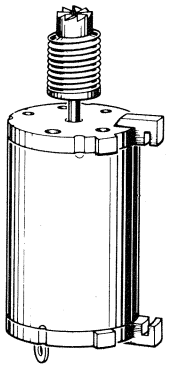
Eastman Kodak Company... Customer Equipment Services Division... Rochester, New York 14650

768930

KODAK CAROUSEL PROJECTORS, MODELS
750, 800, 850, 860 AND AV-900

Focus Motor

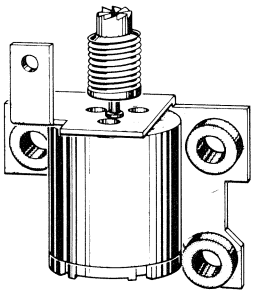
In an effort to clarify the problem of focus motor replacement, the following chart should be of help.

IF YOU HAVE	ORDER
 EARLY	 187812

(CONTINUED ON BACK)

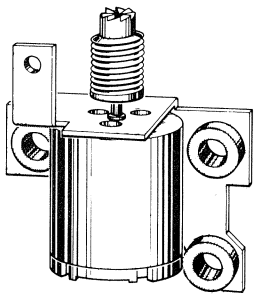
Publication No. 768930
12/69

IF YOU HAVE



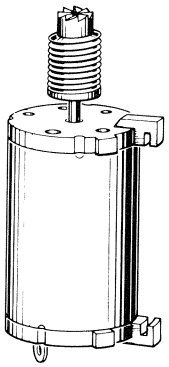
LATE

ORDER



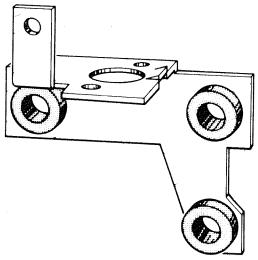
184750

OR

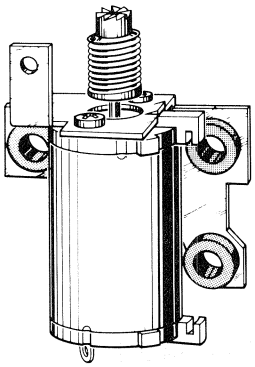


187812

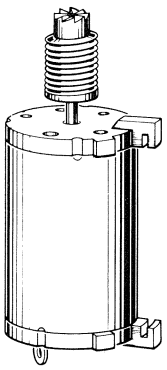
AND



185373



LATE



187812

Kodak Service Bulletin

Eastman Kodak Company... Customer Equipment Services Division... Rochester, New York 14650

768931

KODAK CAROUSEL PROJECTOR, MODELS 850 AND 860

Cell Housing Alignment

When, in the process of setting the null position, there is no response or erratic response the cell housing tab may be malformed.

In order to check the cell housing alignment, remove the cell and cell board as described in Service Manual #768655, "Servicing the *KODAK CAROUSEL* 850 Projector".

At this point you may use the fan cap (Part No. 172115) as a tool in place of Tool #TL1297. Place the fan cap into the cell opening in the cell housing, adjust the cell housing tab and the cell housing until the image is centered on the center dot in the fan cap. Snug down the screw.

Replace the cell and cell board, then make the fine adjustment for proper null positioning. Tighten and cement screw.

Publication No. 768931
12/69

Kodak Service Bulletin

Eastman Kodak Company... Customer Equipment Services Division... Rochester, New York 14650

768952

KODAK CAROUSEL PROJECTOR, MODEL 600
KODAK CAROUSEL PROJECTOR, MODEL 650
KODAK CAROUSEL PROJECTOR, MODEL 700
KODAK CAROUSEL PROJECTOR, MODEL 750
KODAK CAROUSEL PROJECTOR, MODEL 800
KODAK CAROUSEL PROJECTOR, MODEL 850
KODAK CAROUSEL PROJECTOR, MODEL 860

Aligning the Gate Assembly

Misalignment of the LEFT GATE ASSEMBLY (Figures 1 and 2) can cause slides to jam in the projector. The effect of gate misalignment may be to direct the movement of a slide so that it strikes the sharp bottom edge of a tray divider while it is being raised from the gate for return to the tray. In the case of cardboard-mounted slides, the result is that the slides become more and more dog-eared, and the possibility of jamming the projector increases. If the slides being projected are mounted in metal or plastic, the degree of gate misalignment will determine whether or not the slides will jam if they strike the tray divider.

The tray dividers are thinner, and the bottom edge is sharper, in the gray KODAK CAROUSEL Universal Slide Tray than in the black KODAK CAROUSEL Slide Tray. Slide jamming, therefore, is much more likely when using cardboard slides in the gray tray if the projector has a misaligned gate.

To check for gate misalignment, follow these steps:

1. Remove the slide tray and any slide left in the projector gate.

2. Check the gap between the LEFT GATE ASSEMBLY and the edge of the TOP PLATE ASSEMBLY of the mechanism, with gauge (#TL1568), (Figure 1). The diameter of this tool is .115 inches. The tool should just pass through the gap. Clearance should not be excessive.

   NOTE: Make certain the measurement is checked between the shiny, plated portion of the GATE ASSEMBLY and the gray sheet-metal TOP PLATE of the internal projector mechanism. Avoid measuring to either the main cast housing of the projector, or the black baffle, which is attached to the GATE ASSEMBLY of autofocus models.

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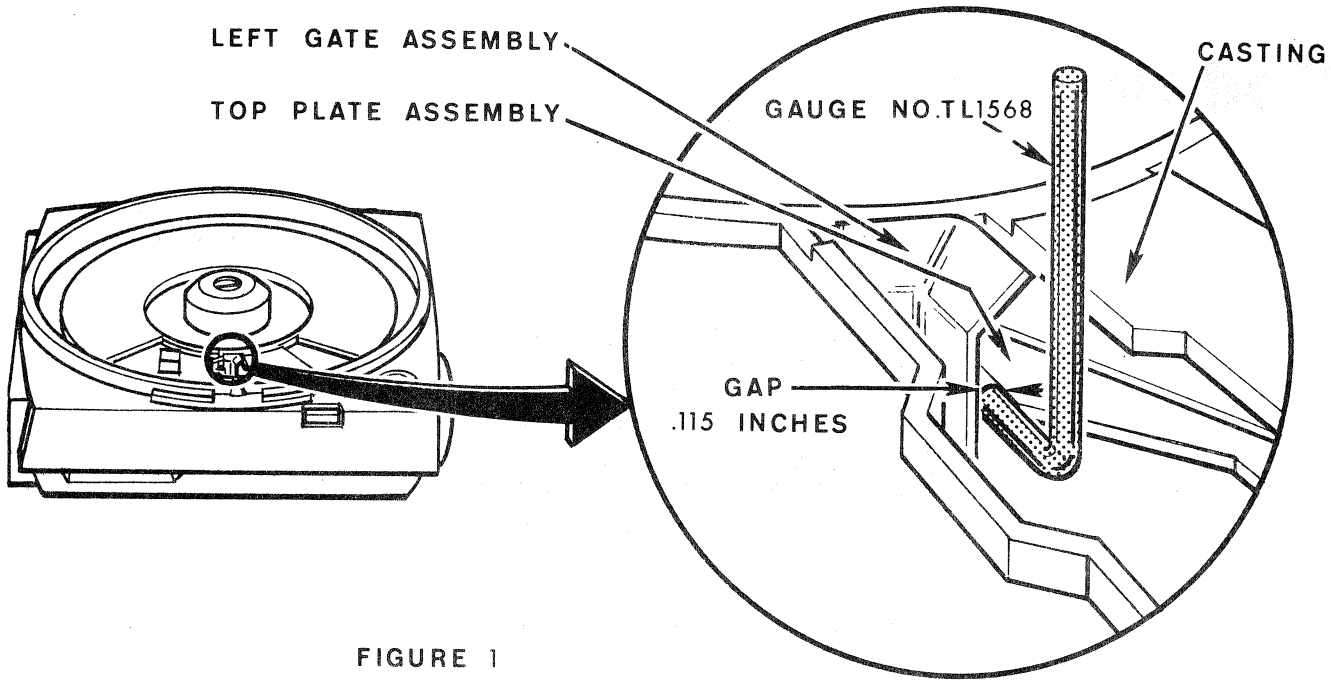


FIGURE 1

If the gap is less than .115 inches, follow steps 3 through 8.

3. Disconnect the power cord.

4. Insert a flat-blade screwdriver between the front edge of the LEFT GATE ASSEMBLY and the top of the main projector housing, as shown in Figure 2. Move the screwdriver handle toward the front of the projector to pry the top of the GATE ASSEMBLY toward the rear of the projector. Pry the assembly until it touches the housing casting at the point indicated in the diagram. The prying action will cause the GATE ASSEMBLY to pivot on the RIVET (Figure 3). When the screwdriver is withdrawn, the GATE ASSEMBLY will spring back slightly.

5. Check to see that the gap between the LEFT GATE ASSEMBLY and the TOP PLATE ASSEMBLY is at least .115 inches. If it is not, repeat step 4 and check again.

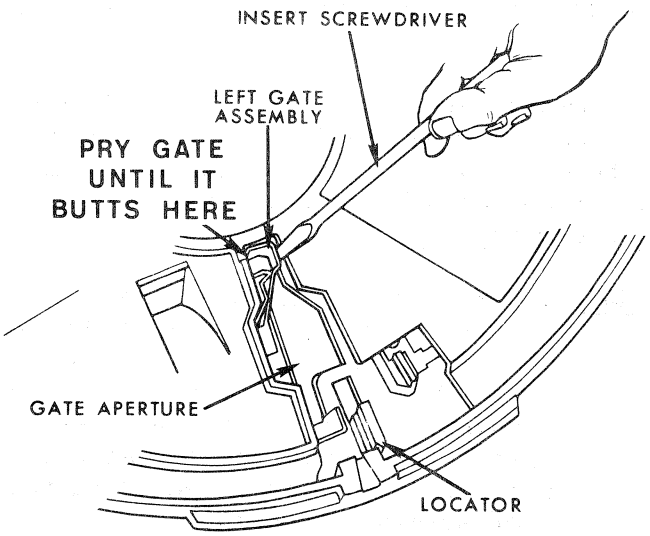
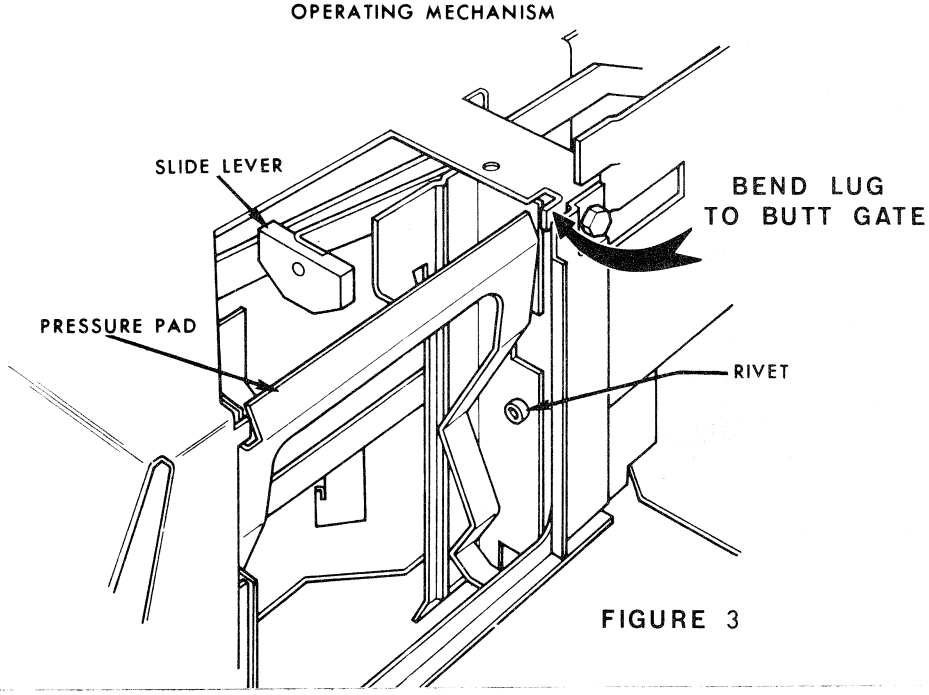


FIGURE 2



MECHANISM ASSEMBLY (Shown upside down with the cover assembly removed)

6. Turn the projector upside down, open the lamphouse door, and remove the front condenser lens, the heat-absorbing glass and the lamp. Locate the LUG (indicated by the heavy arrow in Figure 3 immediately to the right of the cover assembly lip as you look toward the front of the projector. Bend the LUG in the direction shown by the arrow, until it just touches the GATE ASSEMBLY. This can be accomplished by placing the end of a screwdriver against the LUG and tapping the handle lightly with a small hammer. It will ensure that the GATE ASSEMBLY will not easily slip out of alignment again.

   NOTE: Autofocus projectors have a black shield covering most of the LUG; however, enough of the LUG is exposed to permit bending as described.

7. Replace the heat-absorbing glass, the front condenser lens, and lamp in the lamphouse compartment.

   CAUTION: IF the condenser lens is not symmetrical, place the flatter side toward the front of the projector.

8. Close and lock the lamphouse cover.

The projector is now ready for normal operation.

This Service Bulletin supercedes Service Bulletin No. 768681, dated May, 1969.

Publication No. 768952
3-70

Kodak Service Bulletin

Eastman Kodak Company... Customer Equipment Services Division... Rochester, New York 14650

KODAK CAROUSEL PROJECTORS, MODELS 600 650, 700, 750, 800, 850 AND 860

775002

Power Switch Replacement

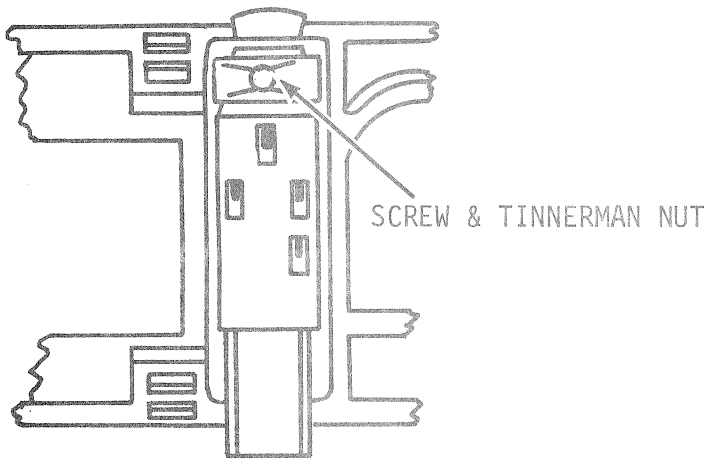
Service Bulletin No. 768911 stipulated that main power switches for the above projectors would be sold only as a part of the grille assembly. Recent changes in switch manufacturers and the resulting wire changes make it feasible for the main power switch to be replaced. There are two switches. One switch, (part No. 187000) is used on *KODAK CAROUSEL* Projector, Models 600 and 650. The other switch, (part No. 186979) is used on *KODAK CAROUSEL* Projector, Models 700, 750, 800, 850 and 860.

NOTE: Complete grille assemblies (with switch) are also available. Refer to the Parts List indicated below when ordering.

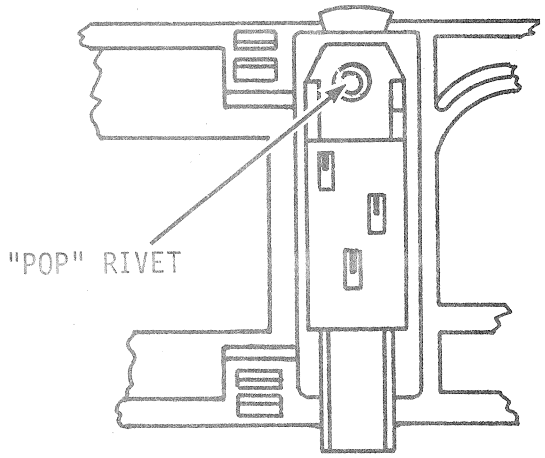
Disconnect the old switch by unsoldering all the leads to it. Remove the grille from the projector and drill out or otherwise remove, the rivets holding the old switch. Replace with appropriate part number switch. There are two methods of fastening the switch to the grille. The preferred method is to use "POP" rivet (part No. 171298) with a pair of "POP" rivet pliers. The second method is to use machine screw (part No. 167109) and Tinnerman speed nut (part No. 116213). Insert a screw through the grille and switch plate and fasten with the nut. (Be sure the long dimension of the nut is parallel to the long dimension of the grille).

To wire the new switch see the appropriate wiring diagram for the particular model projector showing the late style switch. The wiring diagrams are at the back of Parts List No. 768938 for the *KODAK CAROUSEL* Projector, Models 600, 650, 700, 750 and 800 or Parts List No. 768909 for the *KODAK CAROUSEL* Projector, Models 850 and 860.

NOTE: When replacing the switch on the *KODAK CAROUSEL* 700 Projector, use the wiring diagram for the *KODAK CAROUSEL* 750 Projector.



SWITCH P.N. 186979



SWITCH P.N. 187000

This Bulletin supersedes *KODAK* Service Bulletin No. 768911 dated 11/69.

Publication No. 11/70B

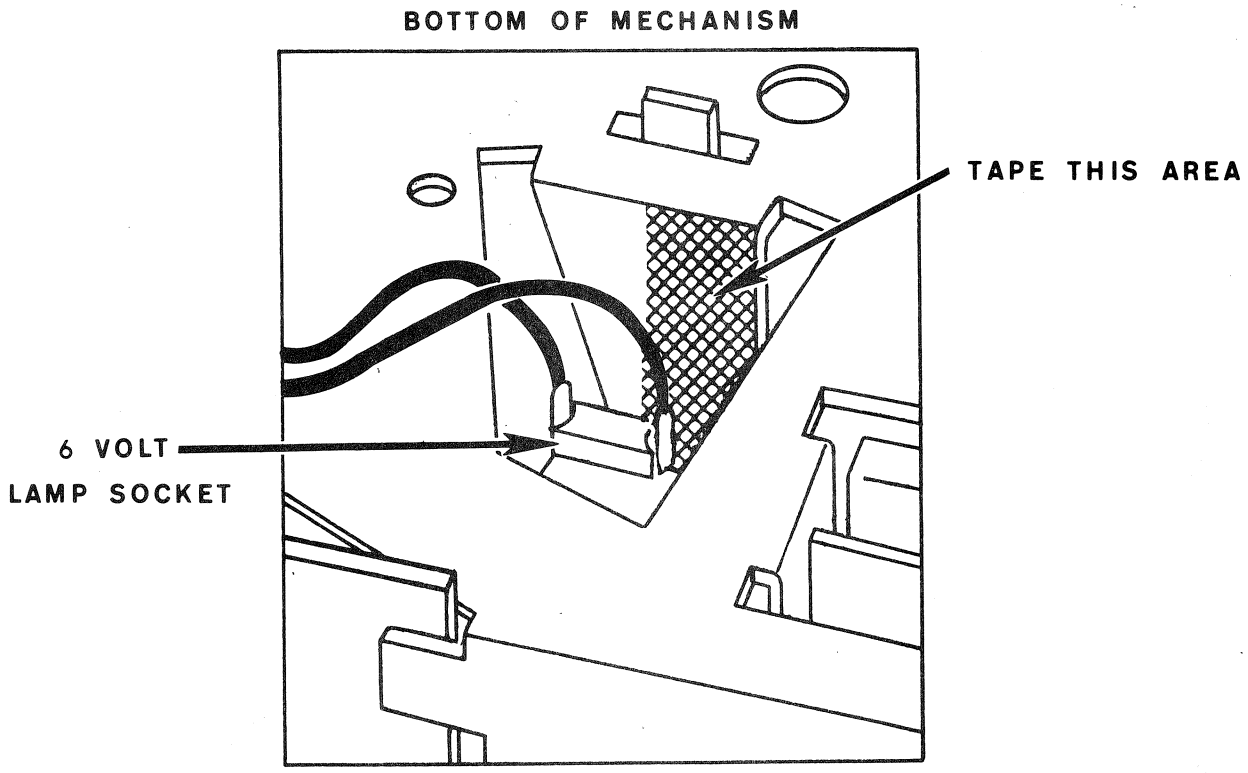
Kodak Service Bulletin

Eastman Kodak Company... Customer Equipment Services Division... Rochester, New York 14650

775004

KODAK CAROUSEL PROJECTORS, MODELS 850, 850K AND 860

It is suggested that when any of the above projectors are received for any repair, you attach a piece of glass tape or electrical tape to the mechanism frame immediately behind the 6-volt lamp socket (see sketch) to prevent a possible short to ground of the 6-volt circuit when the focus rack is at its full back position.



