

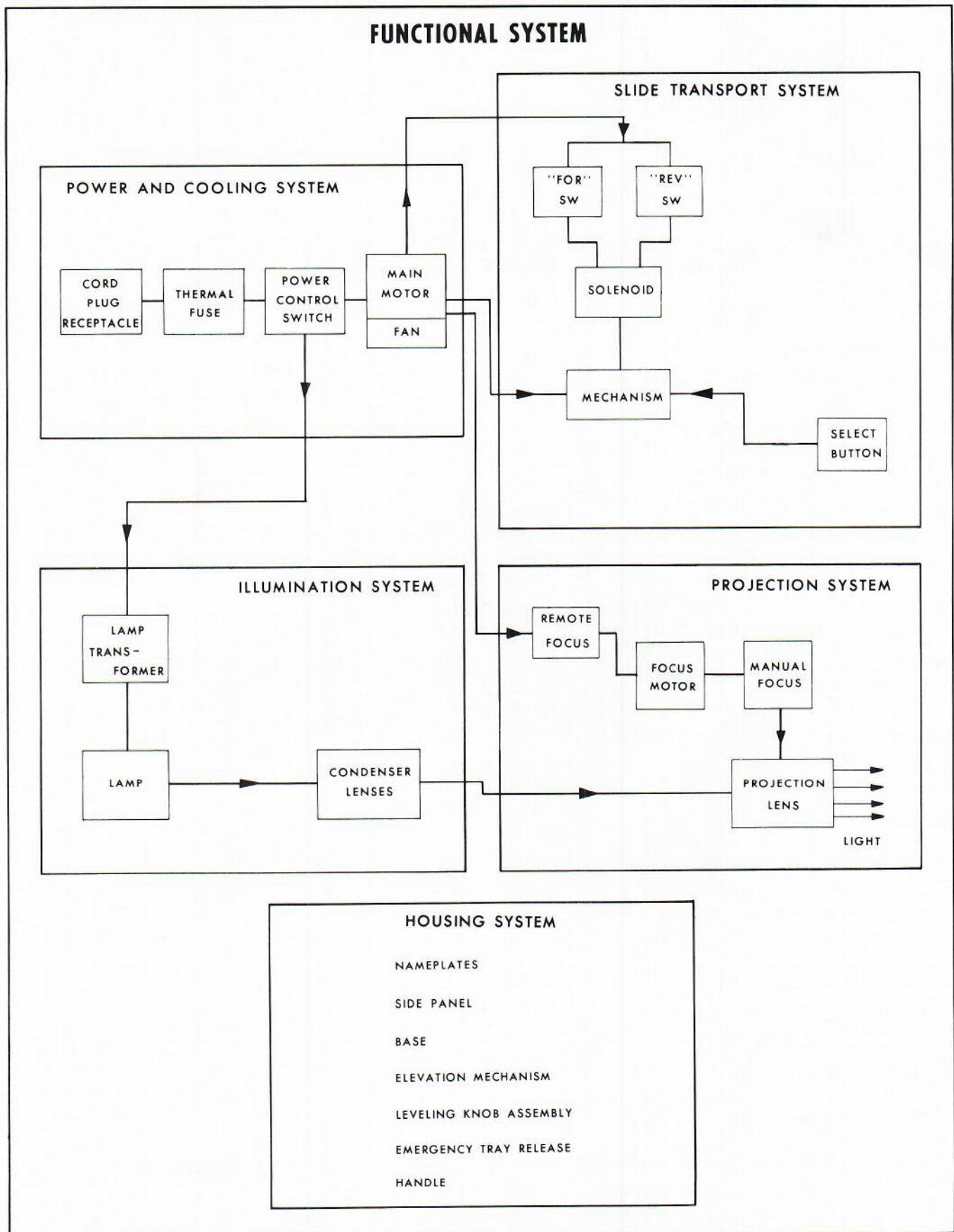
775146

Servicing the

# **KODAK** Pocket **CAROUSEL** 200 Projector



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



## HOW TO EFFECTIVELY USE THE SERVICE MANUAL

GENERAL CHARACTERISTICS

DISASSEMBLY/REASSEMBLY CHART

ILLUSTRATIONS

HOUSING SYSTEM

POWER AND COOLING SYSTEM

ILLUMINATION SYSTEM

PROJECTION SYSTEM

ADJUSTMENTS

SLIDE TRANSPORT SYSTEM

ADJUSTMENTS AND LUBRICATION

TOOLS, CEMENTS AND LUBRICANTS

ELECTRICAL DIAGRAMS

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**PLEASE NOTE**

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**HOW TO EFFECTIVELY USE THE SERVICE MANUAL**

First determine whether or not the customer's projector requires repair by checking its operating characteristics. The operator manual pertaining to it may be of assistance.

If a problem is determined to exist, isolate it on the chart located inside the front cover of the service manual. Define the problem in terms of a specific functional system(s).

Using the tab index, turn to the specific functional system in question. Each functional system contains the following subsections which are designed to help you in your analysis of the problem:

DESCRIPTION

THEORY OF OPERATION (If Applicable)

SPECIFICATIONS

TESTS AND CHECKS (If Applicable)

DISASSEMBLY

A sequence of disassembly steps is described in a block (graphic) format. An illustration showing how to disassemble is indicated in each block. These illustrations are located near the front of the manual. Reassembly is performed in the opposite direction from disassembly. Special reassembly hints, adjustments, and lubrication points are indicated where they occur.

NOTE: A general disassembly block diagram, located as a foldout near the front of the manual, is followed by the illustrations referred to above.

ADJUSTMENTS (If Applicable)

LUBRICATION (If Applicable)

EXAMPLE: Projector Condition: Lamp fails to light but the motor and fan are operating satisfactorily.

Suspected System: Illumination system is isolated on the chart inside the front cover of the manual.

Analysis: Using the tab index, turn to the "Illumination System".

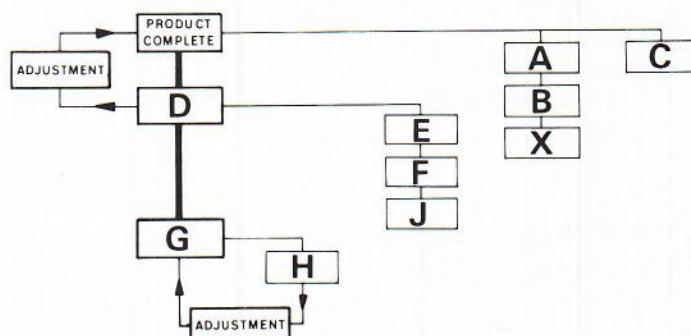
1. Check the lamp; visually, by continuity, by replacement. If it is not defective, go to Step 2.
2. Check for voltage at the solder joints at lamp socket (24V). If proper voltage is present, a defective socket is indicated. If no voltage exists at the socket, check the output voltage of the transformer (24V) at the wire connectors. If no voltage exists, go to Step 3.