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ublication No. 775004
2/70B

Kodak Service Bulletin

Eastman Kodak Company... Customer Equipment Services Division... Rochester, New York 14650

775074

KODAK CAROUSEL PROJECTORS

With Automatic Focus Feature

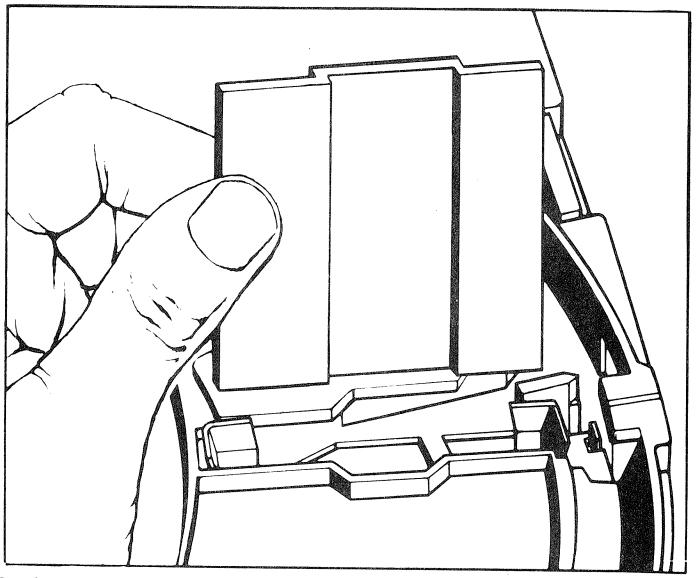
Auto-Focus Gauge (Tool #TL1744)

Some projectors fail to function properly with warped slides even though the automatic focus null position appears to be aligned properly. The focus motor continues to drive the lens either in or out, depending on the warpage.

The Auto-Focus Gauge (Tool #TL1744) provides the check for maximum warped slides. When the gauge is placed in the slide projector gate with the raised central section toward the projection lens, it represents a slide bowed to the maximum of .076-inch forward (see illustration). When the gauge is reversed, so that the raised central section is toward the lamp, the recessed portion on the opposite side now represents a slide bowed .076-inch backward.

Each projector, with automatic focus, should be checked with this gauge. The gauge should be placed in the gate in both directions and in each case sufficient time should be allowed for the focus motor to drive the lens rack to a null position. If the focus motor continues to drive the rack, in either direction, and does not come to a stop, the null adjustment in the projector should be realigned. In these instances, the null adjustment position will require a slight movement, from its current position, in the opposite direction that the rack movement failed to come to a stop. (e.g. if the lens drives forward move the null position backward.)

The Auto-Focus Gauge (#TL1744) is available from Eastman Kodak Company, Central Parts Service, 800 Lee Road, Rochester, New York 14650.



Publication No. 775074
8/71B

Kodak Service Bulletin

Eastman Kodak Company... Customer Equipment Services Division... Rochester, New York 14650

775101

KODAK CAROUSEL SLIDE PROJECTORS, MODEL 750H AND 800H

Focus Motor

Problem: Noisy Focus Motor

Possible Cause: Focus Motor Speed Excessive

Solution: Disconnect the blue focus motor lead from its connectors, and rewire it to the group of orange leads from the solenoid, clutch contact, contact assembly, and grille assembly.

A recent internal design change in the focus motor for the *KODAK CAROUSEL* Slide Projectors, Models 750H and 800H, resulted in an increase of rpm and noise (gear flutter). The motor part number was not changed. It remains part No. 184750, Motor and Bracket Assembly. This part also serves as a replacement in the *KODAK CAROUSEL* Slide Projectors, Models 750 and 800.

This change in wiring has been incorporated in projectors currently being produced. The lead from the motor has been changed from blue to orange.

*NOTE: Be sure to check forward and reverse operation after making the change. If the cycling solenoid adjustment is marginal, remote focus actuation could cause forward or reverse cycling also. If this happens, readjust solenoid.

Publication No. 775101
1/72

Kodak Service Bulletin

Eastman Kodak Company... Customer Equipment Services Division... Rochester, New York 14650

775294

KODAK CAROUSEL PROJECTORS
MODELS 650, 650H, 700, 750, 750H
760, 760H, 800, 800H, 800HC, 850, 850K
850H, 850HC, 860, 860H, 860HC AND AV 900

Capacitor Installation

Engineering has found that placing the capacitor between the orange and yellow leads, instead of between orange and ground, reduces the spark at the clutch contact (this should prolong clutch contact life,) and also reduces radio interference noise.

Therefore, if you are installing a new capacitor because the old one is defective or because a late-style grille (without capacitor) has been installed and there is no capacitor in the projector, proceed as follows:

First, remove any defective capacitor from the projector. It will be found in one of the following locations: (1) between the orange leads and ground in the wiring trough, (2) between the orange terminal and brown lead terminal at the remote cord receptacle on the grille, or (3) between the orange and yellow leads on the cycle switch terminals.

Then, install a new capacitor (Part No. 204331) between orange and yellow leads.

NOTE: One convenient place to install the new capacitor is between the orange and yellow terminals at the remote cord receptacle.

Publication No. 775294
4/73 B

February 1974 Parts List Supplement No. 775166-1

KODAK CAROUSEL Custom 850H, 850H-K, and 860H Projectors

Make the following corrections and additions in Parts List Publication No. 775166:

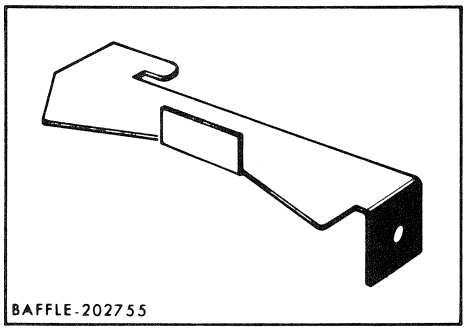
FIGURE 6 CHANGE: BASE COVER ASSEMBLY - 197084

TO: BASE COVER ASSEMBLY COMPLETE - 196960

ADD: BASE AND INSERT ASSEMBLY - 197084

FIGURE 13 ADD: BAFFLE, LAMP MOUNT - 202755

WIRING DIAGRAMS: The attached wiring diagrams replace the wiring diagrams in Parts List Publication No. 775166.



Order parts from / Eastman Kodak Company, Central Parts Service
800 Lee Road, Rochester, New York 14650
Order by PART NUMBER

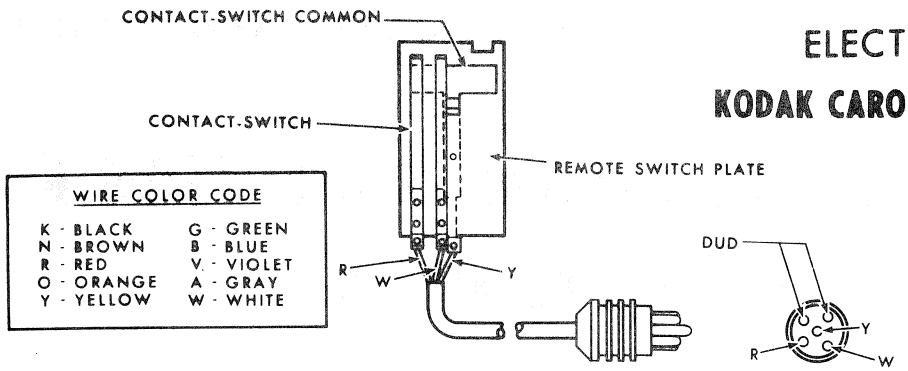
Customer Equipment Services Division
EASTMAN KODAK COMPANY • ROCHESTER, N. Y. 14650

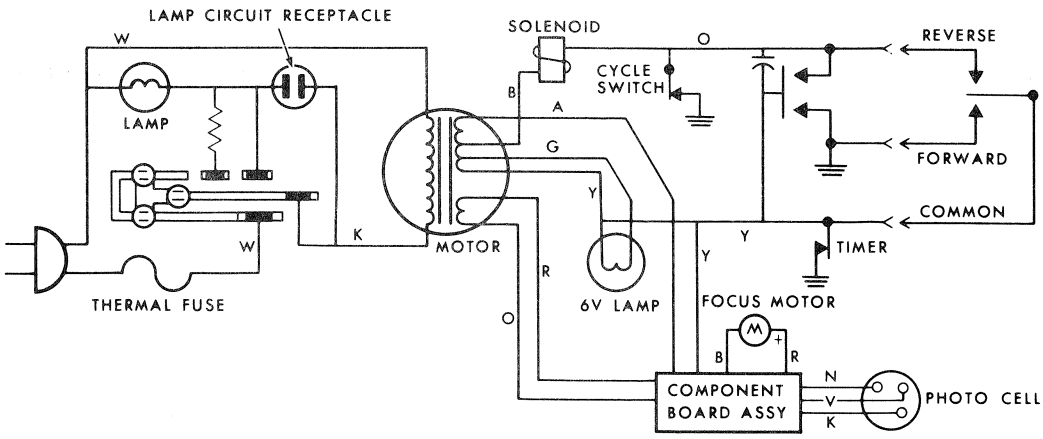
Printed in the U.S.A.

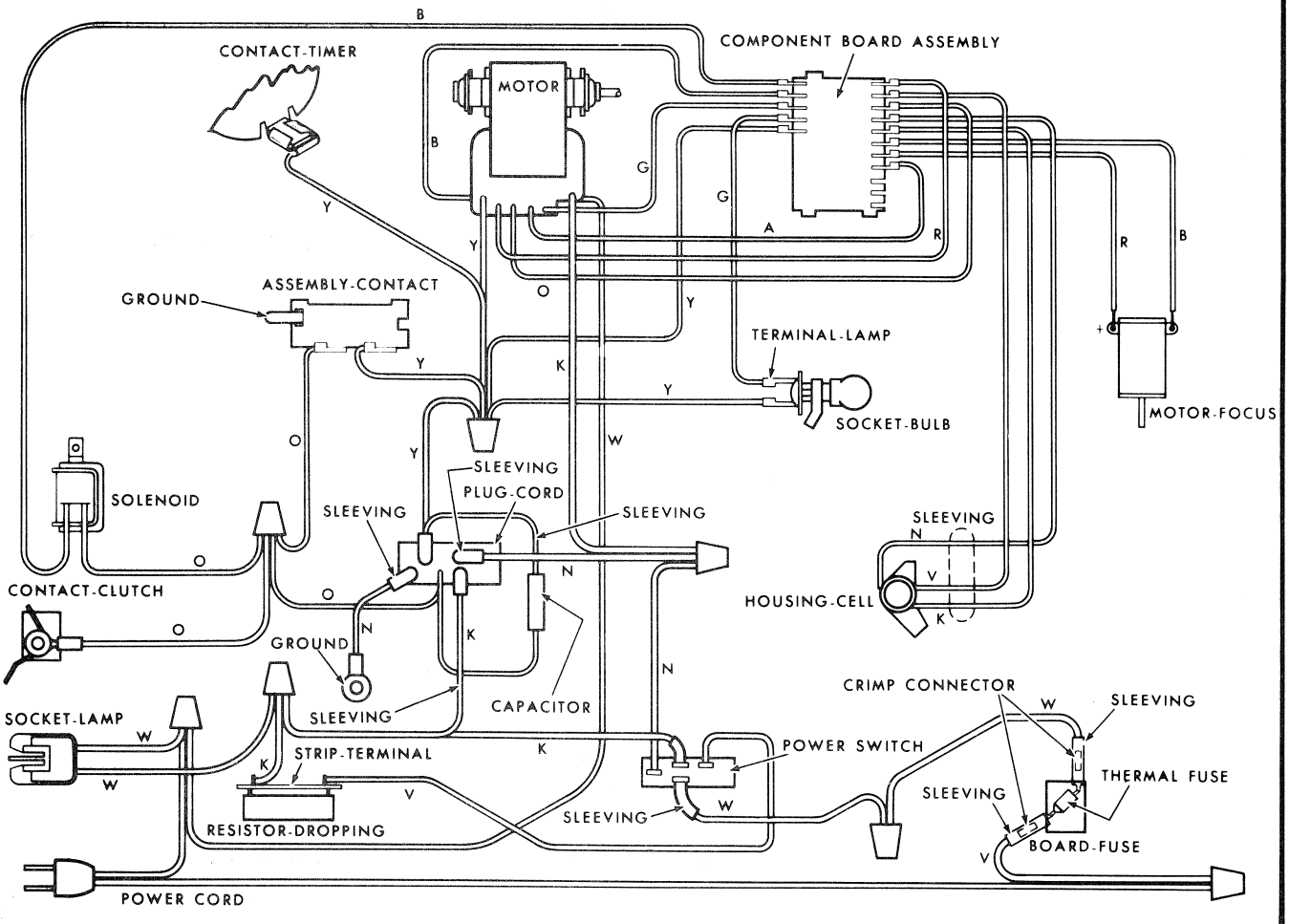
ELECTRICAL DIAGRAMS

KODAK CAROUSEL Custom 850H Projector

EARLY MODEL PROJECTORS MAY VARY FROM DIAGRAMS SHOWN.



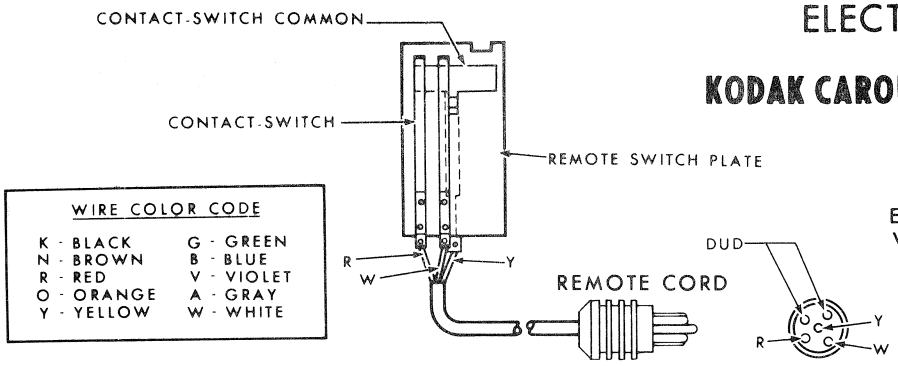


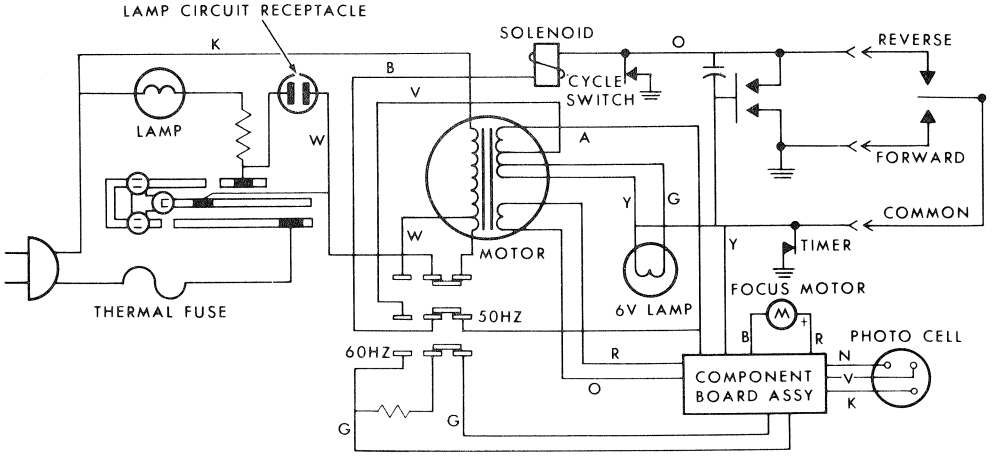


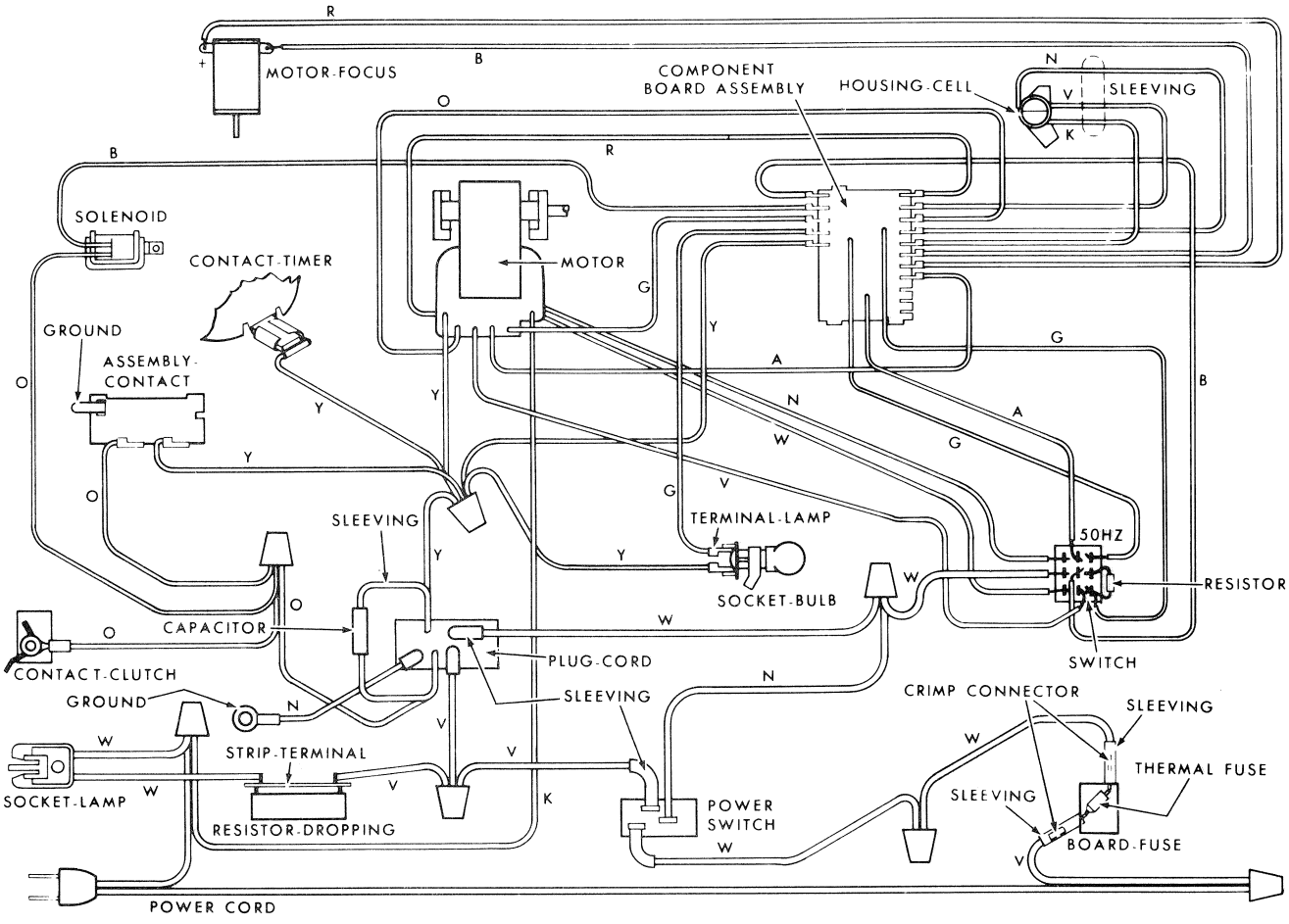
ELECTRICAL DIAGRAMS

KODAK CAROUSEL Custom 850HK Projector

EARLY MODEL PROJECTORS MAY VARY FROM DIAGRAMS SHOWN.