3. Check the voltage to the transformer. (Refer to "Tests and Checks" for test point location.) If voltage exists, a defective transformer is indicated; replace transformer. If there is no input voltage to the transformer, go to Step 4, which now takes you into the "Power and Cooling System".
4. Check the solder connections at the power switch - lamp position. (Refer to electrical diagram at back of manual for location.) If solder connections are satisfactory, a defective switch is indicated. Replace switch by referring to disassembly portion of "Power and Cooling System".

#### DISASSEMBLY/REASSEMBLY

The block diagram illustrates a logical means to disassemble the product. The major assemblies are linked with heavy black lines and stemming from there, minor assemblies or parts.

After you have isolated the problem area, find the corresponding block on the chart and choose the shortest path for disassembly (see example). An illustration number showing how to disassemble is indicated in each block.



#### Problem is in Block

X  
C  
J  
H

#### Disassembly Sequence

Product complete, A, B, X  
Product complete, C  
Product complete, D, E, F, J  
Product complete, D, G, H

Reassembly is performed in the opposite direction from disassembly with the following exception. If in reassembly you pass through a block which has an arrow going out of it, you must go through that block (ex. adjustment).

#### Problem is in Block

J  
H

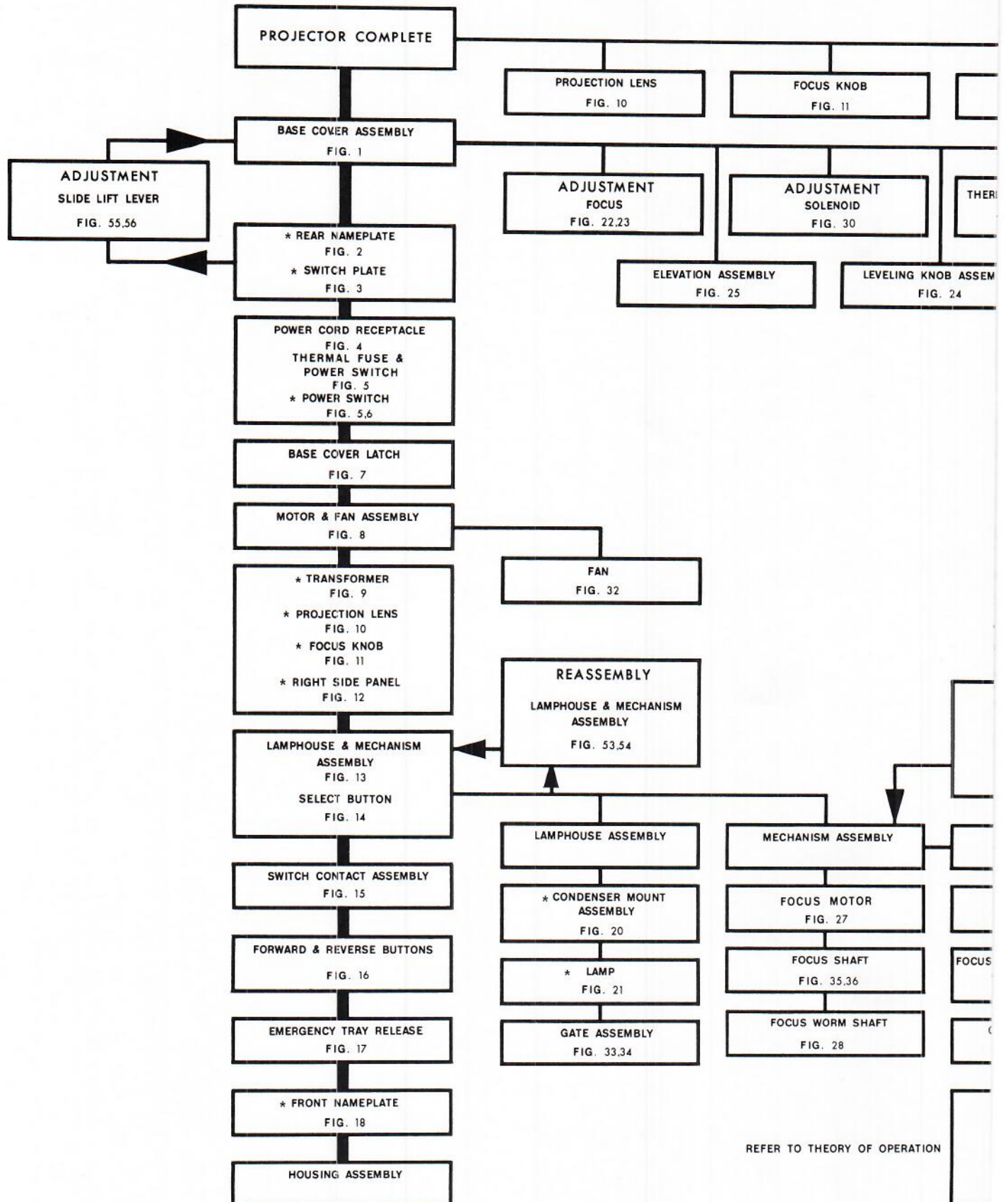
#### Reassembly Sequence

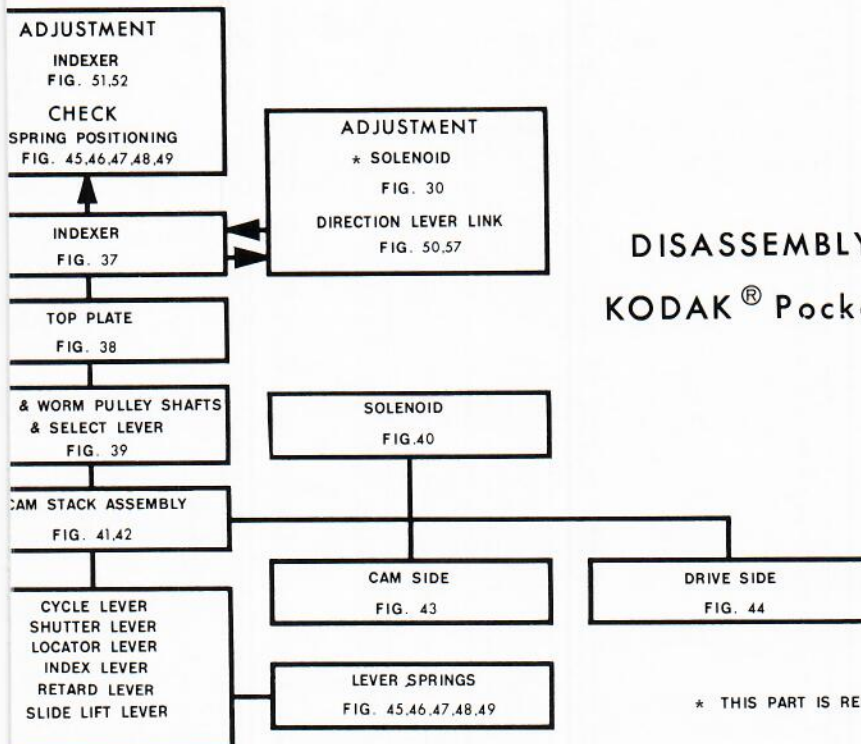
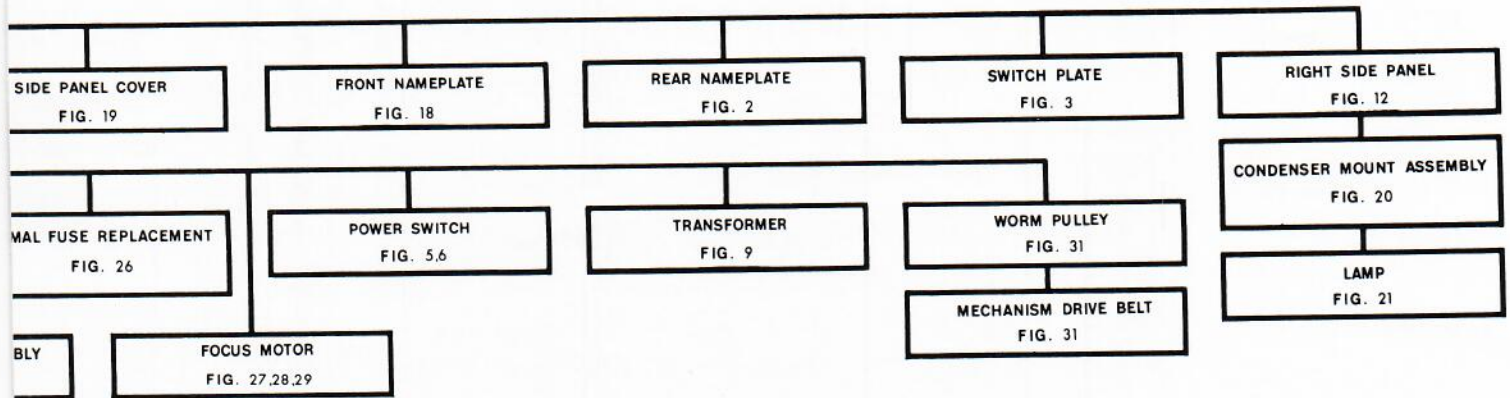
J, F, E, D, Adjustment - Product complete  
H, Adjustment, G, D, Adjustment Product complete