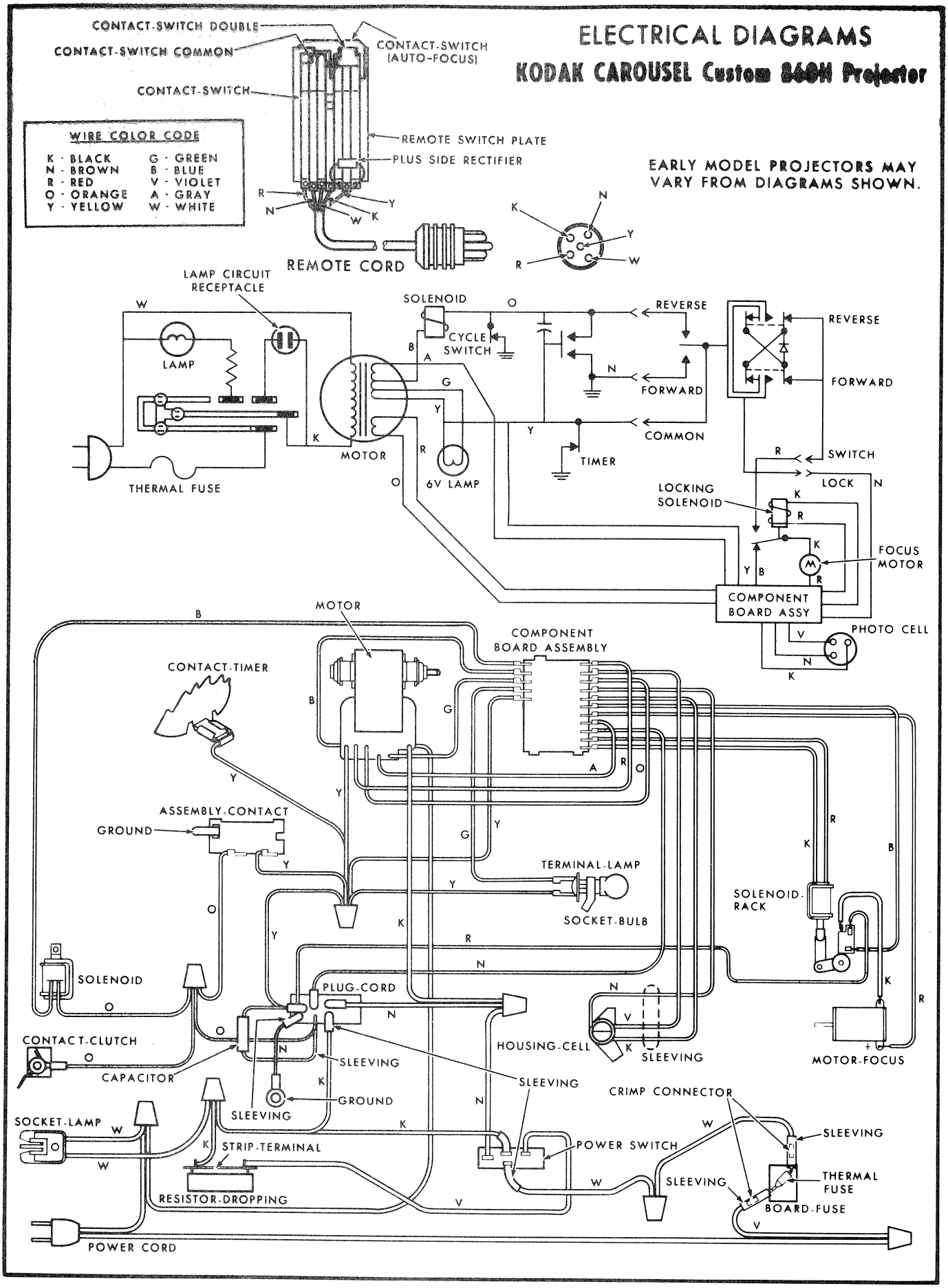






ELECTRICAL DIAGRAMS

KODAK CAROUSEL Custom 860H Projector



Kodak Service Bulletin

Eastman Kodak Company... Customer Equipment Services Division... Rochester, New York 14650

775340

KODAK CAROUSEL PROJECTORS,
MODELS 760, 760H, 850, 850H, 860, AND 860H

Main Drive Motors

Currently, the *KODAK CAROUSEL* Projector, Model 760H is the only model being manufactured with a Kodak motor. All other models including some 760H models have the Bomax-manufactured motor. All models will accept either a Bomax or a Kodak motor as a replacement. Every effort should be made to replace motors with those produced by the same manufacturer. Part numbers are as follows:

Model	Motor	Part No.
760, 850, and 860	Bomax	198608
760, 850, and 860	Kodak	206023
760H, 850H, and 860H	Bomax	199125
760H, 850H, and 860H	Kodak	199325

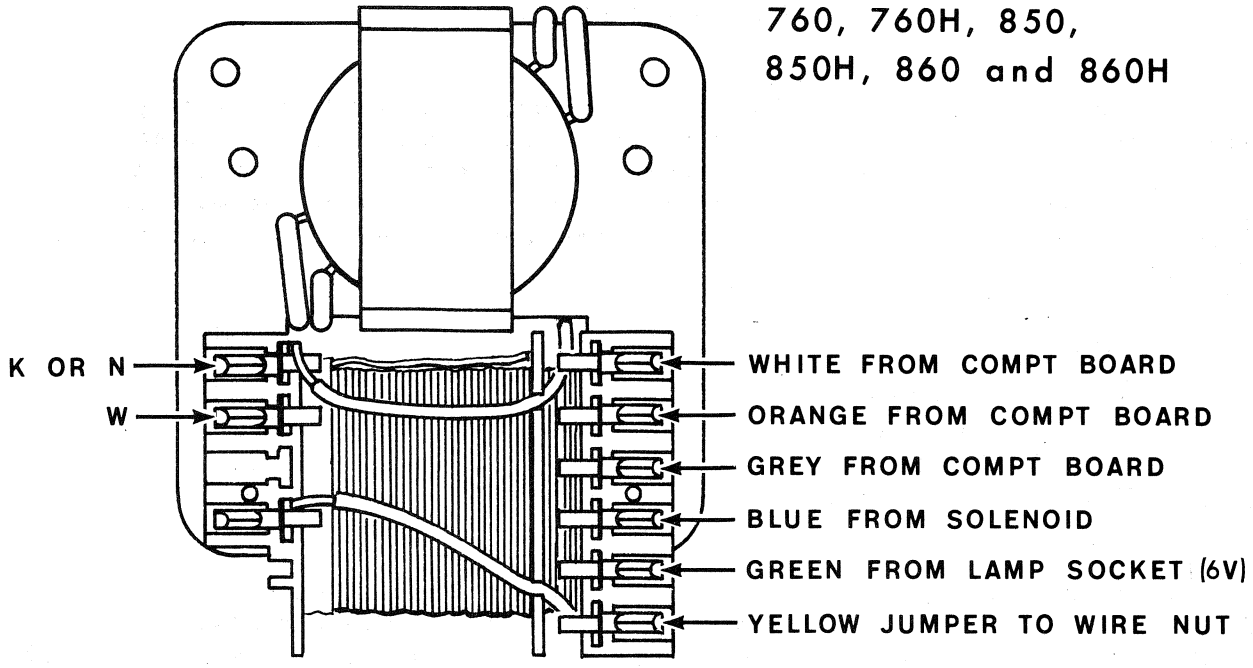
If you are replacing a Bomax motor with a Bomax motor or a Kodak motor with a Bomax motor, use the wiring diagrams in the service manuals. If, however, you are replacing a Kodak motor with a Kodak motor or a Bomax motor with a Kodak motor, connect the wires as shown in the attached illustration.* When replacing a Bomax motor with a Kodak motor, clip the leads from the old Bomax motor as close to the motor as possible. Strip the ends and insert them in the Kodak motor as shown.

*NOTE: When replacing a Bomax motor with a Kodak motor, use base cover, Part No. 203764 for "H" models or No. 203762 for non-"H" models.

Special Note: Some quantity of Models 760H and 850H have been manufactured with Kodak motors wired differently than the illustration. Replacement Kodak motors will be wired as shown in the illustration.

Publication No. 775340
8/73 B

KODAK CAROUSEL Projector, Models
760, 760H, 850,
850H, 860 and 860H



Kodak Service Bulletin

Eastman Kodak Company... Customer Equipment Services Division... Rochester, New York 14650

775349

KODAK CAROUSEL PROJECTORS, MODELS 600 AND 600H

Currently, both model projectors are being produced with motors manufactured at *KODAK*. Previously, the motors were manufactured by Bomax. Both models will accept either a Bomax or a *KODAK* motor as a replacement. Every effort should be made to replace motors with those produced by the same manufacturer. Part numbers are as follows:

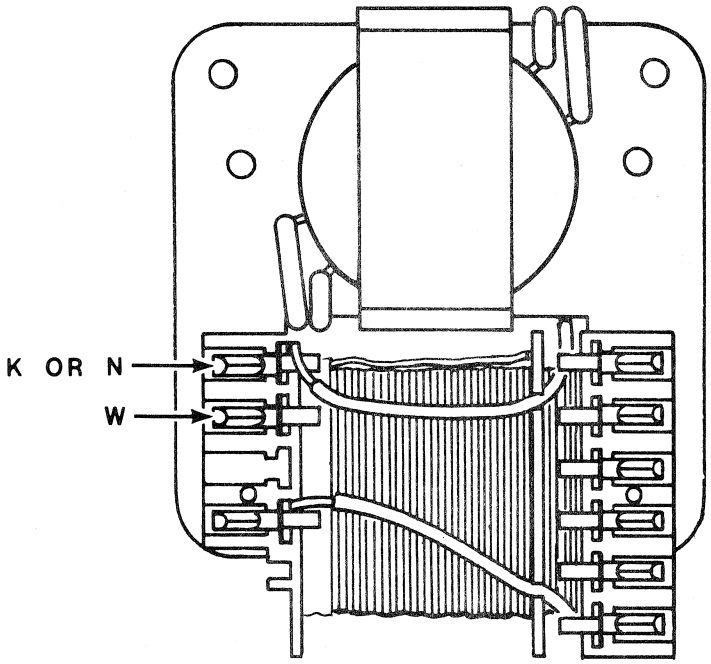
Model	Motor	Part No.
600	Bomax	199907
600	*KODAK*	202292
600H	Bomax	199910
600H	*KODAK*	202289

If you are replacing a Bomax motor with a Bomax motor or a *KODAK* motor with a Bomax motor, use the wiring diagrams in the service manuals. If, however, you are replacing a *KODAK* motor with a *KODAK* motor or a Bomax motor with a *KODAK* motor, connect the wires as shown in the attached illustration.* When replacing a Bomax motor with a *KODAK* motor, clip the leads from the old Bomax motor as close to the motor as possible. Strip the ends and insert them in the *KODAK* motor as shown.

*NOTE: When replacing a Bomax motor with a *KODAK* motor, use base cover, Part No. 203760, for "H" models or No. 203755 for non-"H" models.

Publication No. 775349
9/73 B

KODAK CAROUSEL Projector, Models 600 and 600H



Kodak Service Bulletin

Eastman Kodak Company... Customer Equipment Services Division... Rochester, New York 14650

775351

KODAK CAROUSEL PROJECTORS,
MODELS 650, 650H AND 700

Main Drive Motors

Currently, the *KODAK CAROUSEL* Projector, Model 650H is the only model being manufactured with a *KODAK* motor. All other models, including some 650H models, have the Bomax manufactured motor. All models will accept either a Bomax or a *KODAK* motor as a replacement. Every effort should be made to replace motors with those produced by the same manufacturer. Part numbers are as follows:

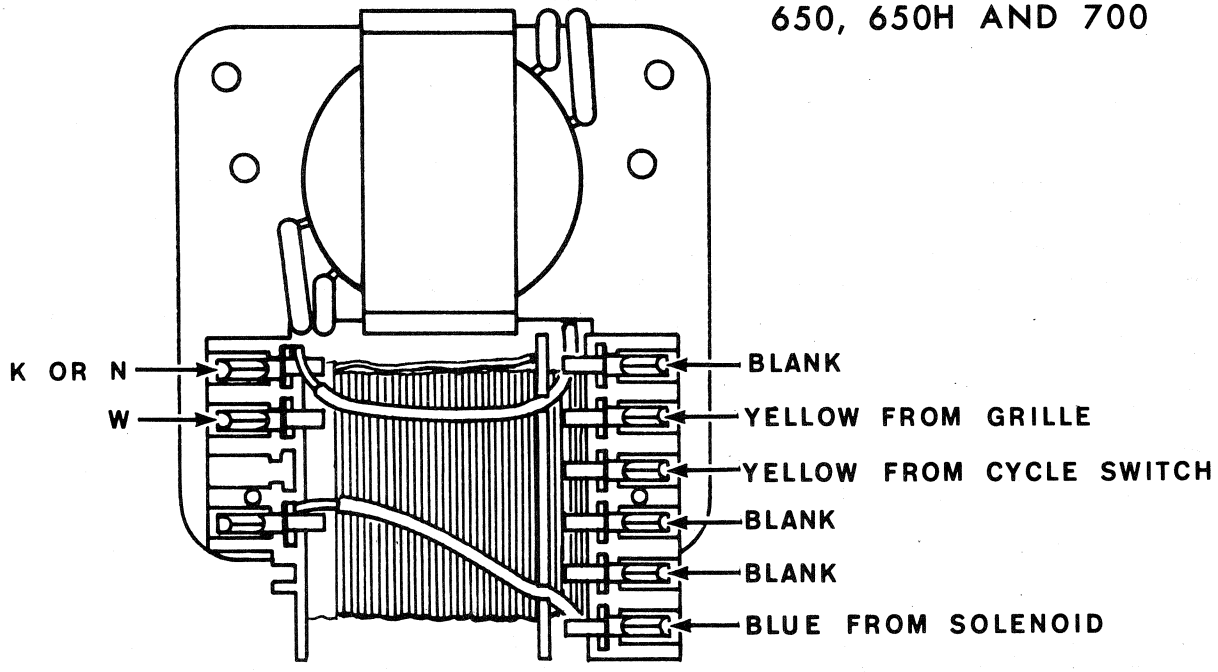
Model	Motor	Part No.
650 and 700	Bomax	203908
650 and 700	*KODAK*	206024
650H	Bomax	198609
650H	*KODAK*	199824

If you are replacing a Bomax motor with a Bomax motor or a *KODAK* motor with a Bomax motor, use the wiring diagrams in the service manuals. If, however, you are replacing a *KODAK* motor with a *KODAK* motor or a Bomax motor with a *KODAK* motor, connect the wires as shown in the attached illustration.* When replacing a Bomax motor with a *KODAK* motor, clip the leads from the old Bomax motor as close to the motor as possible. Strip the ends and insert them in the *KODAK* motor as shown.

*NOTE: When replacing a Bomax motor with a *KODAK* motor, use base cover, Part No. 203760 for "H" models, No. 203755 for non-"H" 650 models, and No. 203762 for model 700 projectors.

Publication No. 775351
9/73 B

KODAK CAROUSEL Projector, Models
650, 650H AND 700



Kodak Service Bulletin

Eastman Kodak Company... Customer Equipment Services Division... Rochester, New York 14650

775352

KODAK CAROUSEL PROJECTORS,
MODELS 800, 800H AND RA-950

Main Drive Motors

None of the above models are currently manufactured. All models will however, accept either a Bomax or a *KODAK* motor as a replacement. Every effort should be made to replace motors with those produced by the same manufacturer. Part numbers are as follows:

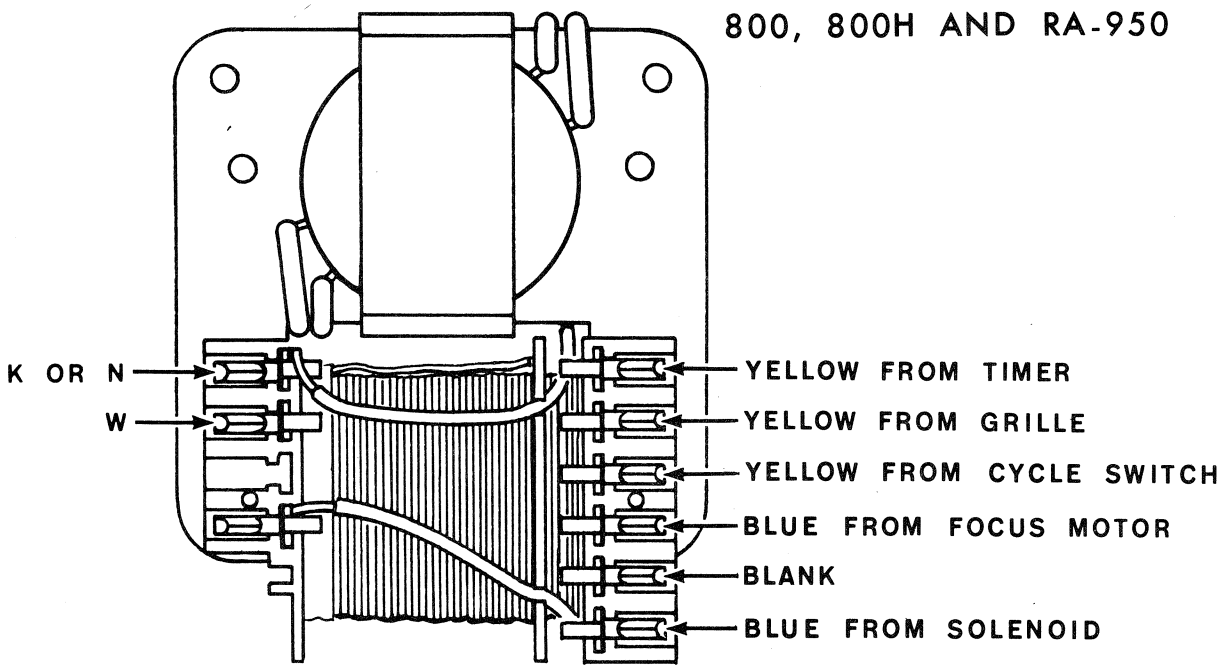
Model	Motor	Part No.
800 and RA-950	Bomax	203908
800 and RA-950	*KODAK*	206024
800H	Bomax	198609
800H	*KODAK*	204610

If you are replacing a Bomax motor with a Bomax motor or a *KODAK* motor with a Bomax motor, use the wiring diagrams in the service manuals, If, however, you are replacing a *KODAK* motor with a *KODAK* motor or a Bomax motor with a *KODAK* motor, connect the wires as shown in the attached illustration.* When replacing a Bomax motor with a *KODAK* motor, clip the leads from the old Bomax motor as close to the motor as possible. Strip the ends and insert them in the *KODAK* motor as shown.

*NOTE: When replacing a Bomax motor with a *KODAK* motor, use base cover, Part No. 203764 for "H" models or No. 203762 for non-"H" models.

Publication No. 775352
9/73 B

KODAK CAROUSEL Projector, Models
800, 800H AND RA-950



Kodak Service Bulletin

Eastman Kodak Company... Customer Equipment Services Division... Rochester, New York 14650

775347

KODAK CAROUSEL PROJECTORS, MODELS 750, 750H, 800 AND 800H

Noisy Solenoid

Since January 1972, the subject projectors have had the focus motor wired in series with the cycle solenoid. Occasionally, a high current drain-focus motor may cause the cycle solenoid to vibrate and/or actually cause the projector to cycle.

The best method to eliminate the problem is to revert to the original wiring of the focus motor. Remove the blue lead of the focus motor from the connection where it joins the orange wires and connect it to the blue lead from the main motor that joins with the blue lead from the solenoid.

Publication No. 775347
9/73 B

SERVICE ENGINEERING
BULLETIN

CUSTOMER EQUIPMENT SERVICES DIVISION EASTMAN KODAK COMPANY

SE/AM 16

KODAK CAROUSEL 760, 850, 850K, and 860 Projectors
KODAK CAROUSEL 760H, 850H, and 860H Projectors
KODAK CAROUSEL Custom 850H, 850H-K, and 860H Projectors

Auto-Focus Circuit Board

Component Test Procedure

This procedure is for testing the auto-focus circuit board (1 Transistor, 1SCR) in the above model projectors. Replace any defective component on the circuit board. Refer to the wiring diagrams, Pages 3 and 4.

I. Circuit Board Preparations:

a. Remove the circuit board from the projector. Refer to the service manual publications listed on page 2.

b. Connect the following circuit board wires, figure 1:

White, orange, gray, and yellow wires to the MAIN MOTOR.

Blue (negative), and red (positive) to the D.C. VOLTMETER, and FOCUS MOTOR WITH LOCKED ROTOR.

Brown, black, and violet wires to the PHOTOCELL SIMILATOR.

II. Testing the Circuit Board:

a. Place switches S1 and S2 in "OPEN" position.
Voltmeter must read zero.

b. Place switch S1 in "CLOSED" position, and switch S2 in "OPEN" position.
Voltmeter must read - 12.5 $\pm$ 2.5 volts.

c. Place switches S1 and S2 in "CLOSED" position.
Voltmeter must read zero.

d. Place switch S1 in "OPEN" position, and switch S2 in "CLOSED" position.
Voltmeter must read + 12.5 $\pm$ 2.5 volts.

e. Measure the resistance between the violet and brown wires.
Resistance must be 2KΩ $\pm$ 20%.

f. Measure the resistance between the blue and gray wires.
Resistance must be 1 Meg ohm.