Special lubrication points and reassembly hints are indicated where they occur.

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## DISASSEMBLY/REASSEMBLY CHART FOR THE KODAK® Pocket INSTAMATIC® 200 PROJECTOR

\* THIS PART IS REMOVABLE AT AN EARLIER STAGE



Compliments of:  
www.KodakParts.com  
**GENERAL CHARACTERISTICS**

- Operation - Basically the same as the *KODAK CAROUSEL* 750 Projector only miniaturized.
- Power Requirements - 110-125V ac, 60 Hz only.
- Lamp - ANSI Code DDA, 150W, 24V
- Lenses - *KODAK* Projection *EKTAR* Lens, 2 1/2-inch,  $f/2.8$   
- *KODAK* Projection *EKTAR* Zoom Lens, 2- to 3-inch,  $f/2.8$
- Housing - Molded plastic with vinyl wood-grain paneling.  
- Projection lens and condenser optics serviced through the removable side panel.  
- Thumb-wheel elevation through a range of 10 degrees.  
- Thumb-wheel leveling through a range of 1 degree.
- Slide Tray - Circular, 120-slide capacity for slide mounts 30mm square (1.193 inches) and 1.27mm (.050-inch) thick. Tray-loaded slides are conditioned with temperature-controlled air before projection.
- Projector Controls - Select  
- Forward and Reverse on projector also, Forward and Reverse by remote control cord.
- Focus - Manual focus  
- Full focus control by remote control cord.
- Cooling - Fan mounted on motor shaft.
- Power Switch - Off, Fan, and Lamp.

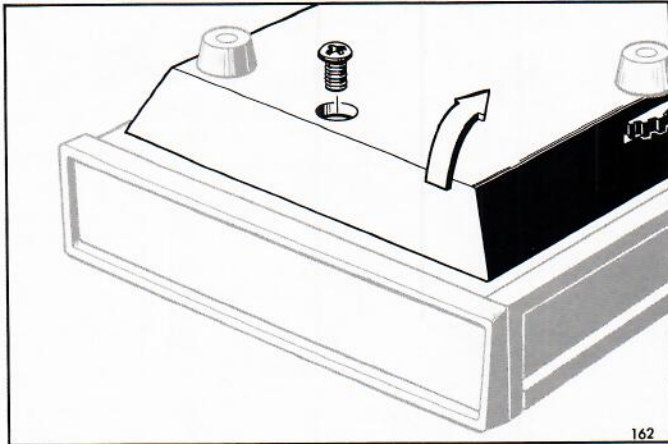


FIGURE 1 -- BASE COVER ASSEMBLY

When replacing, be sure hinge tabs are engaged.

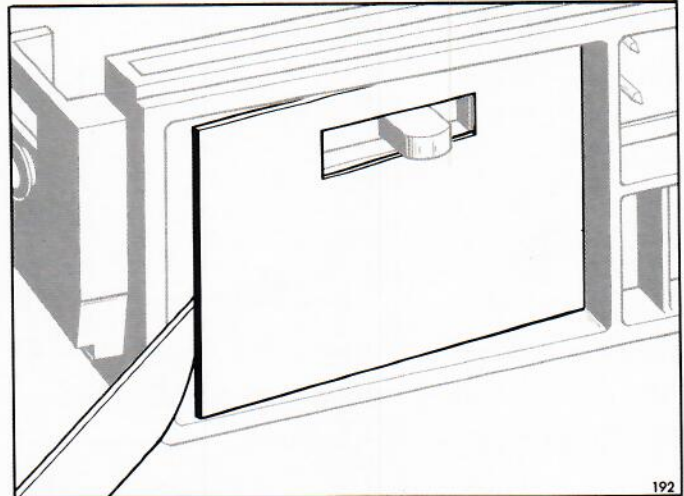


FIGURE 3 -- SWITCH PLATE

Switch plates will generally not be reusable. Apply a small amount of cement (part No. 763098) to back surface of new switch plate.

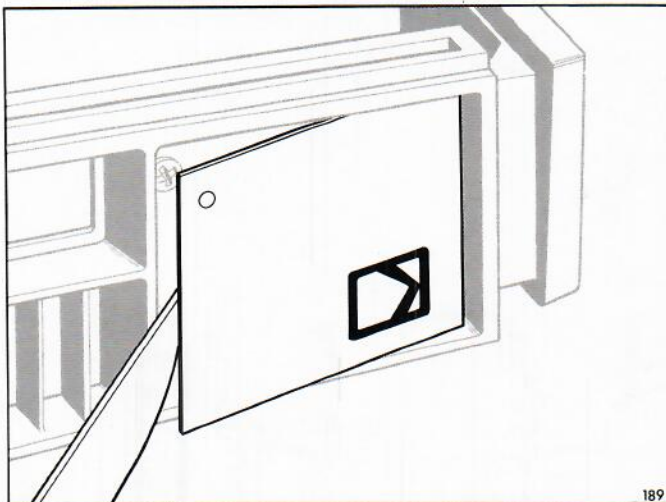


FIGURE 2 -- REAR NAMEPLATE

Nameplates will generally not be reusable. Apply a small amount of cement (part No. 763098) to back surface of new nameplate.

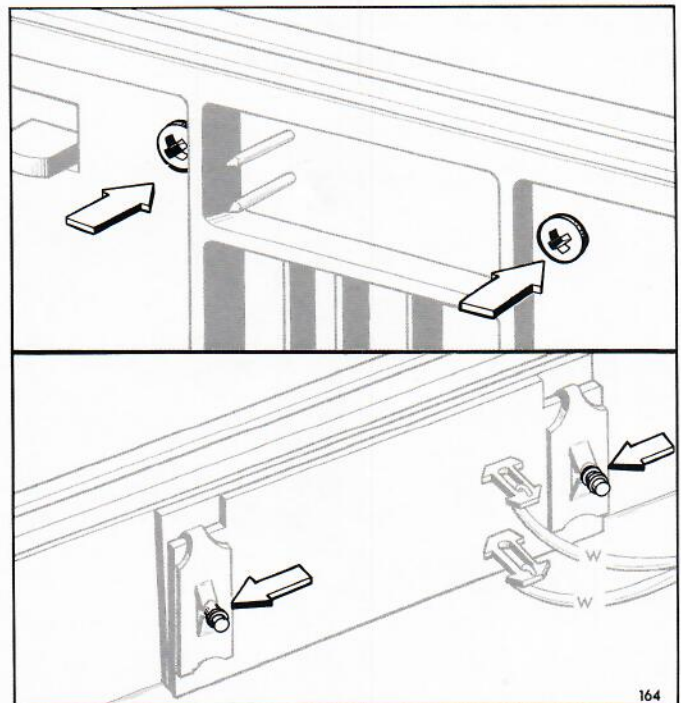


FIGURE 4 -- POWER CORD RECEPTACLE



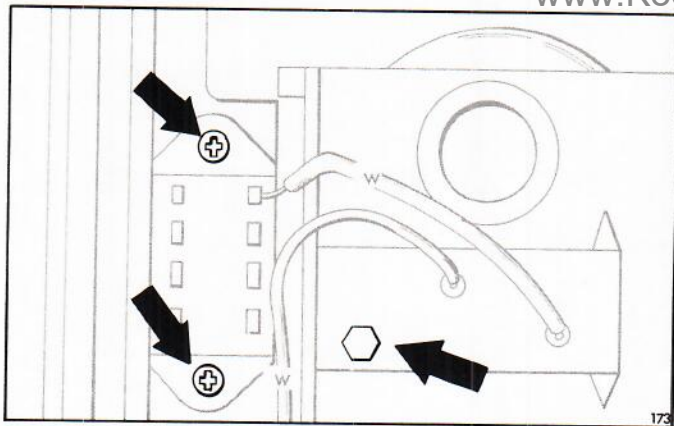


FIGURE 5 -- THERMAL FUSE AND POWER SWITCH

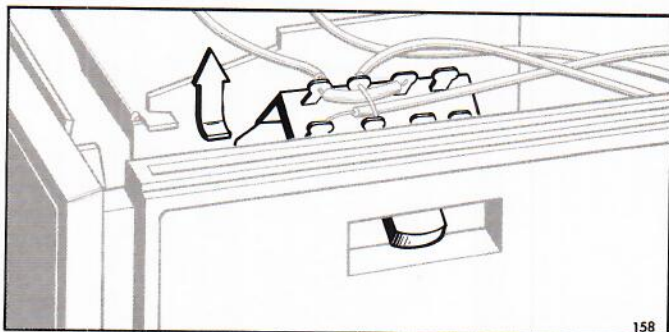


FIGURE 6 -- POWER SWITCH REMOVAL

Guide switch out as shown.

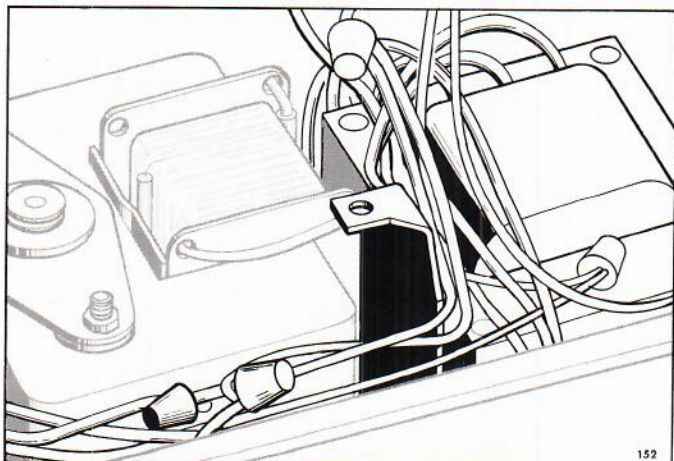


FIGURE 7 -- BASE LATCH AND WIRE DRESSING

The base cover latch is held by one of the screws holding the motor and fan assembly. Upon reassembly, dress the wires as shown.

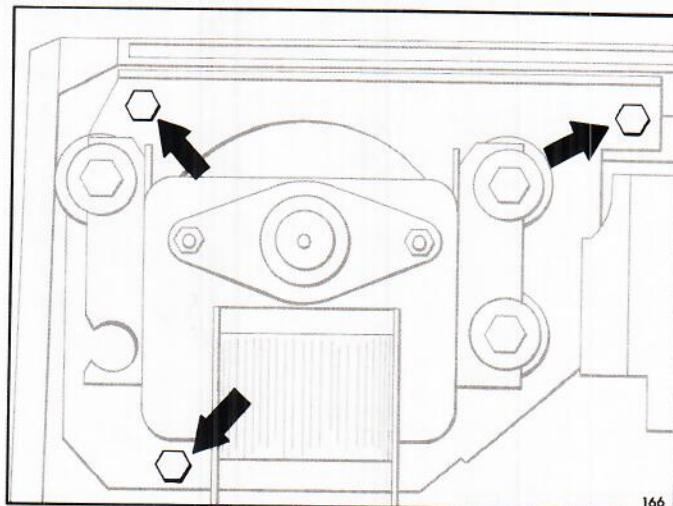


FIGURE 8 -- MOTOR AND FAN ASSEMBLY

NOTE: When reassembling to housing, back-turn the screw upon insertion; then tighten to prevent cross threading of screws in housing.