Publication No. 775414
1/74 B

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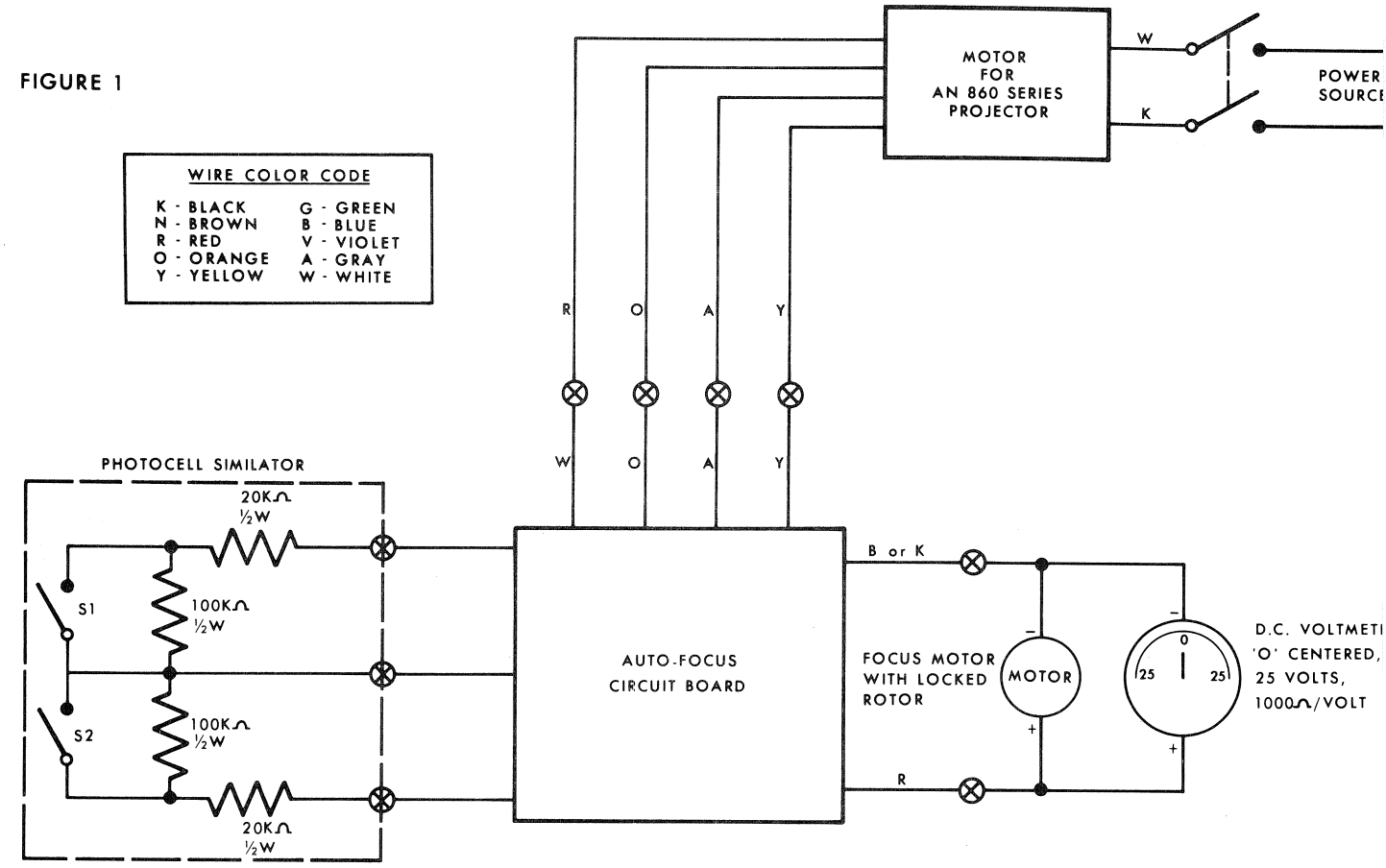
III. Circuit Board - Trouble/Remedy Chart:

Switch S1 Position	Switch S2 Position	D.C. Volt Meter Reading	Check Component
Open	Open	Negative	CR2, CR5
Open	Open	Positive	CR3, CR4
Open	Closed	0	CR2, CR5, Q1, Q2
Open	Closed	Negative	Q1, Q2
Closed	Closed	Negative	CR2, CR5
Closed	Closed	Positive	CR3, CR4
Closed	Open	0	CR3, CR4, Q1, Q2
Closed	Open	Positive	Q1, Q2

FIGURE 1



References:

KODAK CAROUSEL 760, 850, 850K, and 860 Projectors
Service Manual Publication No. 775051

KODAK CAROUSEL 760H, 850H, and 860H Projectors
Service Manual Publication No. 775051

KODAK CAROUSEL Custom 850H, 850H-K, and 860H Projectors
Service Manual Publication No. 775165

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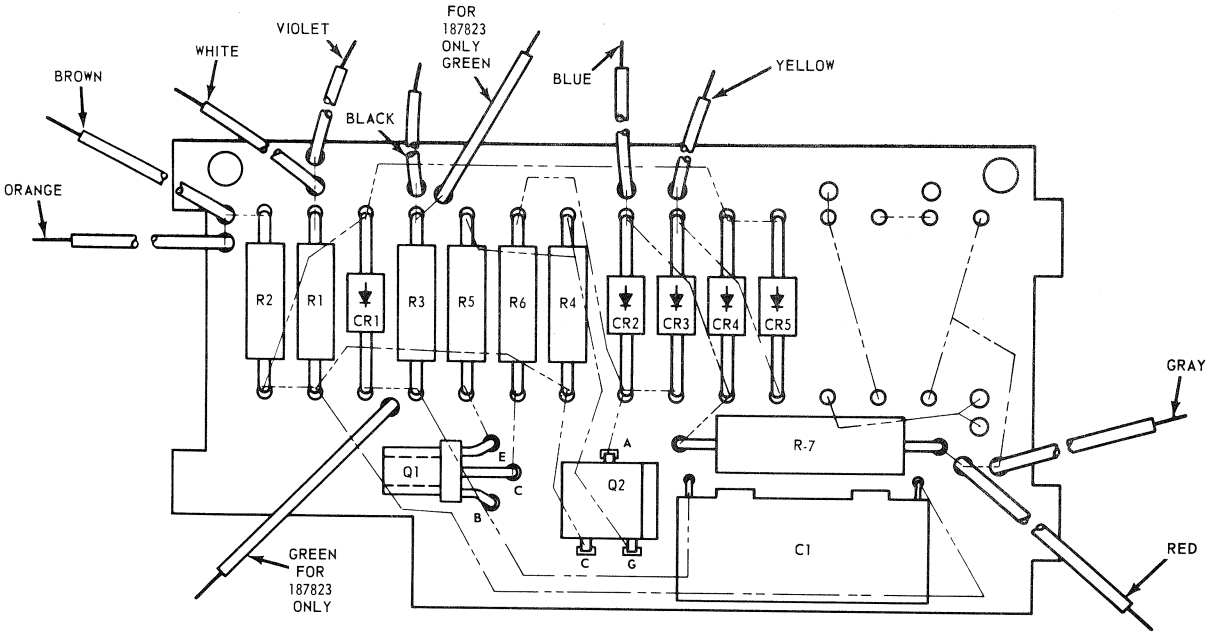

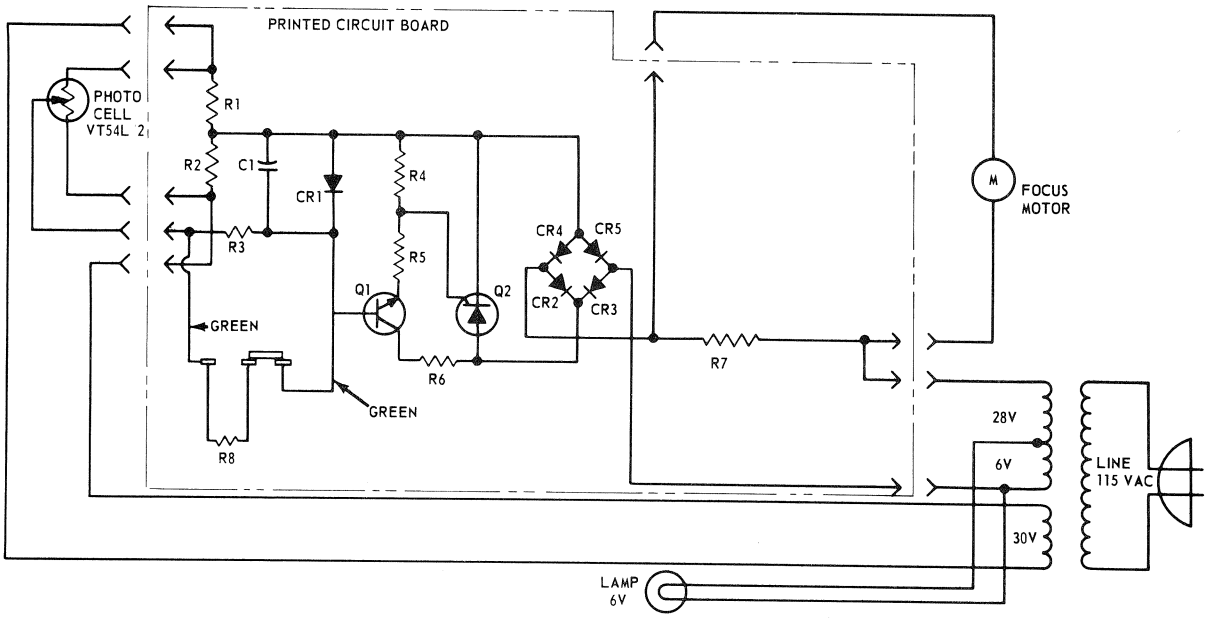

COMPONENT BOARD FOR

KODAK CAROUSEL
760 and 850 PROJECTORS

1 TRANSISTOR, SCR TYPE (CURRENT)

PRINTED CIRCUIT BOARD COMPONENT NOMENCLATURE		
C1	186554	CAPACITOR, 0.1μf ±10%, 50VDC GE. #75F2R5-104-A
CR1,2,3,4,5	187813	GE. RECTIFIER, EK-1-A
Q1	186555	TRANSISTOR, 2N5172, GE.
Q2	185766	SCR, C106F41-GE.
R1,2,3,4,5	187814	RESISTOR, 1KΩ ±5%, ½WATT
R3	186962	RESISTOR, 47KΩ ±5%, ½WATT
R6	126900	RESISTOR, 10KΩ ±10%, ½WATT
R7	146619	RESISTOR, 220Ω ±10%, 1WATT

(A) Addition (R) Revised (D) Delete	Remove and destroy page dated	
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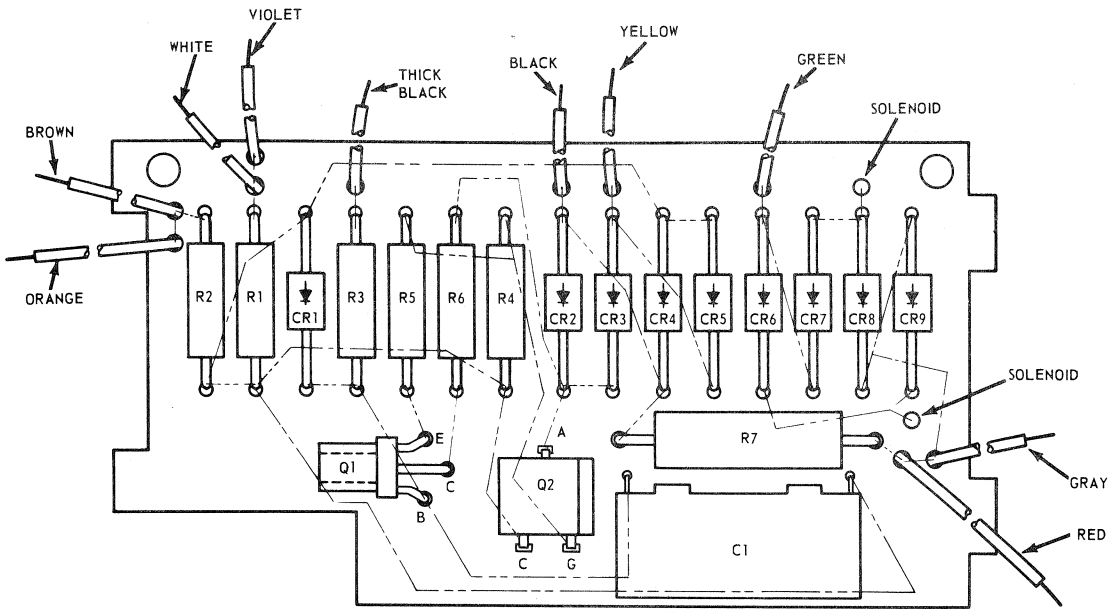

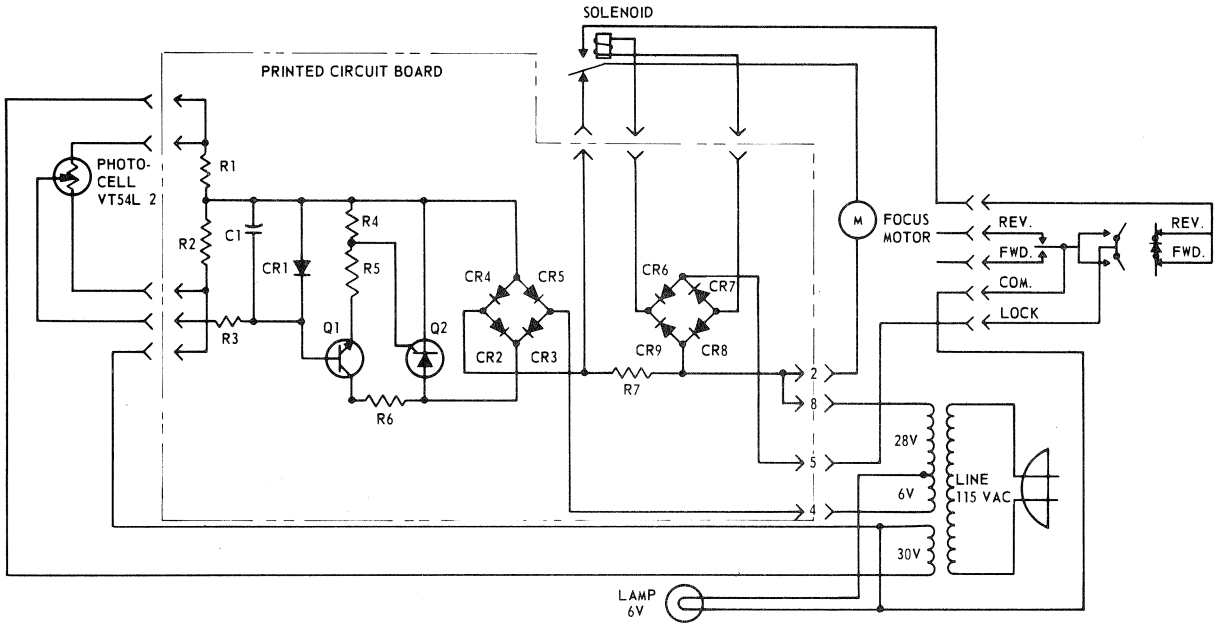

COMPONENT BOARD FOR

KODAK CAROUSEL 860 PROJECTOR

1 TRANSISTOR, 1 SCR TYPE (CURRENT)

PRINTED CIRCUIT BOARD COMPONENT NOMENCLATURE		
C1	186554	CAPACITOR, 0.1 μf, ± 10%, 50VDC, GE. #75F2R5-104.A
CR1,2,3,4,	187813	G.E. RECTIFIER, EK-1-A
5,6,7,8	"	"
9	"	"
Q1	186555	TRANSISTOR – 2N5172- G.E.
Q2	185766	S.C.R. – C106F41 – G.E.
R–1,2,4,5	187814	RESISTOR, 1K Ω ± 5%, ½WATT
R3	186962	RESISTOR, 47KΩ ± 5%, ½WATT
R6	126900	RESISTOR, 10KΩ ± 10%, ½WATT
R7	146619	RESISTOR, 220Ω ± 10%, 1WATT

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SERVICE ENGINEERING
BULLETIN

CUSTOMER EQUIPMENT SERVICES DIVISION EASTMAN KODAK COMPANY

SE/AM 29

KODAK CAROUSEL SLIDE PROJECTORS, MODELS 650H, 750H, AND 760H
KODAK CAROUSEL CUSTOM SLIDE PROJECTORS, MODELS 800HC, 850HC, 850HC-K, AND 860HC

Electrical Fuses in Secondary Circuits

Electrical fuses have been added to the secondary circuits in the above model projectors, which have a BOMAX main motor. These fuses have been added to protect the main motor secondary from a current overload.

When the motor operates and there is no current in a secondary circuit, check the electrical fuse in the circuit. If the fuse is open, replace it.

Check the mechanical and electrical functions to prevent a repeat of the fuse failure.

Install the replacement electrical fuses as shown in the attached wiring diagrams.

Fuse part numbers and values are listed below:

ALL MODELS

Part Number	Value	Secondary Circuit
207129	1.5 amp.	Joining main motor to yellow leads

NON CUSTOM AUTO FOCUS MODELS

Part Number	Value	Secondary Circuit
207128	0.4 amp.	Red lead from motor to white from component board
207132	1.5 amp.	Green lead from motor to green from six-volt lamp

CUSTOM AUTO FOCUS MODELS

Part Number	Value	Secondary Circuit
207130	0.4 amp.	Red lead from motor to its connection on component board
207131	1.5 amp.	Green lead from motor to its connection on component board

Publication No. 775436
3/74 B

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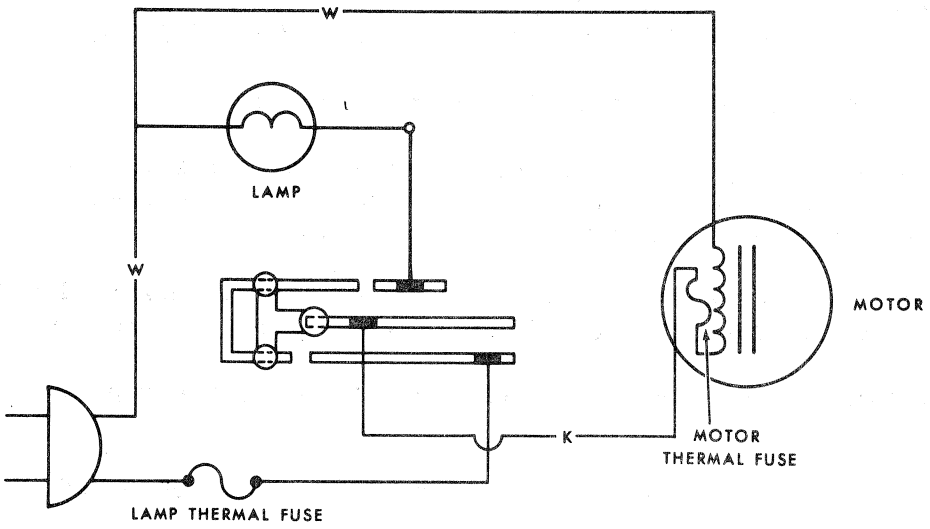
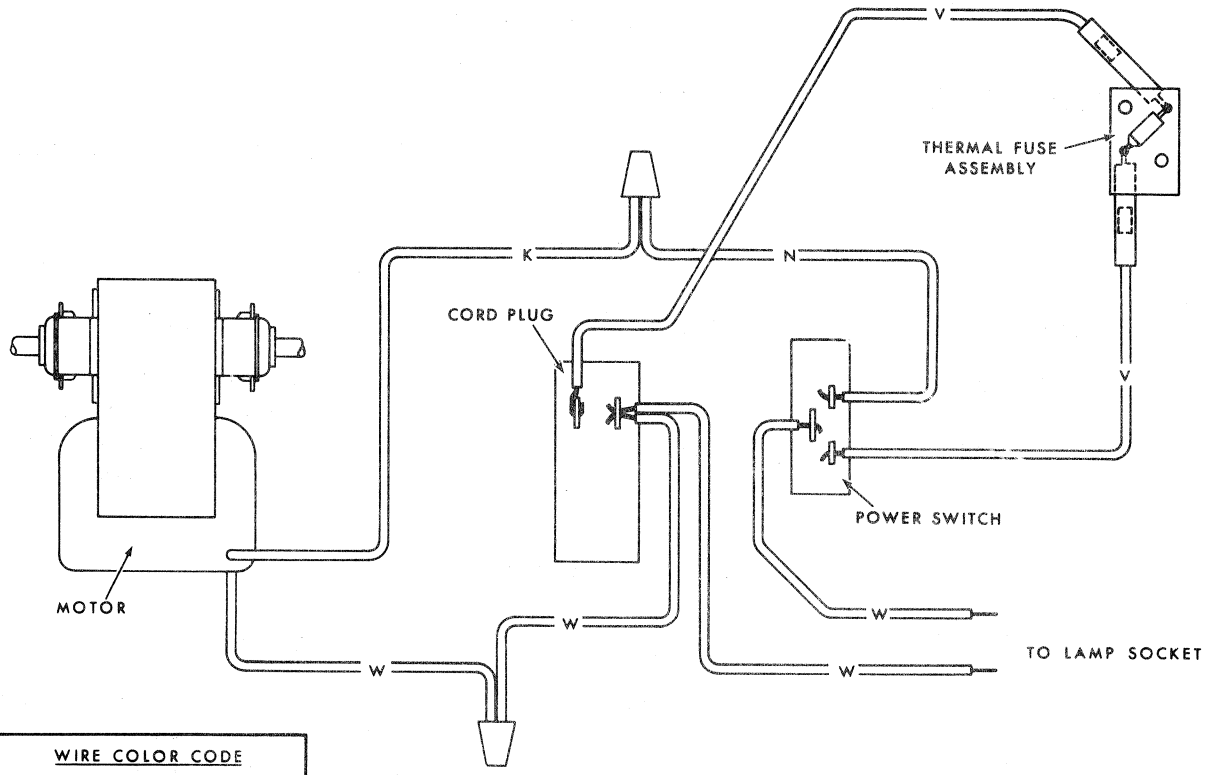
ELECTRICAL DIAGRAMS

KODAK CAROUSEL MODELS 600 and 600H PROJECTORS





WIRE COLOR CODE

K - BLACK	G - GREEN
N - BROWN	B - BLUE
R - RED	V - VIOLET
O - ORANGE	A - GRAY
Y - YELLOW	W - WHITE

EARLY MODEL PROJECTORS MAY VARY FROM DIAGRAMS SHOWN

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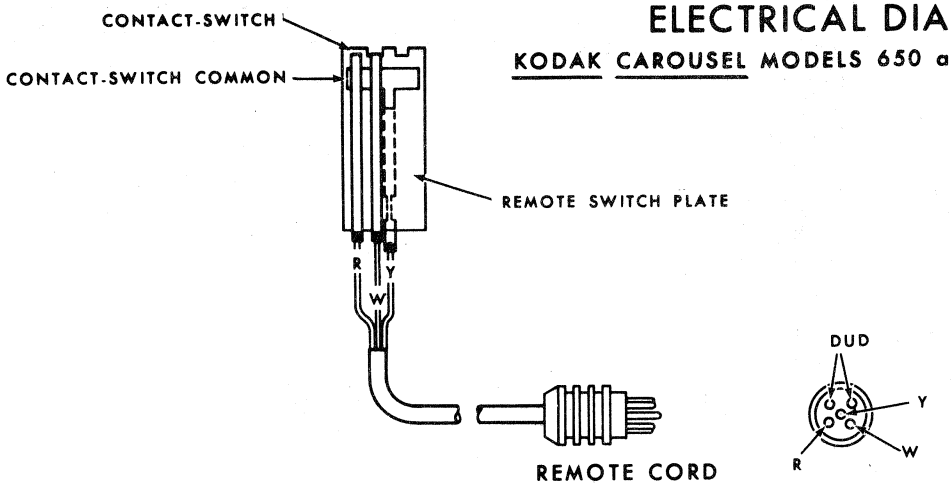
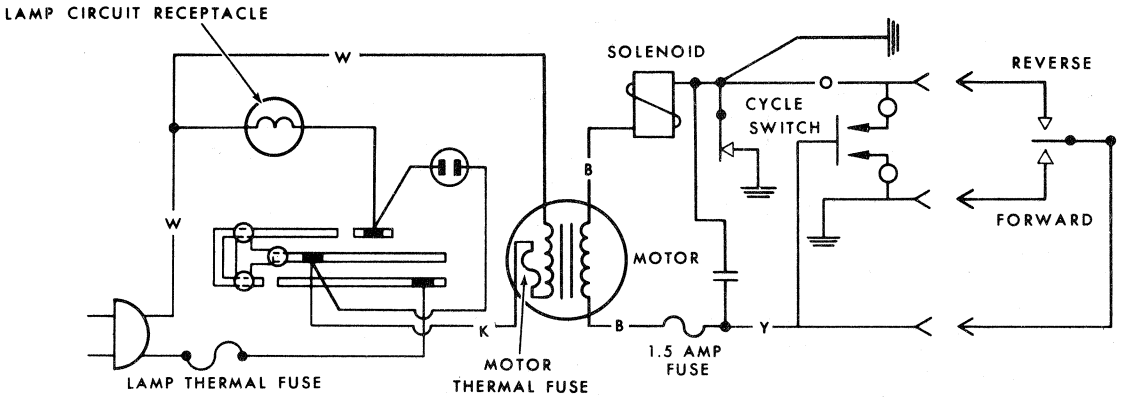
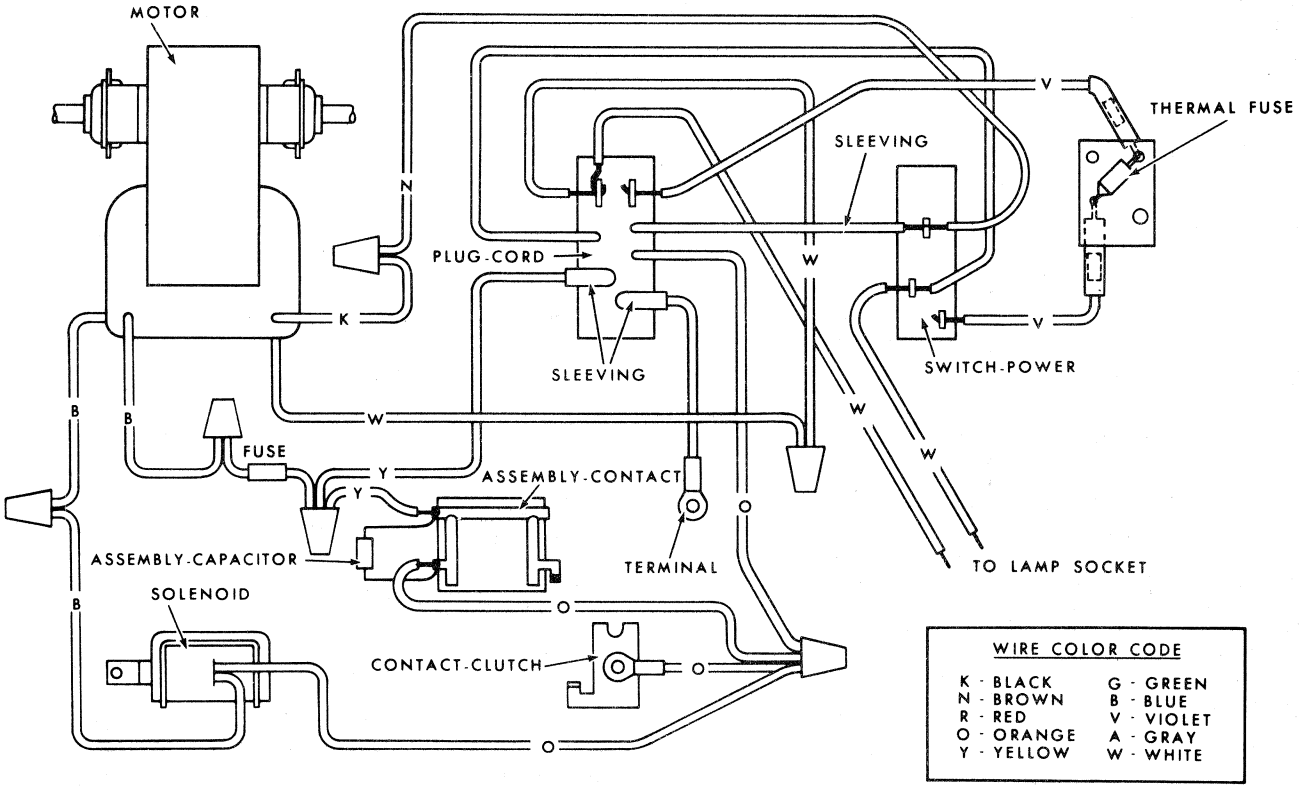
ELECTRICAL DIAGRAMS

KODAK CAROUSEL MODELS 650 and 650H PROJECTORS







WIRE COLOR CODE	
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N - BROWN	B - BLUE
R - RED	V - VIOLET
O - ORANGE	A - GRAY
Y - YELLOW	W - WHITE

EARLY MODEL PROJECTORS MAY VARY FROM DIAGRAMS SHOWN

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ELECTRICAL DIAGRAMS

KODAK CAROUSEL MODELS 750 and 750H PROJECTORS

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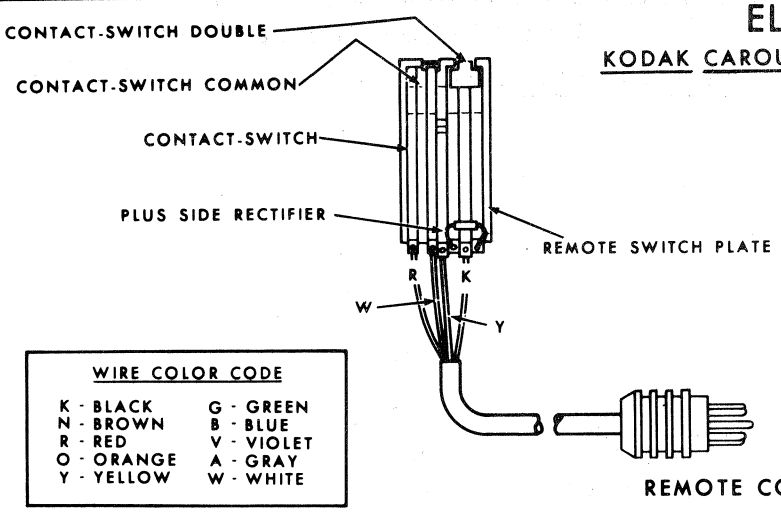

WIRE COLOR CODE	
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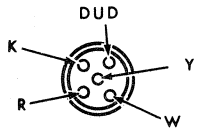
R - RED	V - VIOLET
O - ORANGE	A - GRAY
Y - YELLOW	W - WHITE



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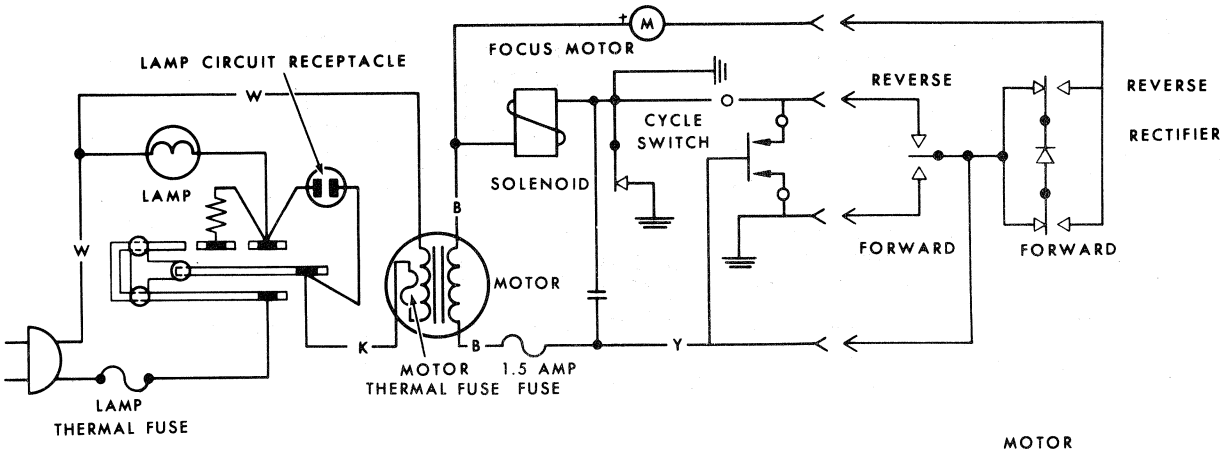

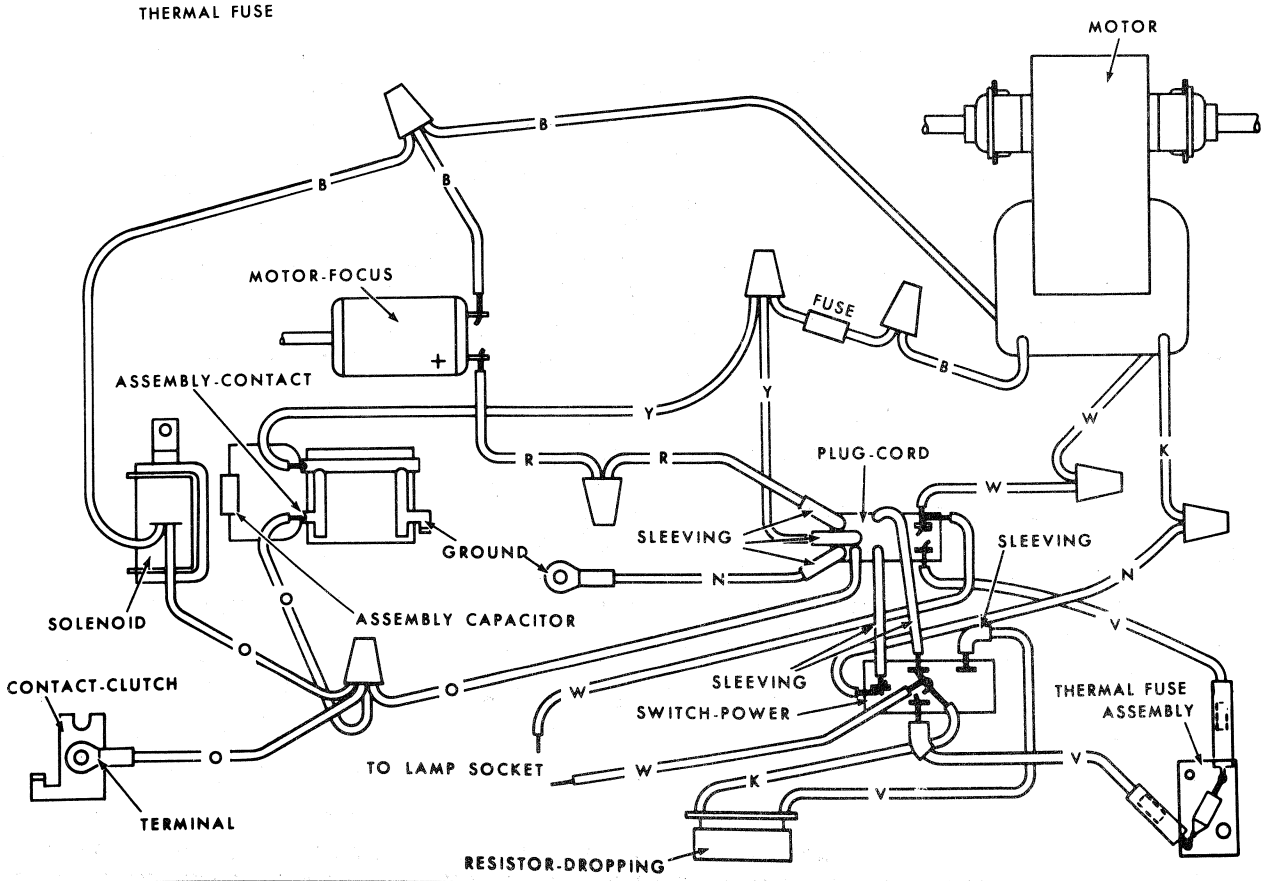

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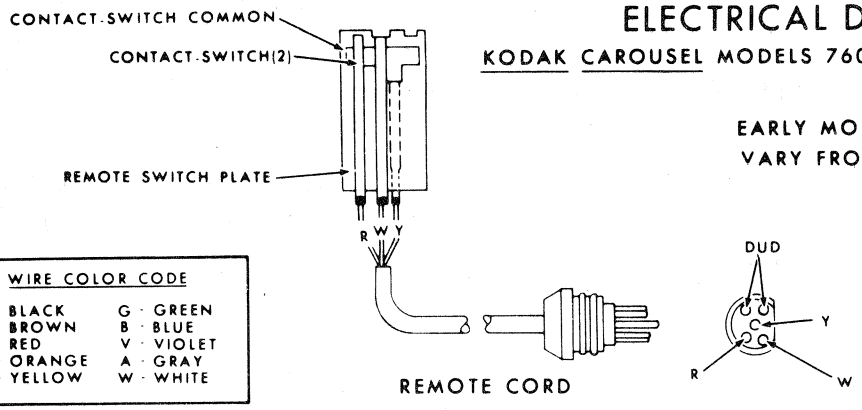
ELECTRICAL DIAGRAMS

KODAK CAROUSEL MODELS 760 and 760H PROJECTORS

EARLY MODEL PROJECTORS MAY VARY FROM DIAGRAMS SHOWN



WIRE COLOR CODE

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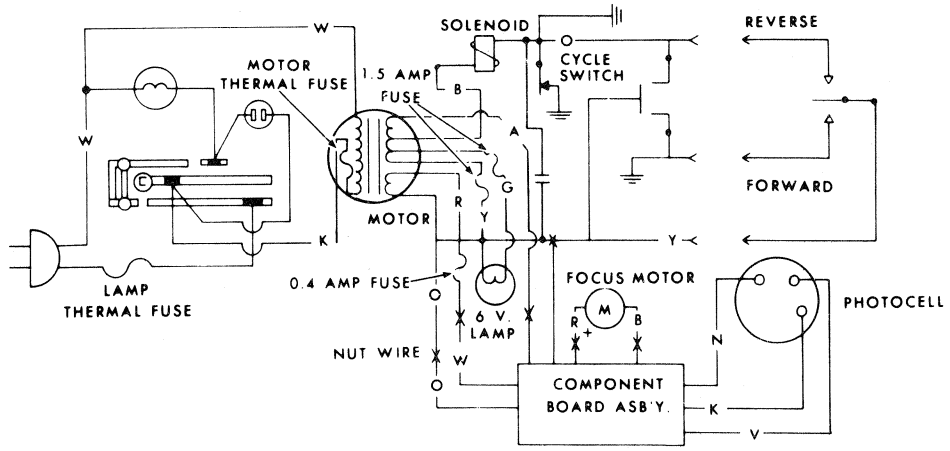
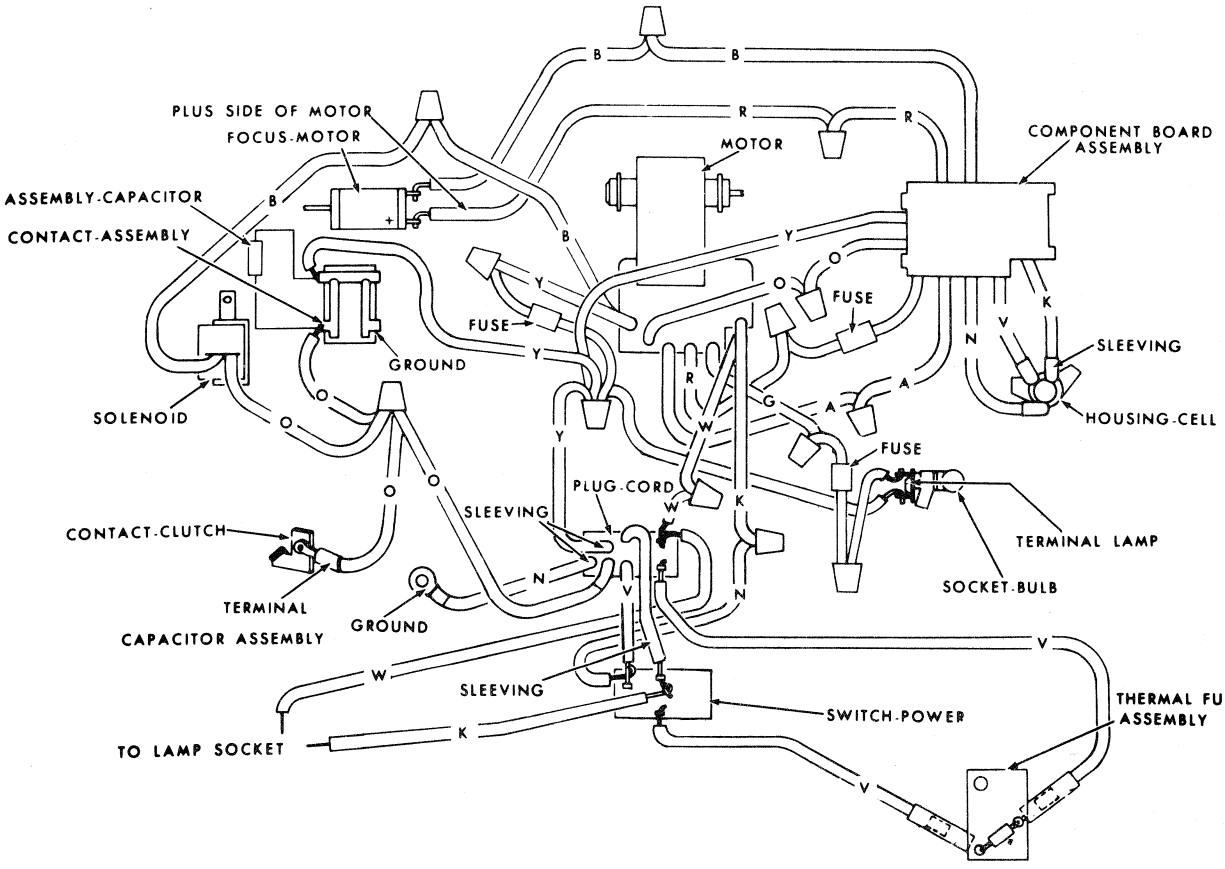
R	RED	V	VIOLET
O	ORANGE	A	GRAY
Y	YELLOW	W	WHITE





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ELECTRICAL DIAGRAMS

KODAK CAROUSEL MODELS 800 and 800H PROJECTORS

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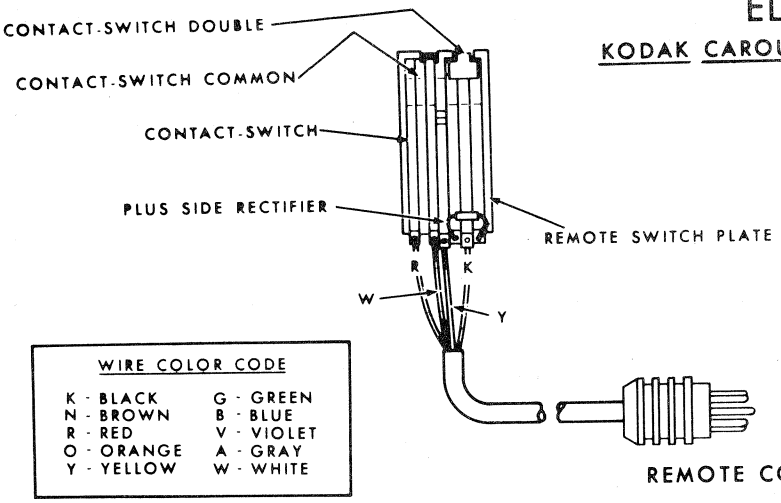

WIRE COLOR CODE	
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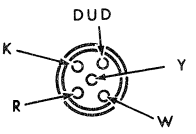
R - RED	V - VIOLET
O - ORANGE	A - GRAY
Y - YELLOW	W - WHITE



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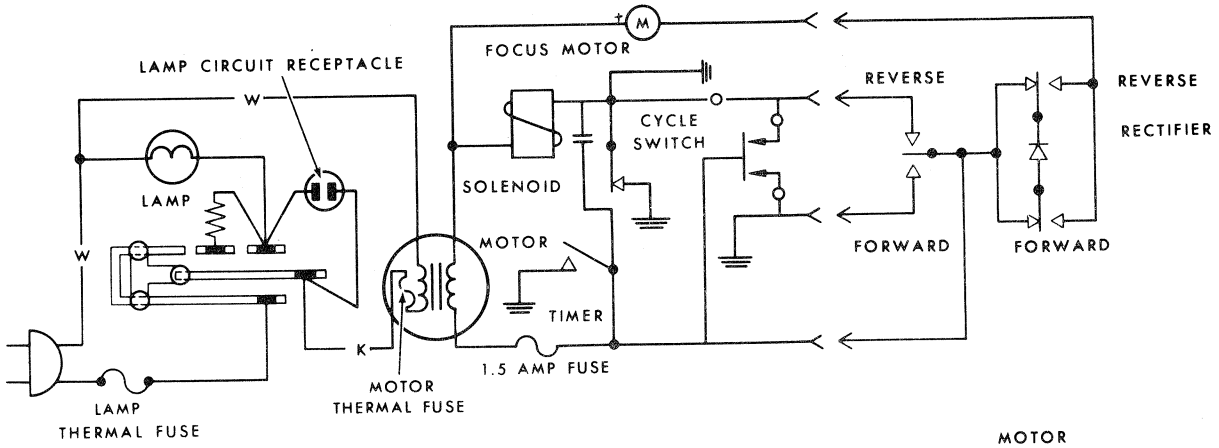