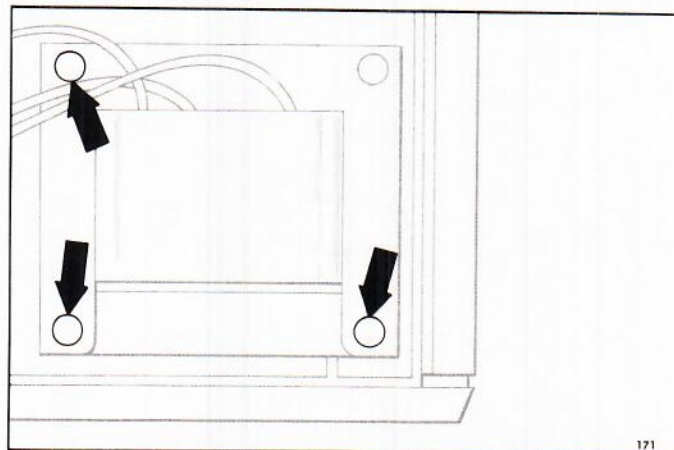


FIGURE 9 -- TRANSFORMER

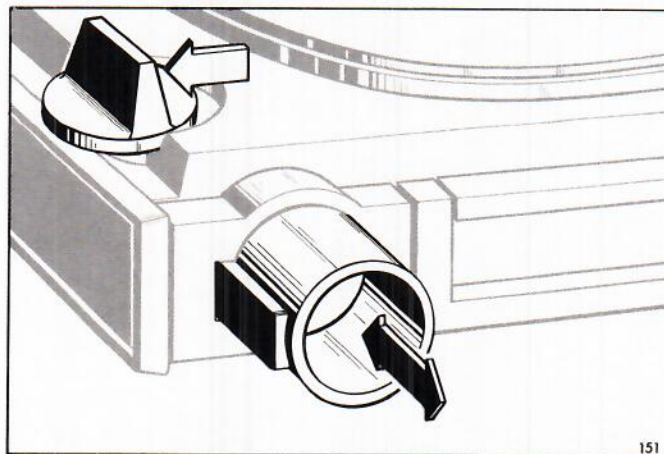


FIGURE 10 -- PROJECTION LENS

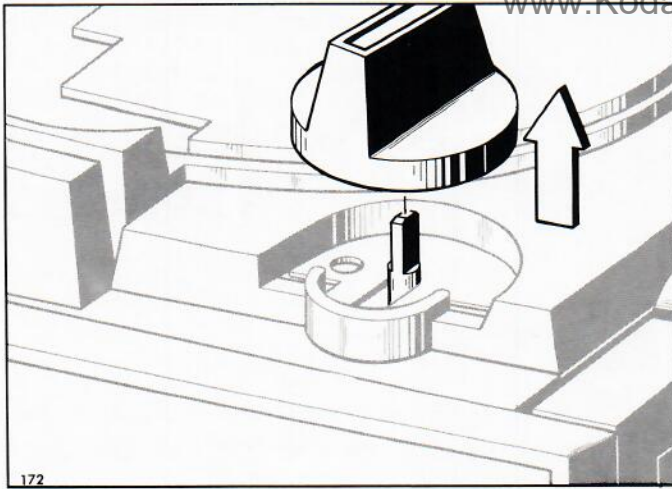


FIGURE 11 -- FOCUS KNOB

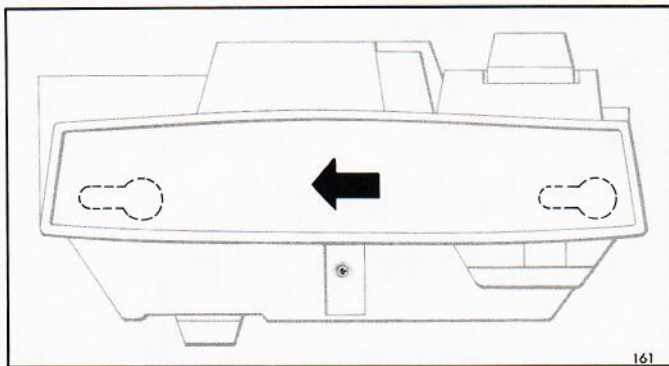


FIGURE 12 -- RIGHT SIDE PANEL

Slides off for access to condenser mount assembly and lamp.

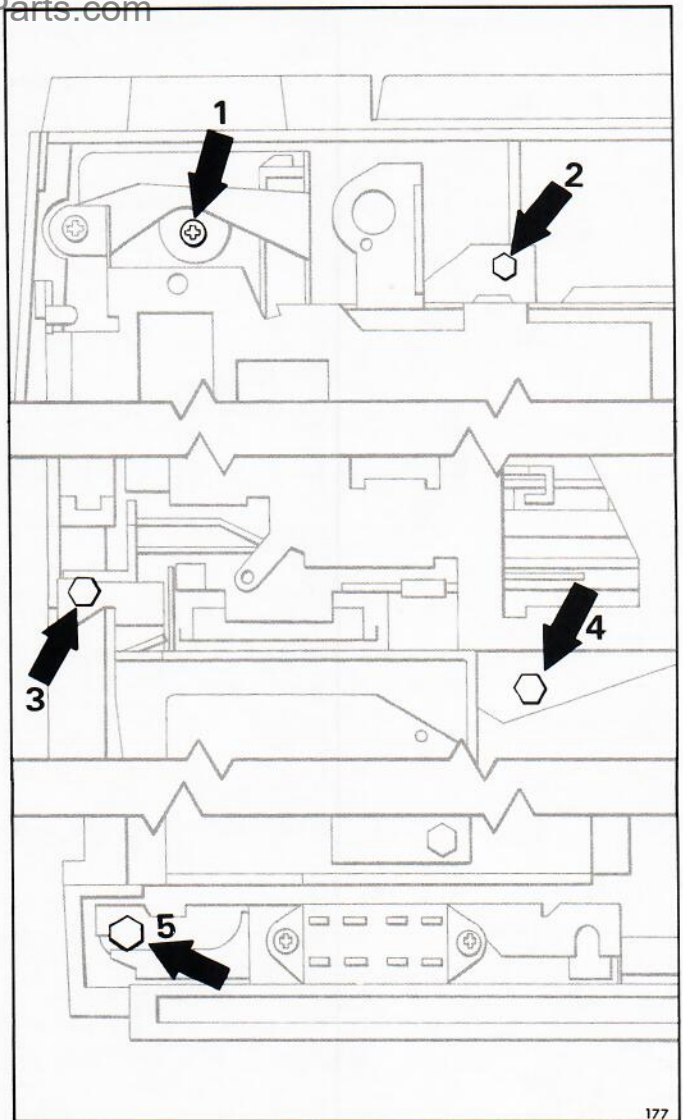


FIGURE 13 -- MECHANISM AND LAMPHOUSE ASSEMBLIES

To remove screw, Numeral 3, be sure condenser mount assembly is removed. All screws are at various levels.