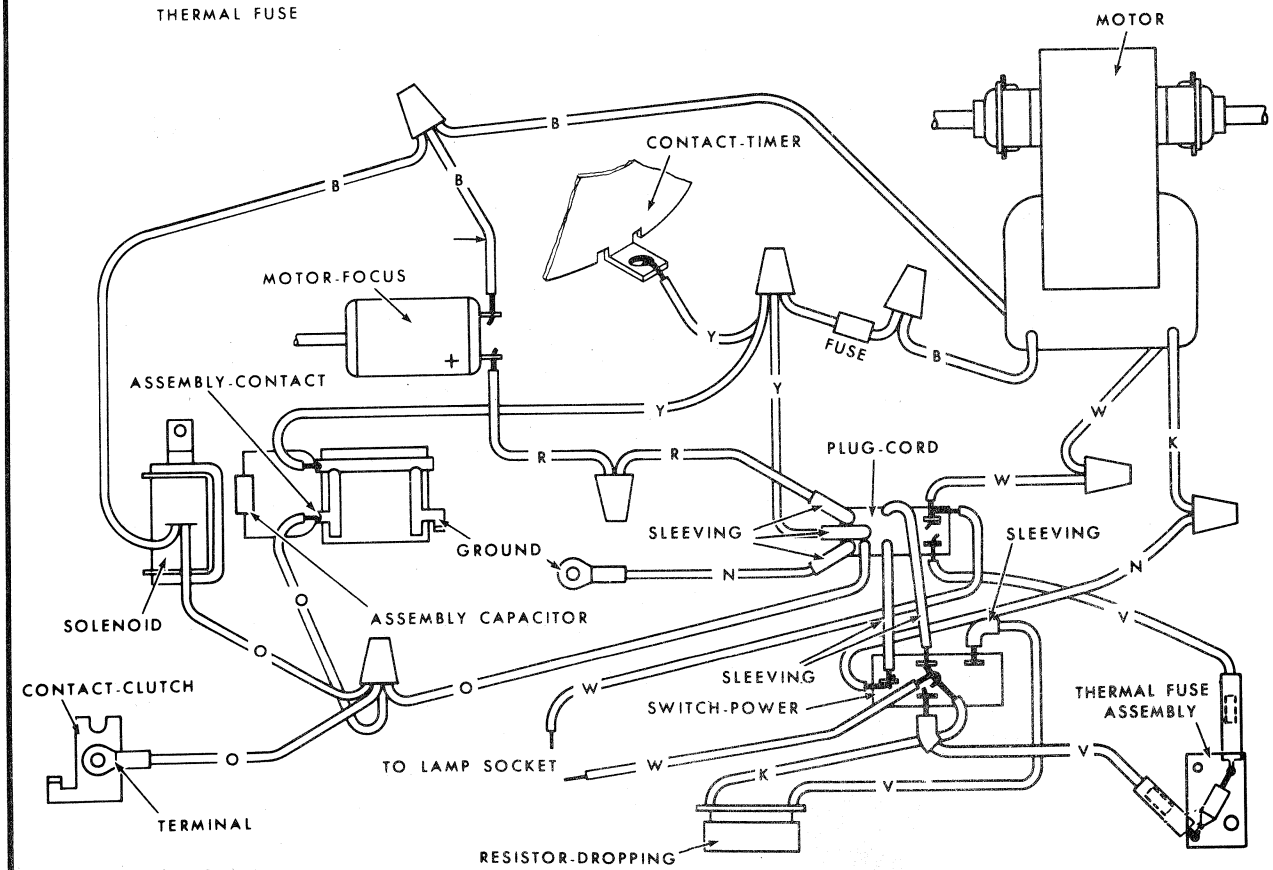

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ELECTRICAL DIAGRAMS

KODAK CAROUSEL MODELS 850 and 850H PROJECTORS

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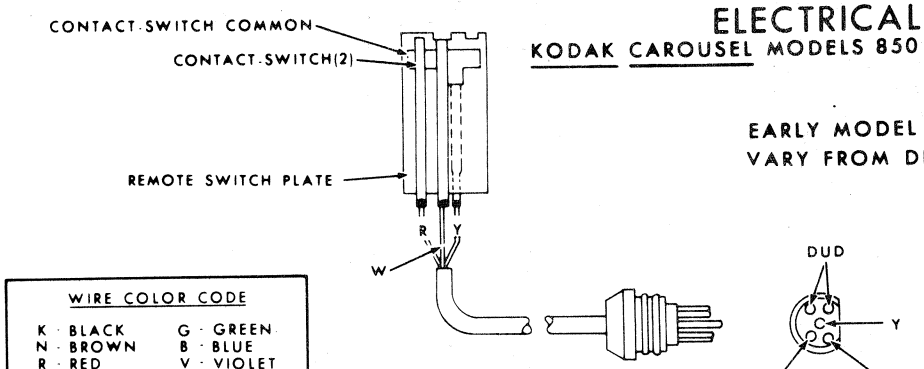

WIRE COLOR CODE

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R - RED	V - VIOLET
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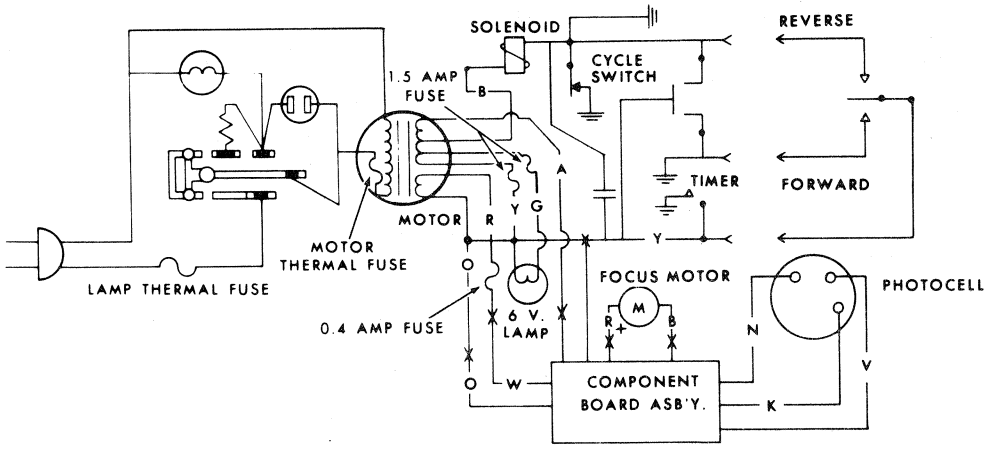
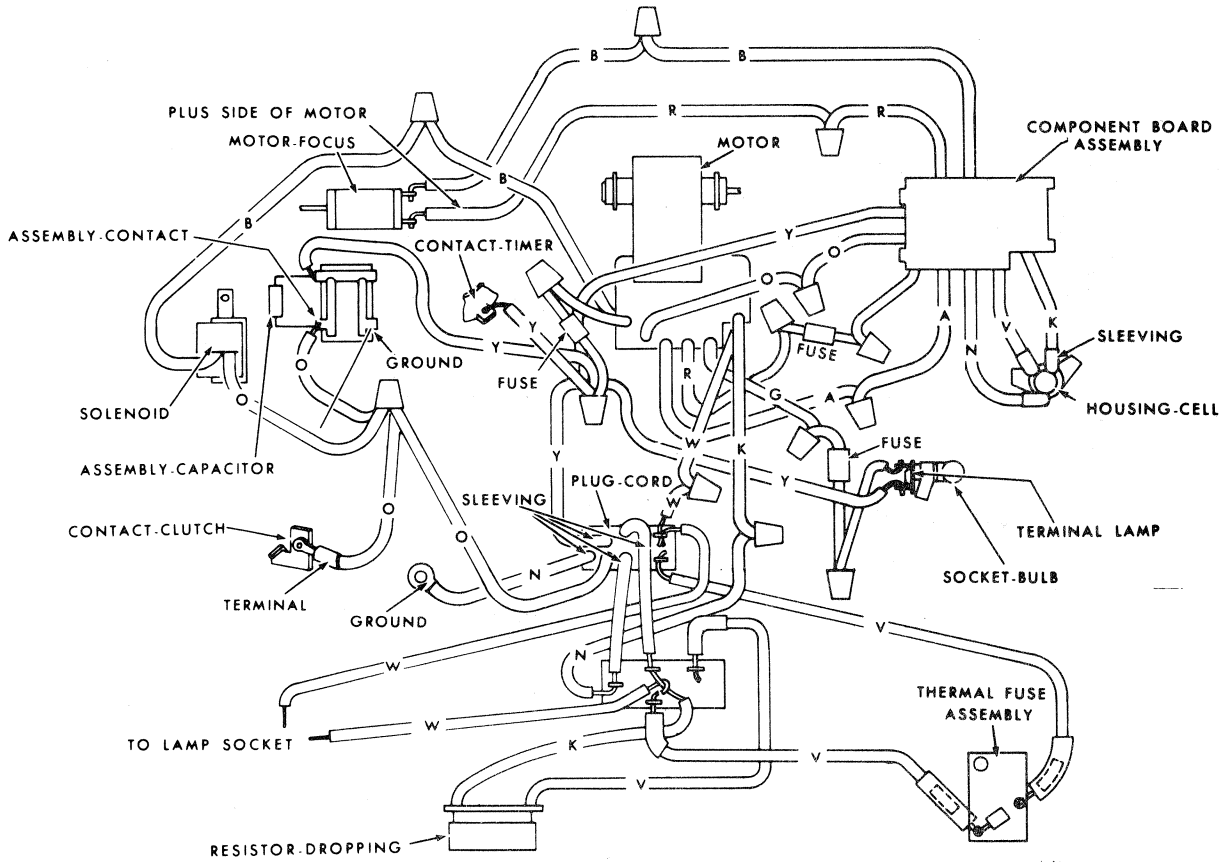
Y - YELLOW	W - WHITE





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ELECTRICAL DIAGRAMS

KODAK CAROUSEL MODELS 860 and 860H PROJECTORS

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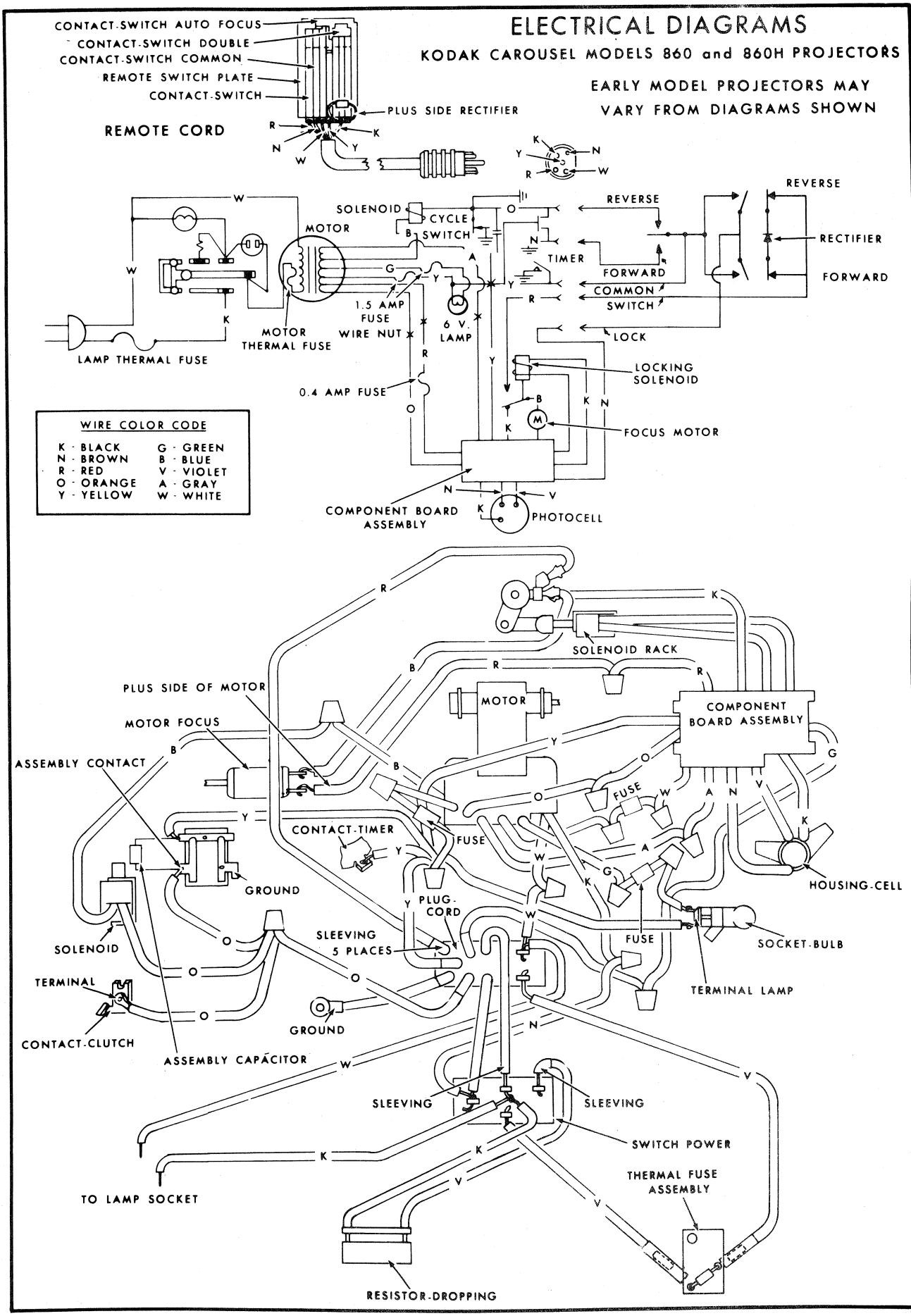

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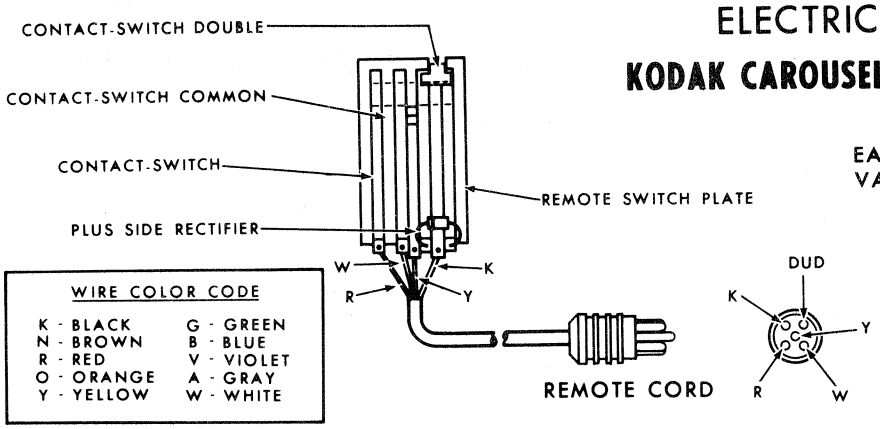
ELECTRICAL DIAGRAMS

KODAK CAROUSEL Custom 800H Projector

EARLY MODEL PROJECTORS MAY VARY FROM DIAGRAMS SHOWN.



WIRE COLOR CODE

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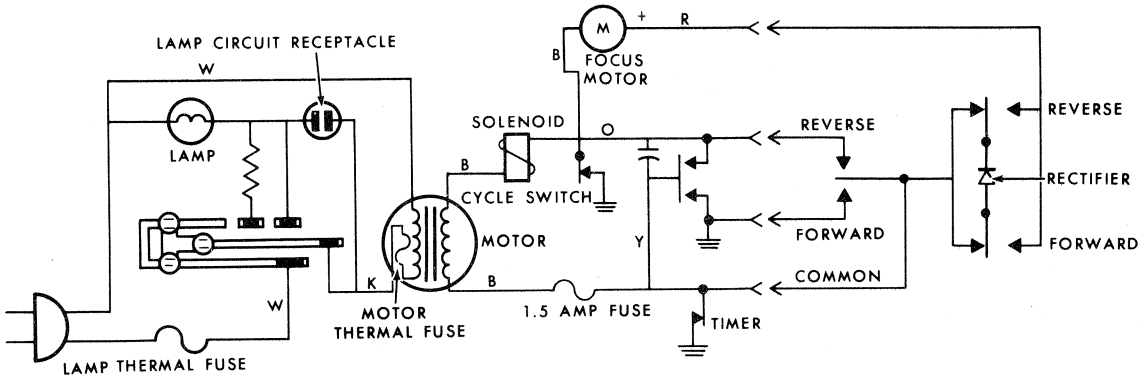
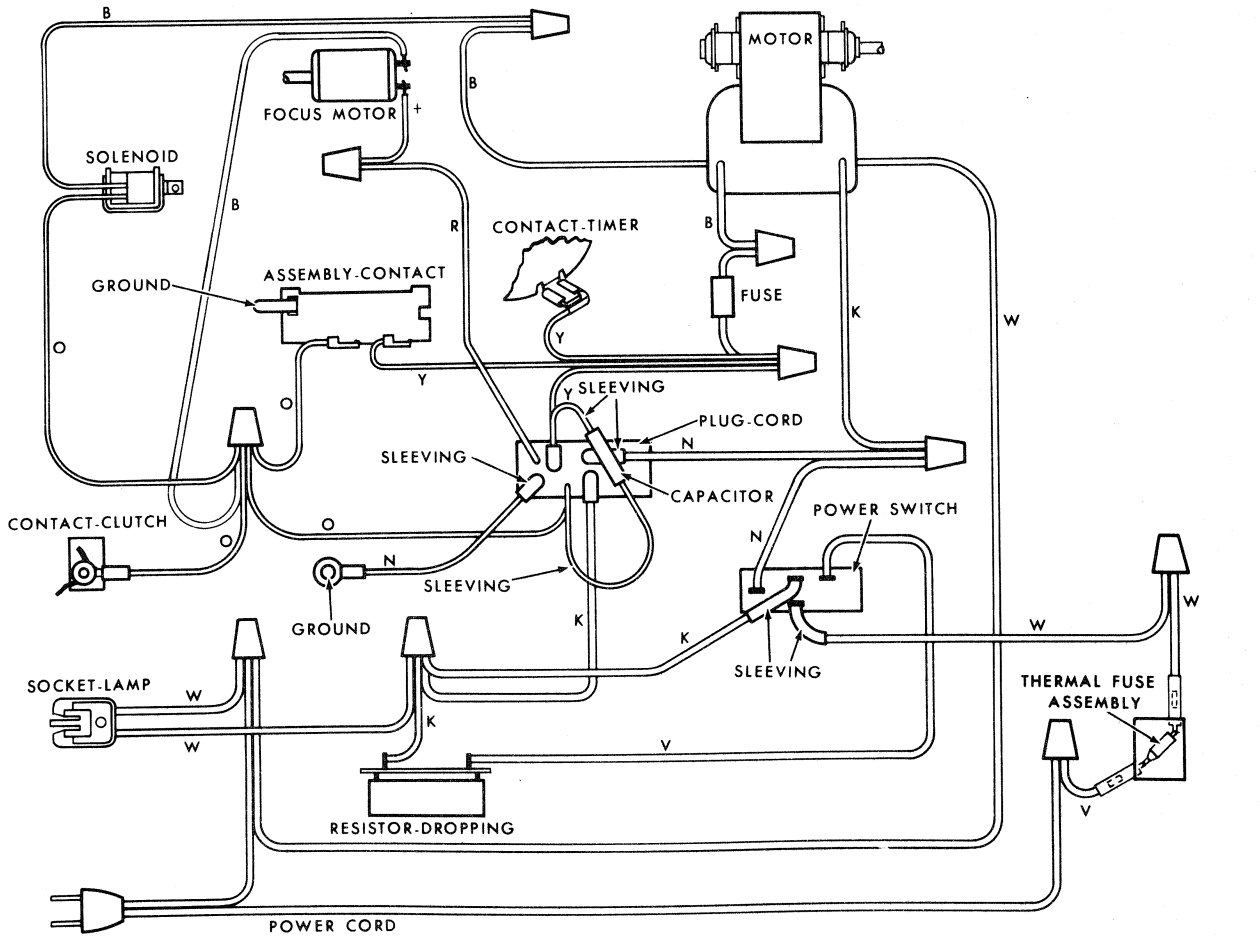
Y - YELLOW	W - WHITE





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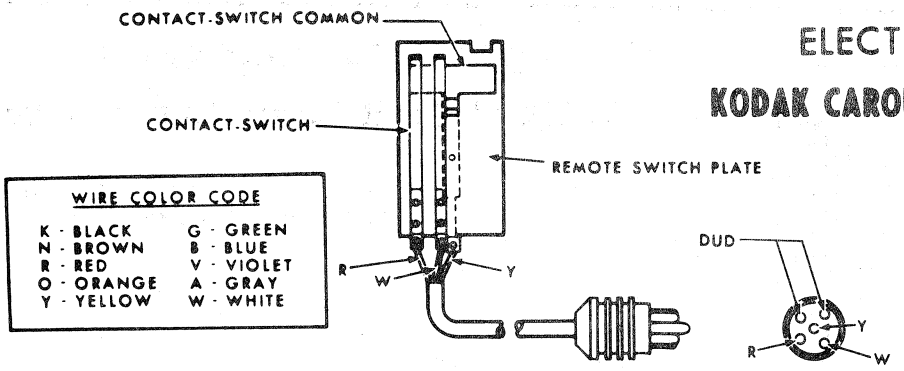
ELECTRICAL DIAGRAMS