NOTE: When reassembling, we suggest you back-turn the screws upon insertion; then tighten to prevent cross threading of screws in housing.



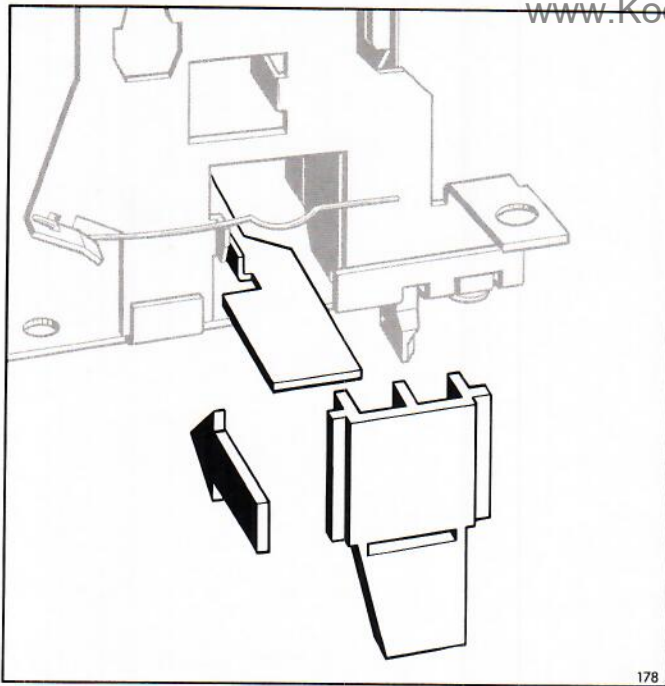


FIGURE 14 -- SELECT BUTTON

NOTE: Place select button on select lever before inserting mechanism assembly into housing.

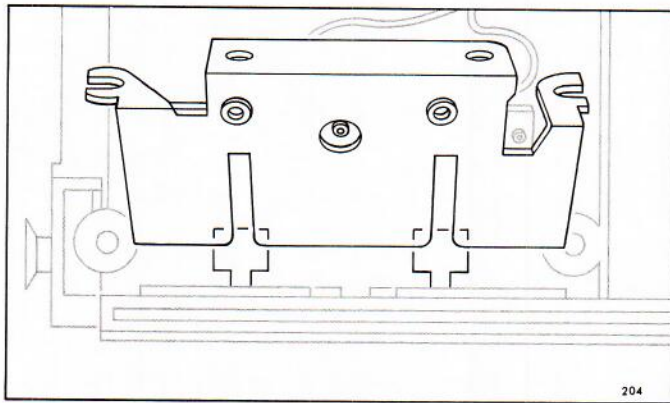


FIGURE 15 -- SWITCH CONTACT ASSEMBLY

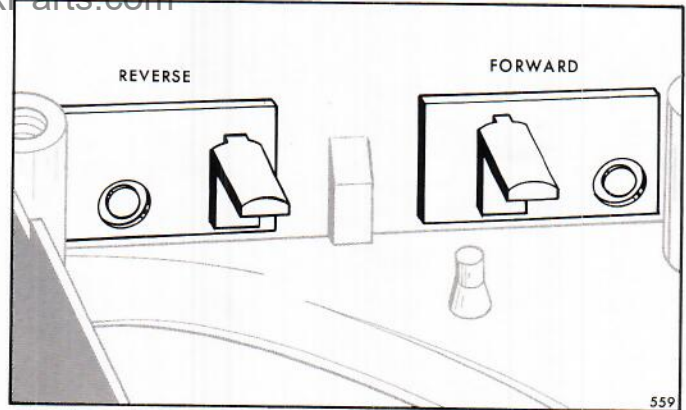


FIGURE 16 -- FORWARD AND REVERSE BUTTONS

Buttons must be in their correct opening or switch contact assembly will not fit properly.

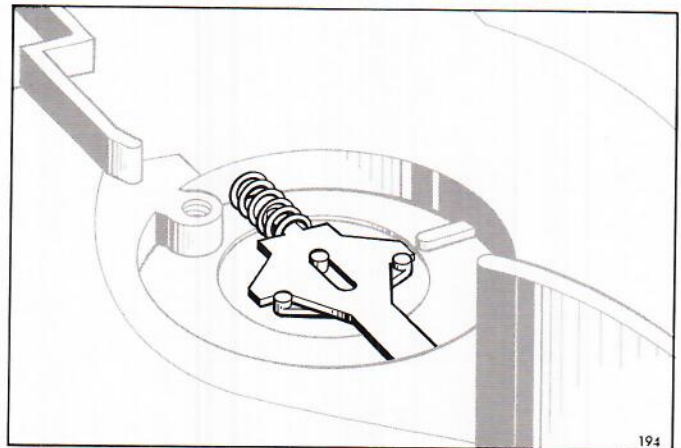


FIGURE 17 -- EMERGENCY TRAY RELEASE

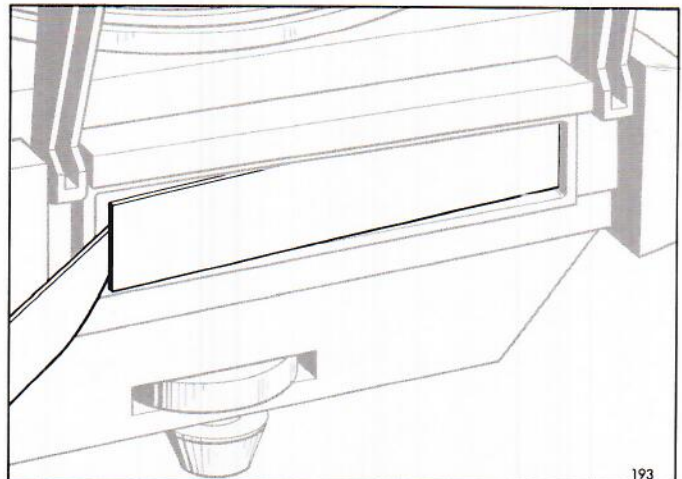


FIGURE 18 -- FRONT NAMEPLATE

Nameplates will generally not be reusable. Apply a small amount of cement (part No. 763098) to back surface of new nameplate.



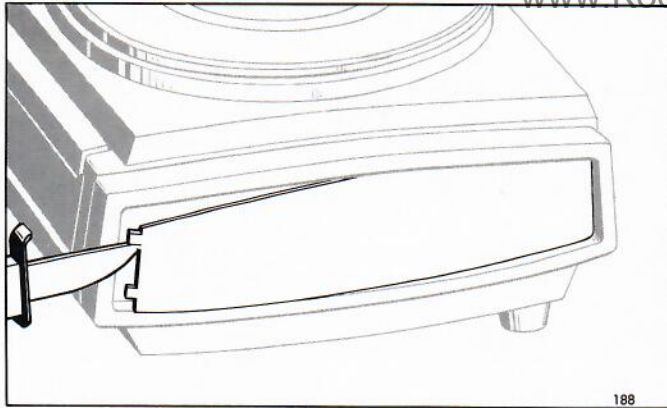


FIGURE 19 -- RIGHT AND LEFT SIDE PANEL COVERS

Panel covers will generally not be reusable. Apply a small amount of cement (part No. 763098) to back surface of new panel cover.

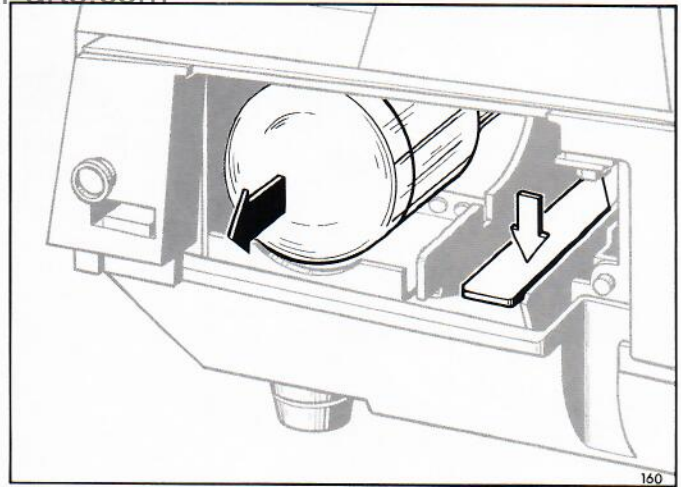


FIGURE 21 -- LAMP

CAUTION: Be sure lamp is fully seated upon reinsertion.

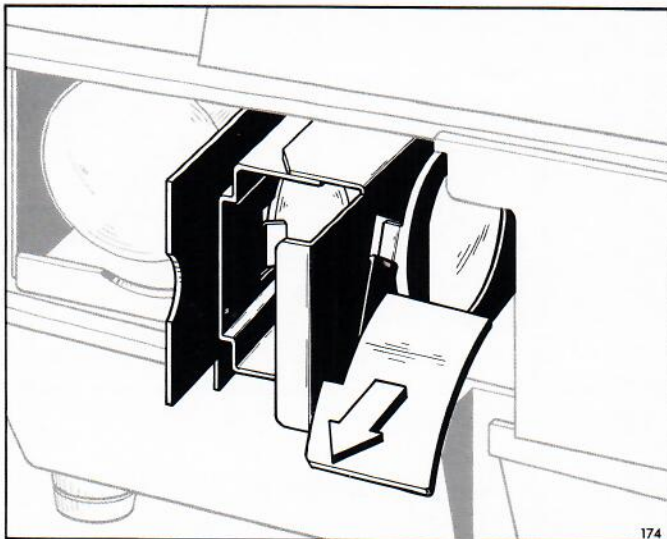


FIGURE 20 -- CONDENSER LENS MOUNT ASSEMBLY

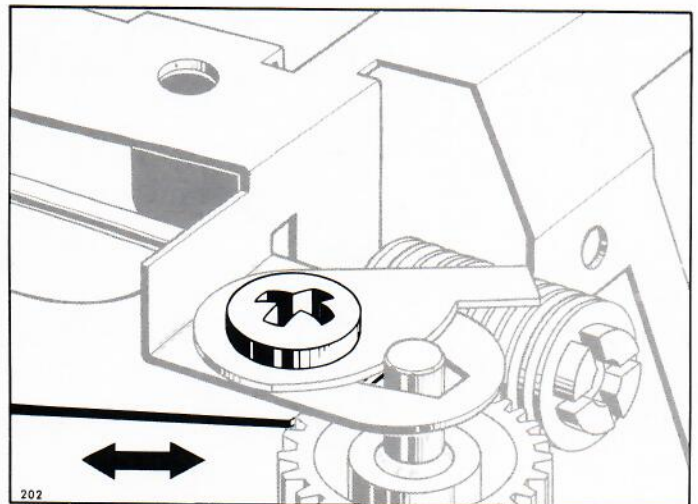


FIGURE 22 -- ADJUST FOCUS (HORIZONTAL)

Loosen screw and move arm left or right. Tighten screw.

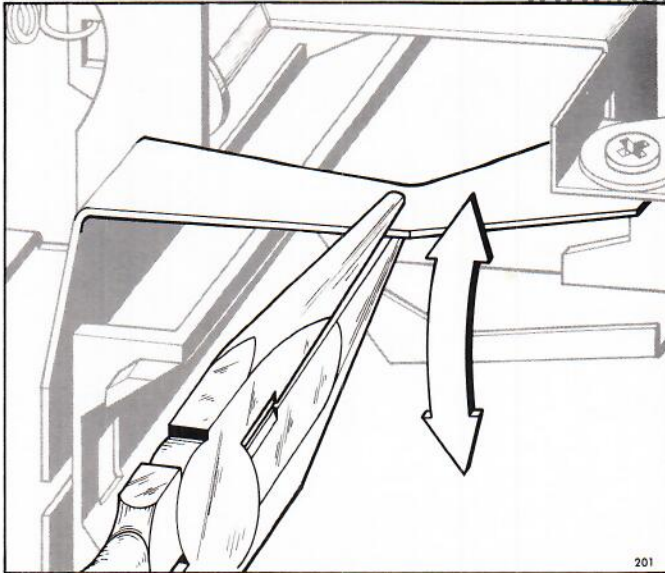


FIGURE 23 -- ADJUST FOCUS (VERTICAL)

Form bracket arm up or down.