KODAK CAROUSEL Custom 850H Projector



WIRE COLOR CODE

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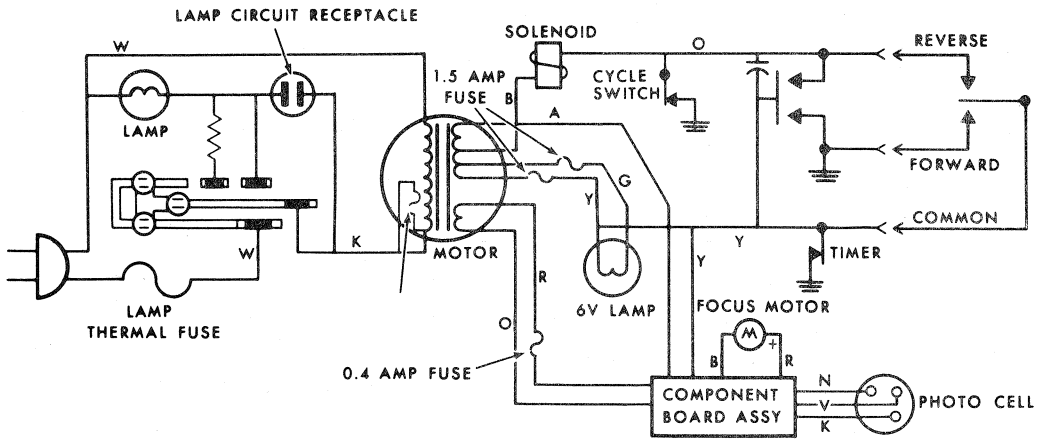
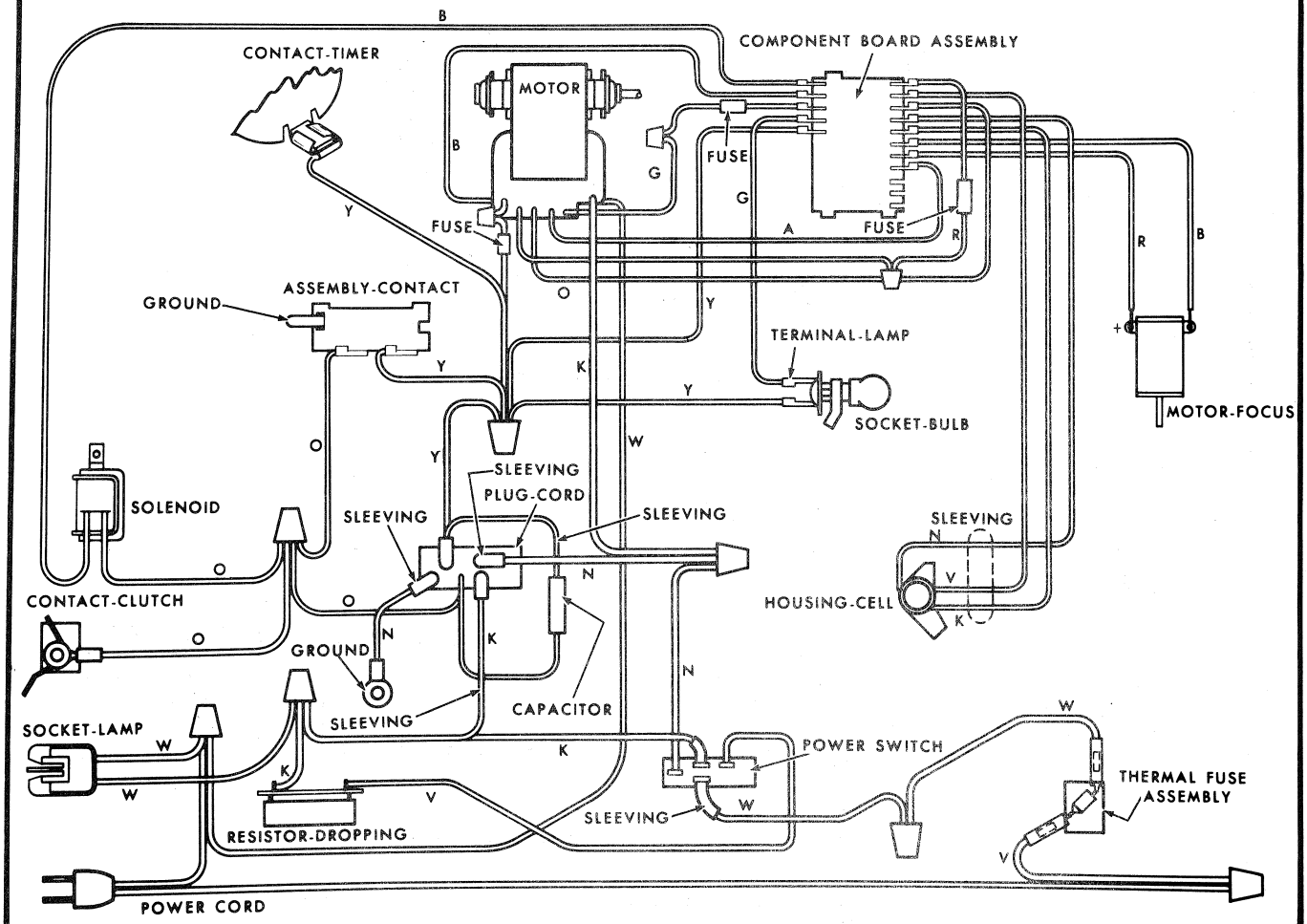
EARLY MODEL PROJECTORS MAY VARY FROM DIAGRAMS SHOWN.





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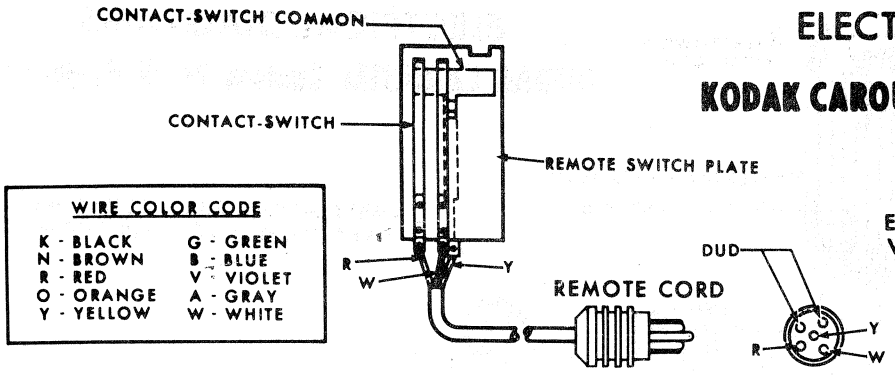
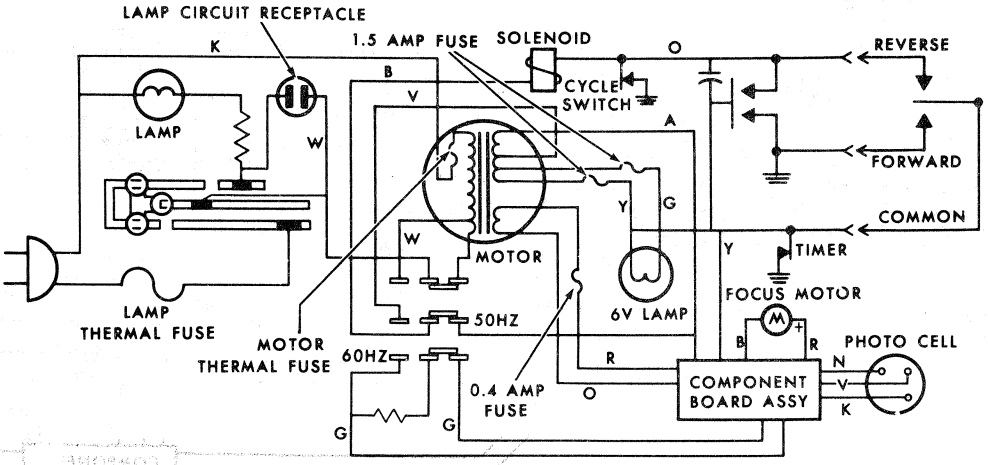
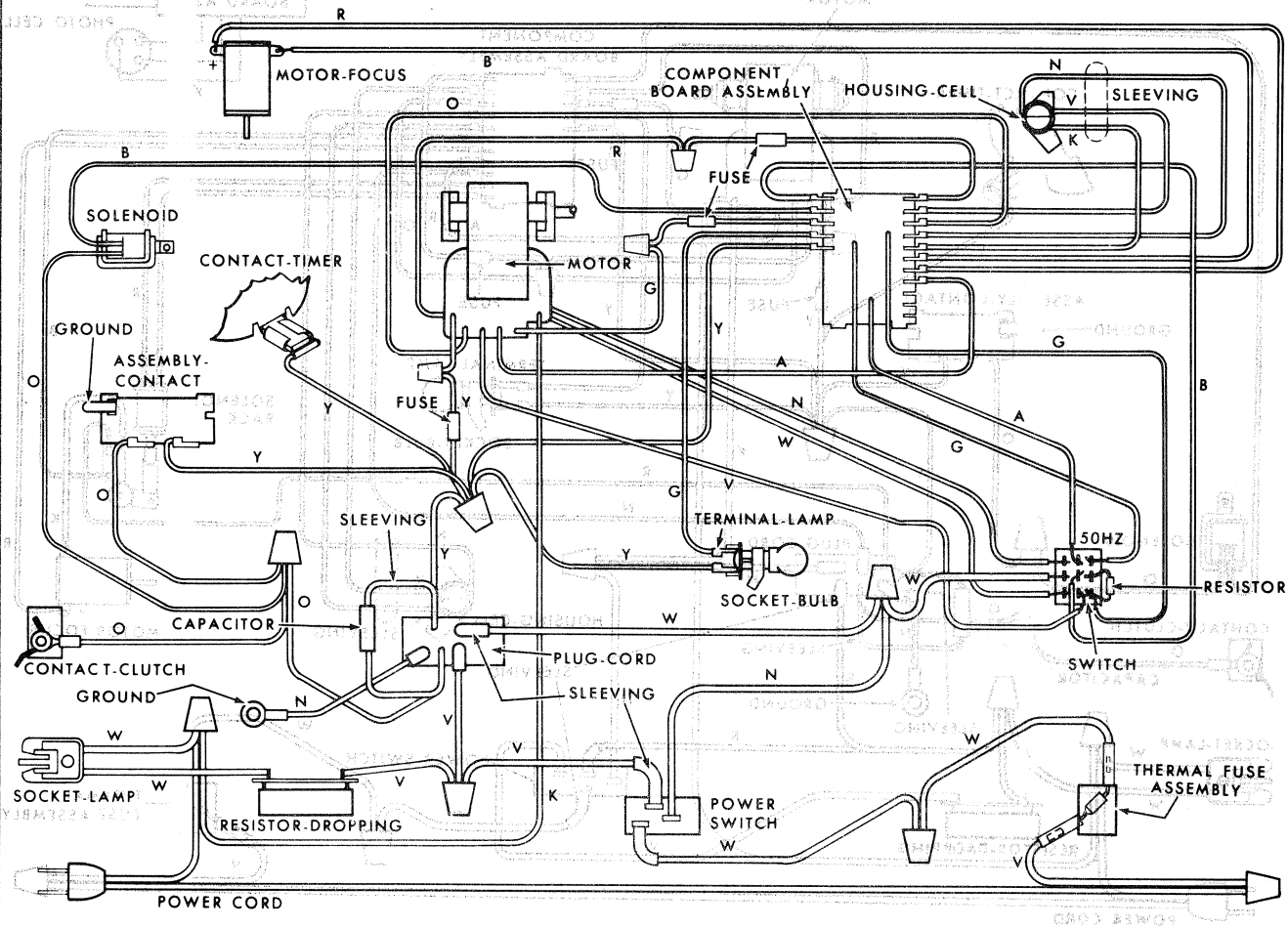
ELECTRICAL DIAGRAMS

KODAK CAROUSEL Custom 850HK Projector



EARLY MODEL PROJECTORS MAY VARY FROM DIAGRAMS SHOWN.





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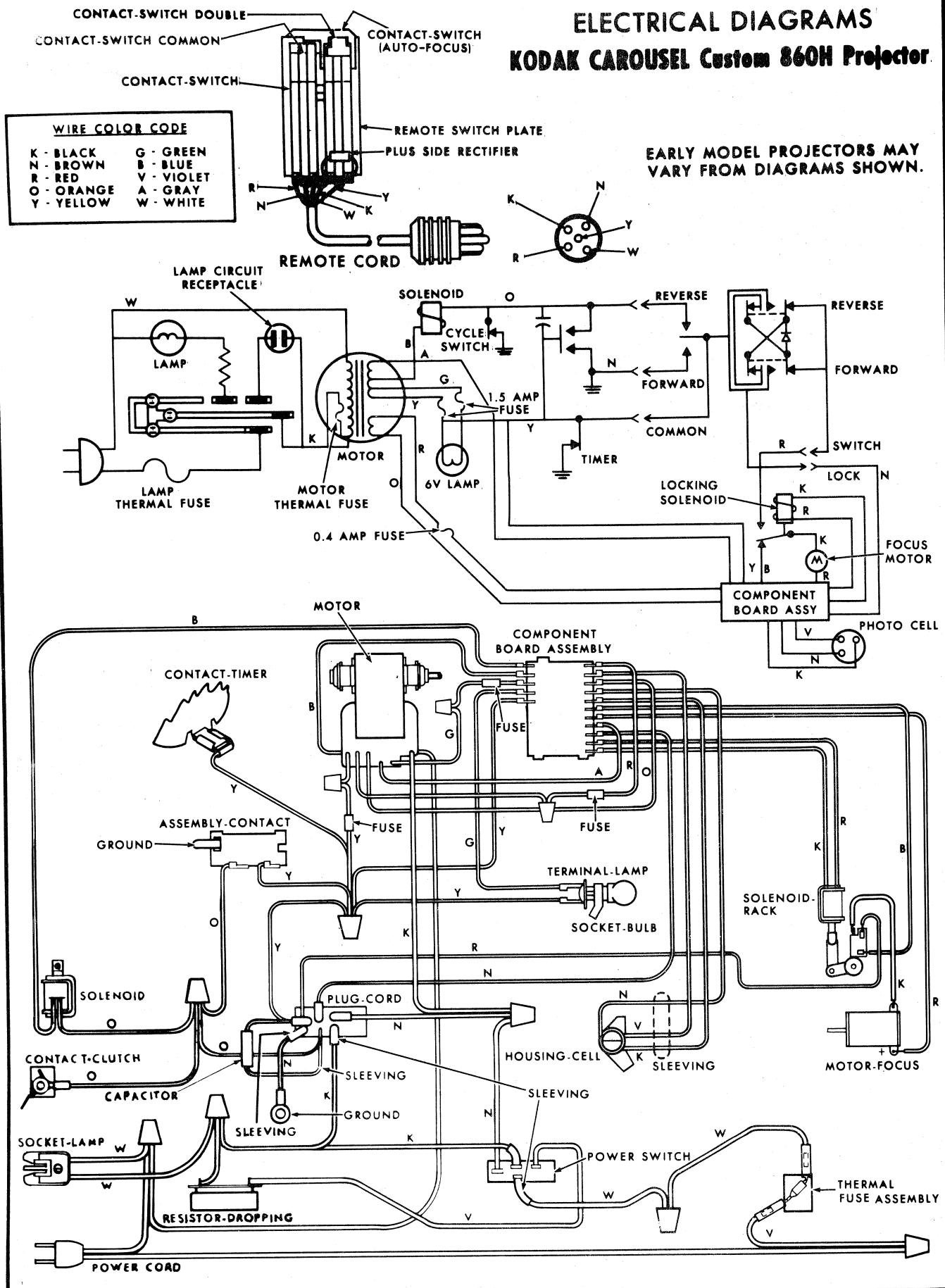
ELECTRICAL DIAGRAMS

KODAK CAROUSEL Custom 860H Projector



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SERVICE ENGINEERING BULLETIN

CUSTOMER EQUIPMENT SERVICES DIVISION EASTMAN KODAK COMPANY

SE/AM 27

KODAK CAROUSEL PROJECTORS,
MODELS 600, 600H, 650H, 750H, AND 760H
KODAK CAROUSEL CUSTOM PROJECTORS
MODELS 800HC, 850HC, 850HCK, AND 860HC

KODAK MANUFACTURED MOTORS

Many of the currently produced *CAROUSEL* Projectors have a main motor manufactured by KODAK. If a motor failure should occur in a projector with a KODAK motor it should be replaced with a KODAK motor.

When replacing a KODAK motor with a KODAK motor the motor cover (Part No. 199348) and two drive screws (Part No. 123602) are required. You may use the parts from the motor just removed or you may use new parts.

Wire connections for the KODAK motor are shown in the attached diagrams.

The motor part numbers are:

PROJECTOR MODEL	KODAK MOTOR PART NO.
600	202292
600H	202289
650H	199824
750H	204610
760H	199325
Custom 800H	202293
Custom 850H	202280
Custom 850H-K	202420
Custom 860H	202280

Do not use these numbers if you are replacing a BOMAX motor. Use the motor assembly part number in the appropriate Parts List.

Supersedes Service Bulletin #775340, 775349, 775351, 775352, and 775357

Publication No. 775433
3/74B

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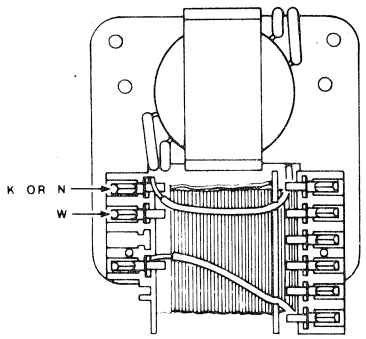
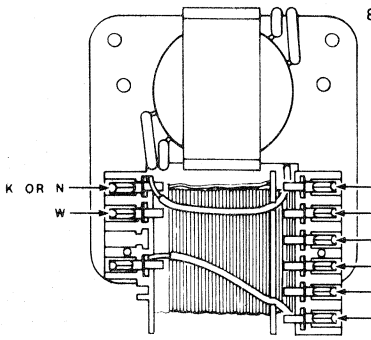
WIRING DIAGRAMS

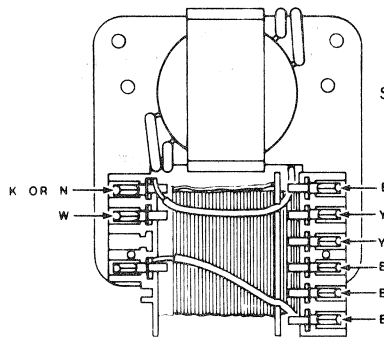
KODAK CAROUSEL Projector, Models
600 and 600H



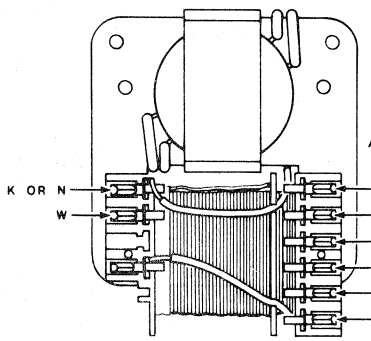
KODAK CAROUSEL Projector, Models
800, 800H AND RA-950



KODAK CAROUSEL Projector, Models
650, 650H AND 700
AND
KODAK EKTAGRAPHIC
Slide Projector, Models
E AND E-2

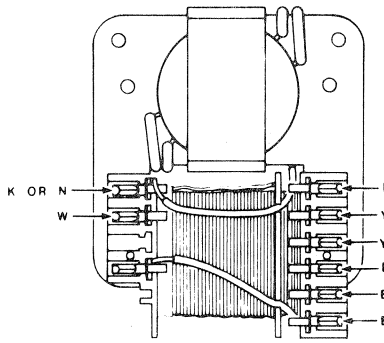


KODAK CAROUSEL Projector, Models
760, 760H, 850,
850H, 860 and 860H
AND
KODAK EKTAGRAPHIC
Slide Projector, Models
AF, AF-2, RA-960 AND ARC

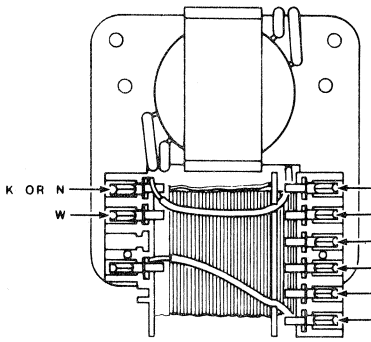


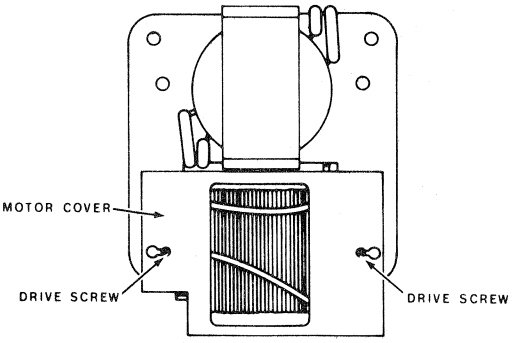
KODAK Custom CAROUSEL Projector, Models 850HC AND 860HC

KODAK CAROUSEL Projector, Models
750 AND 750H
AND
KODAK EKTAGRAPHIC
Slide Projector, Models
B AND B-2



KODAK Custom CAROUSEL
Projector, Models
800HC





SERVICE ENGINEERING
BULLETIN

CUSTOMER EQUIPMENT SERVICES DIVISION EASTMAN KODAK COMPANY

SE/AM 24

KODAK CAROUSEL PROJECTORS, MODELS 760H AND 800H
KODAK CAROUSEL CUSTOM 800H PROJECTOR

Cycling Problems

If a projector cycles either when actuating the remote focus button, or cycles only in reverse, or the projector will not cycle; check the focus motor wiring.

Most projectors have the minus (-) wire from the focus motor connected to the orange wires. Rewire the minus wire from the focus motor to join the yellow wires.

If the cycle problem is not eliminated, replace the focus motor and rewire the minus wire (as above).

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3/74B

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SERVICE ENGINEERING
BULLETIN

CUSTOMER EQUIPMENT SERVICES DIVISION EASTMAN KODAK COMPANY

SE/AM 33

KODAK CAROUSEL PROJECTORS, MODELS 650H, 750H, AND 760H

Capacitor

Replace the gray capacitor on the above late-model projectors with the following conditions:

1. Failure of the clutch contact or the clutch spring.

2. Visible wear on the point of contact with clutch spring and clutch contact.

3. Customer complaints of excessive noise in the tape recorder used with the projector.

Replace the gray capacitor 204345, Figure 1, on the cycle switch, located behind the forward and reverse buttons, with either a brown or orange capacitor 204331, Figure 2. Connect the new capacitor to the orange wires, and the yellow wires at the wire connector in the wire trough.

NOTE: There are no visible indications that an open capacitor is not functioning properly.

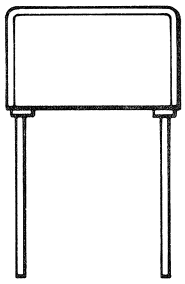

FIGURE 1

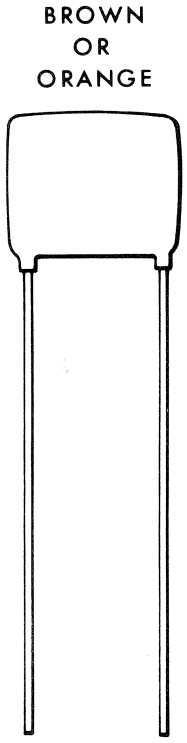

FIGURE 2

Publication No. 775443
4/74B

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SERVICE ENGINEERING
BULLETIN

CUSTOMER EQUIPMENT SERVICES DIVISION EASTMAN KODAK COMPANY

SE/AM 16
Revised

KODAK CAROUSEL 760, 850, 850K, and 860 Projectors
KODAK CAROUSEL 760H, 850H, and 860H Projectors
KODAK CAROUSEL Custom 850H, 850H-K, and 860H Projectors

Auto-Focus Circuit Board

Component Test Procedure

This procedure is for testing the auto-focus circuit board (1 Transistor, 1SCR) in the above model projectors. Replace any defective component on the circuit board. Refer to the wiring diagrams, Pages 3 and 4.

I. Circuit Board Preparations:

a. Remove the circuit board from the projector. Refer to the service manual publications listed on page 2.

b. Connect the following circuit board wires, figure 1:

White, orange, gray, and yellow wires to the MAIN MOTOR.

Blue (negative), and red (positive) to the D.C. VOLTMETER, and FOCUS MOTOR WITH LOCKED ROTOR.

Brown, black, and violet wires to the PHOTOCELL SIMILATOR.

II. Testing the Circuit Board:

a. Place switches S1 and S2 in "OPEN" position.
Voltmeter must read zero.

b. Place switch S1 in "CLOSED" position, and switch S2 in "OPEN" position.
Voltmeter must read - 12.5 $\pm$ 2.5 volts.

c. Place switches S1 and S2 in "CLOSED" position.
Voltmeter must read zero.

d. Place switch S1 in "OPEN" position, and switch S2 in "CLOSED" position.
Voltmeter must read + 12.5 $\pm$ 2.5 volts.

e. Measure the resistance between the violet and brown wires.
Resistance must be 2KΩ $\pm$ 20%.

f. Measure the resistance between the blue and gray wires.
Resistance must be 1 Meg ohm.

Publication No. 775414
8/74B

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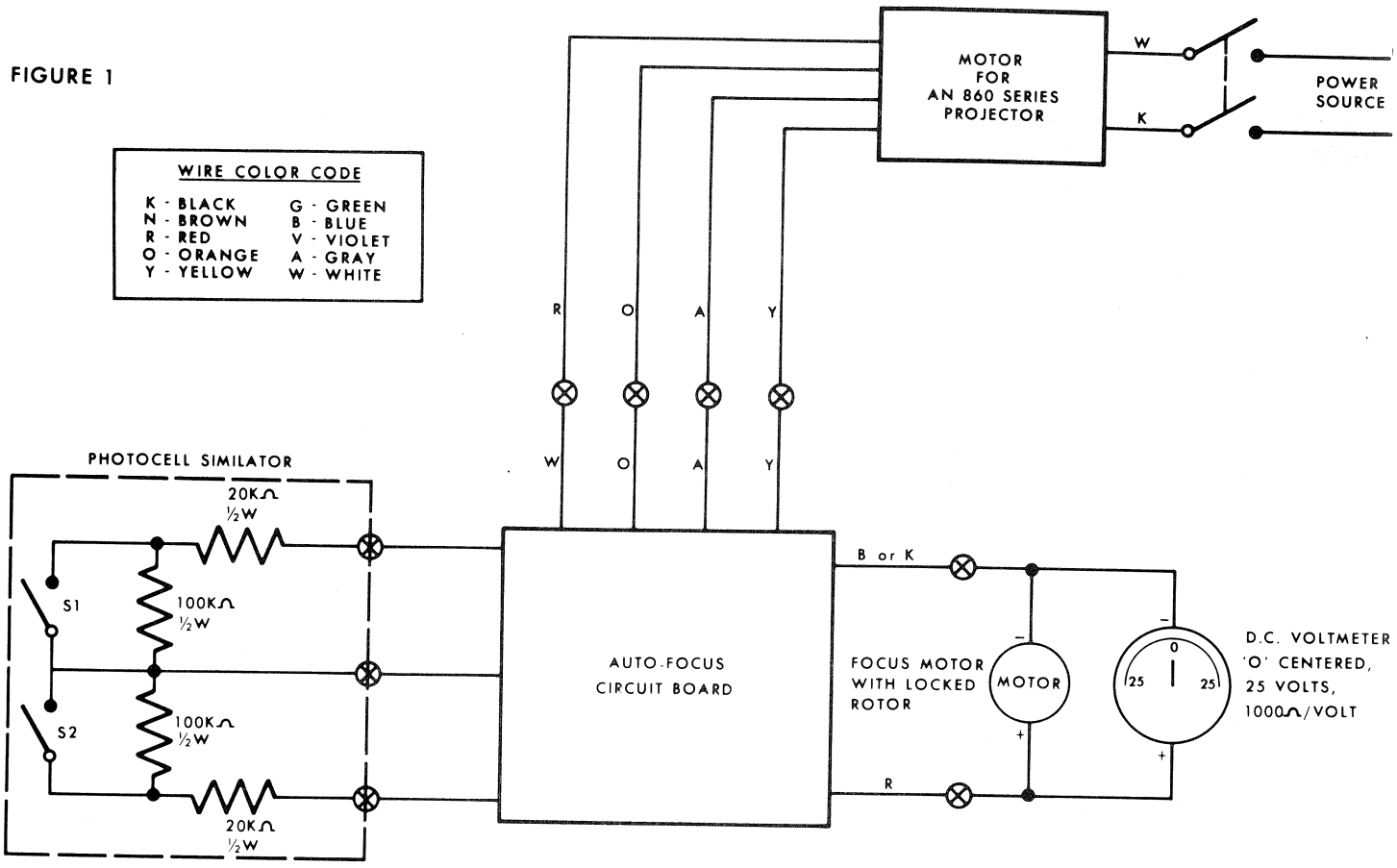
III. Circuit Board - Trouble/Remedy Chart:

Switch S1 Position	Switch S2 Position	D.C. Volt Meter Reading	Check Component
Open	Open	Negative	CR2, CR5
Open	Open	Positive	CR3, CR4
Open	Closed	0	CR2, CR5, Q1, Q2
Open	Closed	Negative	Q1, Q2
Closed	Closed	Negative	CR2, CR5
Closed	Closed	Positive	CR3, CR4
Closed	Open	0	CR3, CR4, Q1, Q2
Closed	Open	Positive	Q1, Q2

FIGURE 1



References:

KODAK CAROUSEL 760, 850, 850K, and 860 Projectors
Service Manual Publication No. 775051

KODAK CAROUSEL 760H, 850H, and 860H Projectors
Service Manual Publication No. 775051

KODAK CAROUSEL Custom 850H, 850H-K, and 860H Projectors
Service Manual Publication No. 775165

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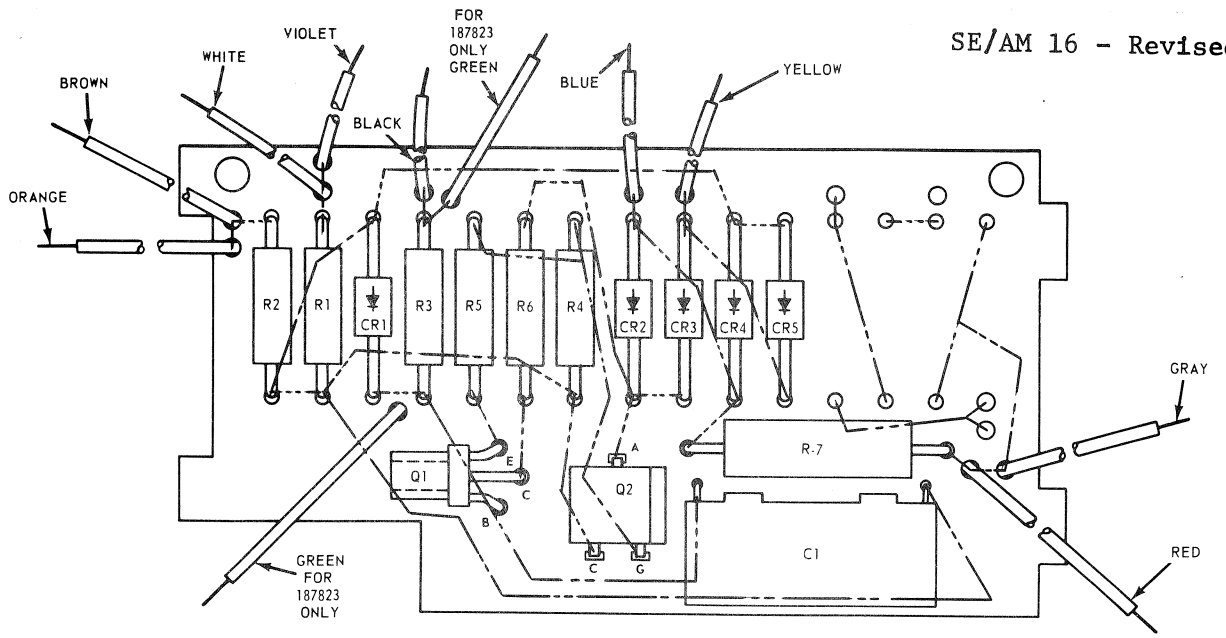

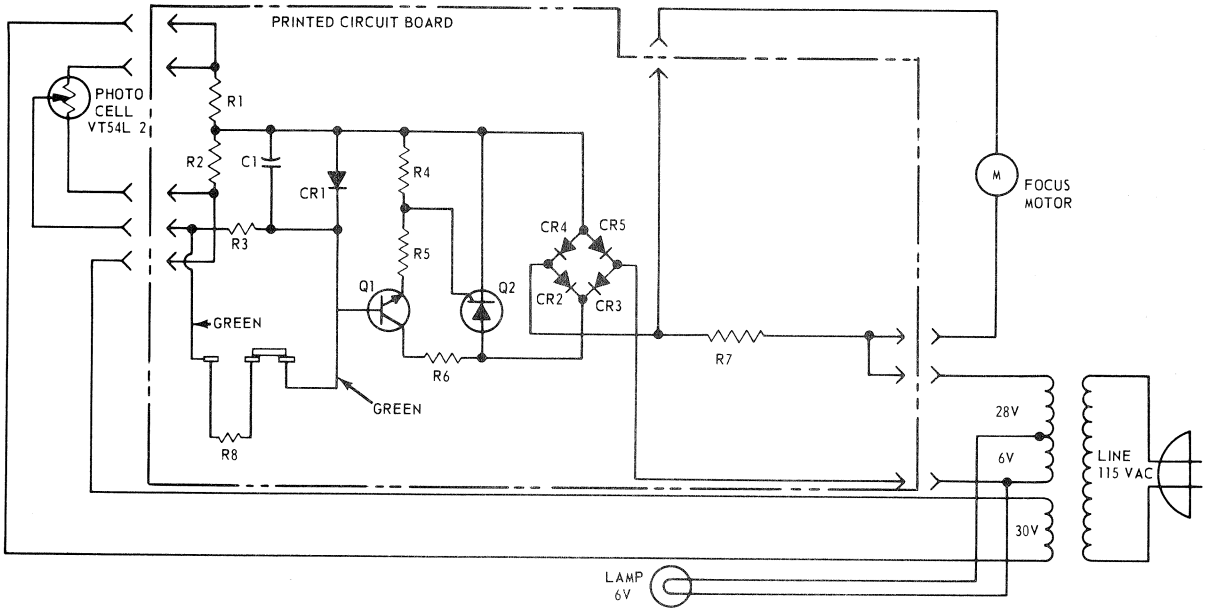

COMPONENT BOARD FOR

KODAK CAROUSEL
760 and 850 PROJECTORS

1 TRANSISTOR, SCR TYPE (CURRENT)

	PRINTED CIRCUIT BOARD COMPONENT NOMENCLATURE		
	C1	186554	CAPACITOR, 0.1μf ±10%, 50VDC GE #75F2R5-104 A
	CR1,2,3,4,5	187813	GE. RECTIFIER, EK-1-A
	Q1	186555	TRANSISTOR, 2N5172, GE.
	Q2	197459	S.C.R. MCR 106-2 (SELECTED)
	R1,2	187814	RESISTOR, 1KΩ ±5%, ½WATT
	R3 EARLY STYLE	186962	RESISTOR, 47KΩ ±5%, ½WATT
(R)	R3 LATE STYLE	195564	RESISTOR, 47KΩ ± 5% 1/2 WATT
	R4, 5 EARLY STYLE	187814	RESISTOR, 1KΩ ± 5%, 1/2 WATT
(R)	R4 LATE STYLE	140825	RESISTOR, 270Ω ± 5%, 1/2 WATT
(R)	R5 LATE STYLE	200314	RESISTOR, 100Ω ± 5%, 1/2 WATT
	R6 EARLY STYLE	126900	RESISTOR, 10KΩ ±10%, ½WATT
(R)	R6 LATE STYLE	187814	RESISTOR, 1K Ω ± 5%, 1/2 WATT
	R7	146619	RESISTOR, 220Ω ±10%, 1WATT

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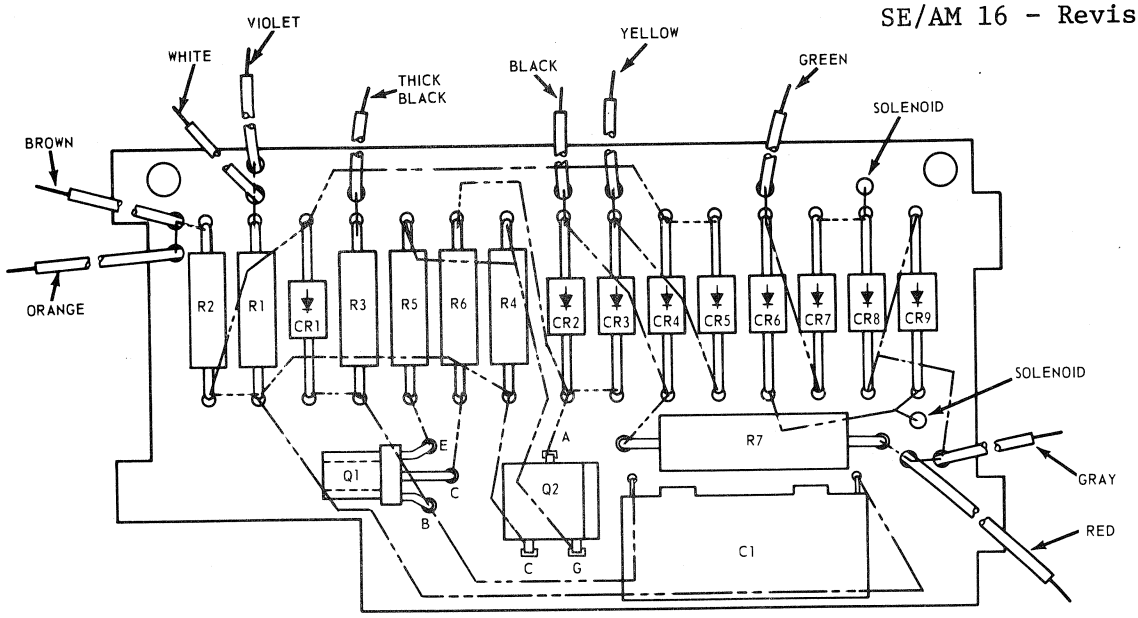

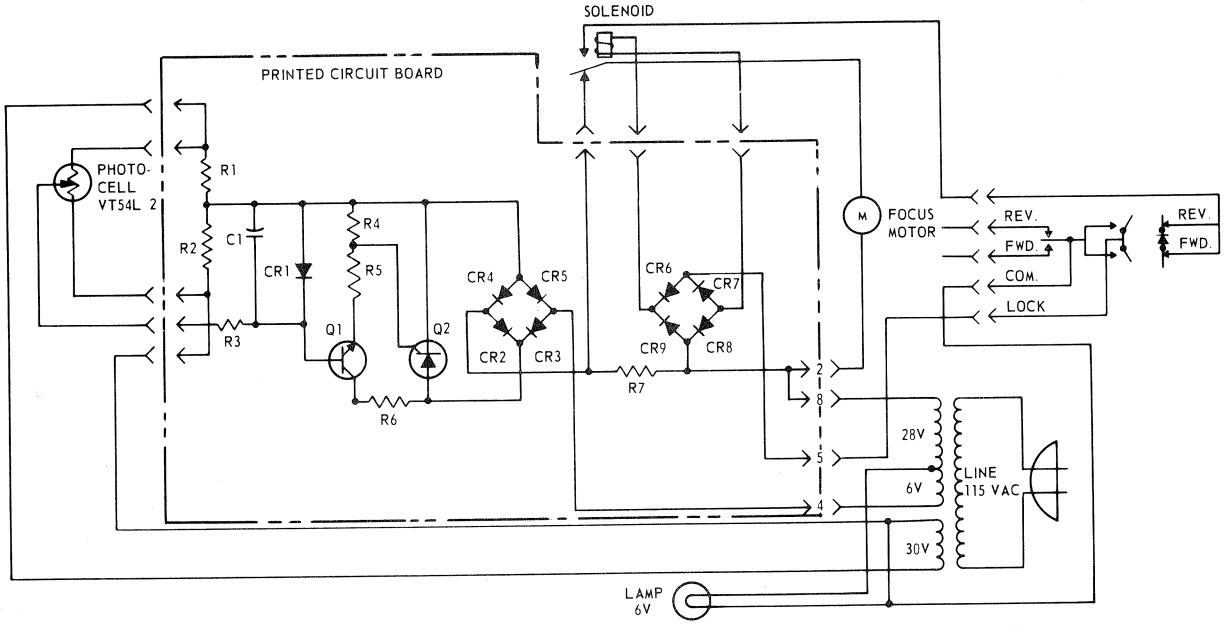

COMPONENT BOARD FOR

KODAK CAROUSEL 860 PROJECTOR

1 TRANSISTOR, 1 SCR TYPE (CURRENT)

	PRINTED CIRCUIT BOARD COMPONENT NOMENCLATURE		
	C1	186554	CAPACITOR 0.1μf ± 10% 50VDC, G.E., 75F2R5-104A
	CR1,2,3,4,	187813	G.E. RECTIFIER, EK-1-A
	5,6,7,8 9	187813	G.E. RECTIFIER EK-1-A
	Q1	186555	TRANSISTOR – 2N5172- G.E.
(R)	Q2	197459	S.C.R. MCR 106-2 (SELECTED)
	R-1,2	187814	RESISTOR, 1KΩ ± 5%, 1/2 WATT
	R3 EARLY STYLE	186962	RESISTOR, 47KΩ ± 5%, ½WATT
(R)	R3 LATE STYLE	195564	RESISTOR, 47K Ω ± 5%, 1/2 WATT
	R 4,5 EARLY STYLE	187814	RESISTOR, 1KΩ ± 5%, 1/2 WATT
(R)	R4 LATE STYLE	140825	RESISTOR, 270Ω ± 5%, 1/2 WATT
(R)	R 5 LATE STYLE	200314	RESISTOR, 100Ω ± 5%, 1/2 WATT
	R6 EARLY STYLE	126900	RESISTOR, 10KΩ ±10%, ½WATT
(R)	LATE STYLE	187814	RESISTOR, 1KΩ ± 5%, 1/2 WATT
	R7	146619	RESISTOR, 220Ω ±10%, 1WATT

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