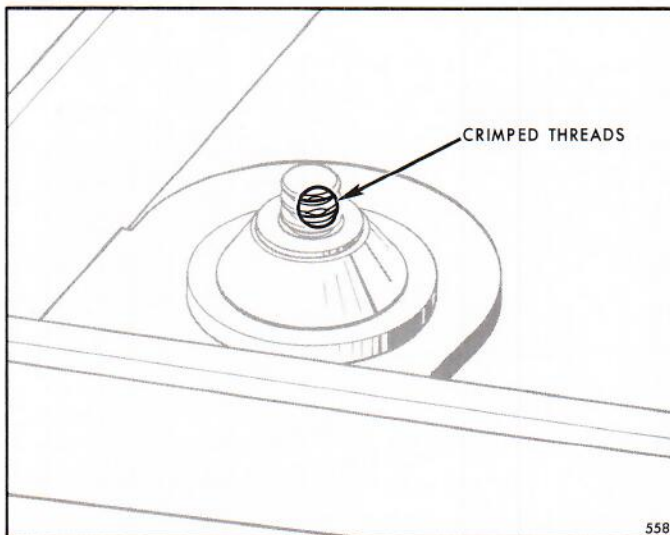


FIGURE 24 -- LEVELING KNOB ASSEMBLY

File crimped teeth on screw for removal.

Crimp teeth of new screw after threading through base plate nut.

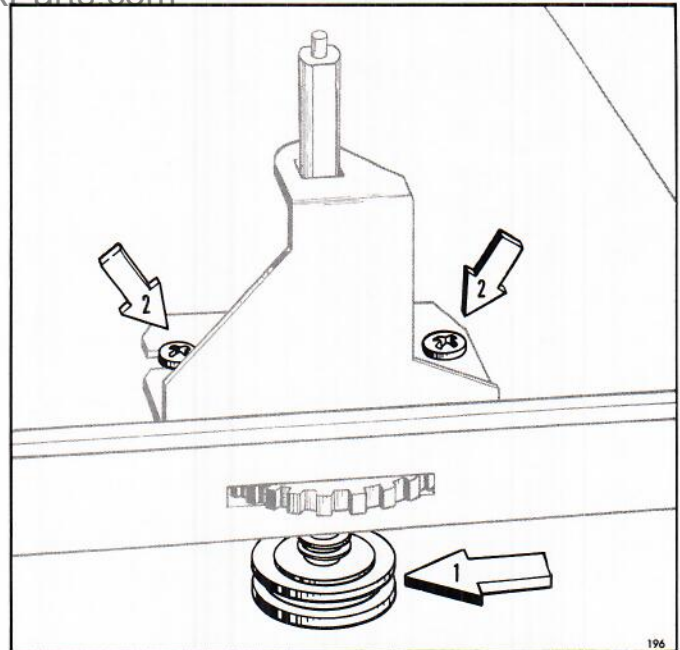


FIGURE 25 -- ELEVATION ASSEMBLY

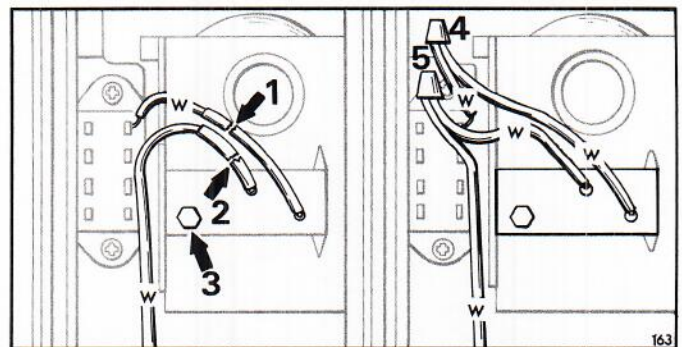


FIGURE 26 -- THERMAL FUSE REPLACEMENT

Cut leads as shown at Numerals 1 and 2; remove screw, Numeral 3. Strip leads. Insert new thermal fuse and wire connect as shown at Numerals 4 and 5. Replace screw.



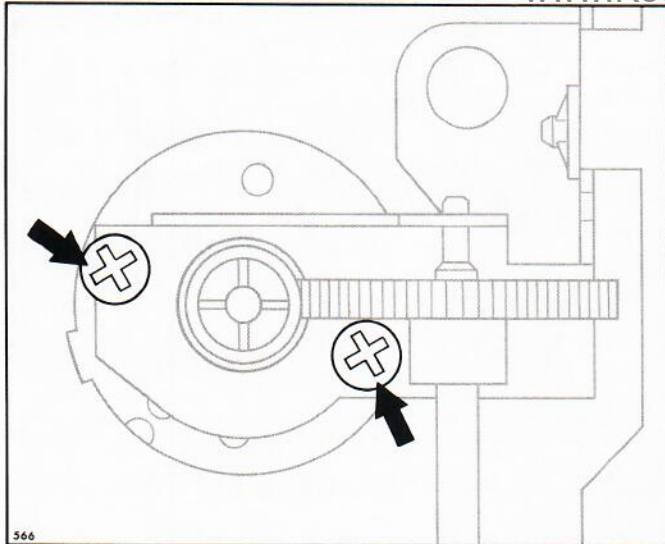


FIGURE 27 -- FOCUS MOTOR REMOVAL

Remove screws.

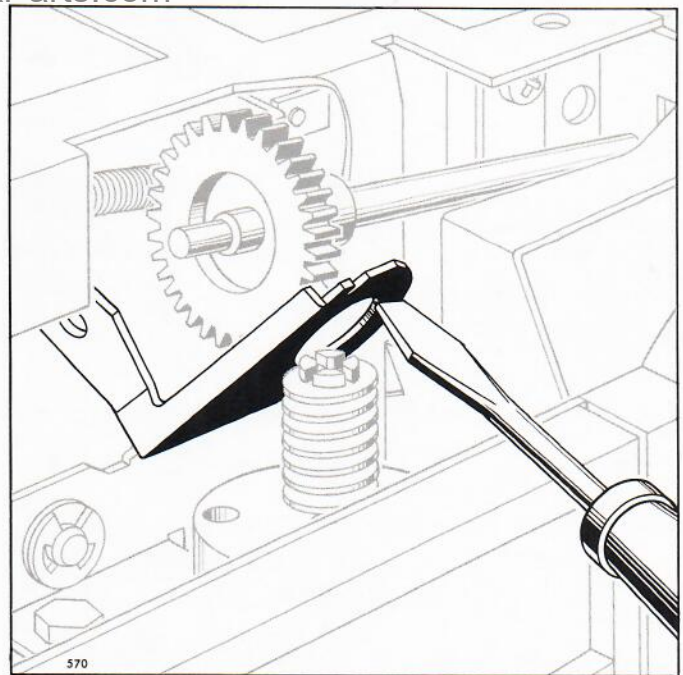


FIGURE 29 -- FOCUS MOTOR REMOVAL

Form bracket up sufficiently to re-  
move focus motor from housing.

Reassemble in reverse order. Be  
sure bracket is reformed to its  
original position to give proper  
engagement of worm and worm gear.

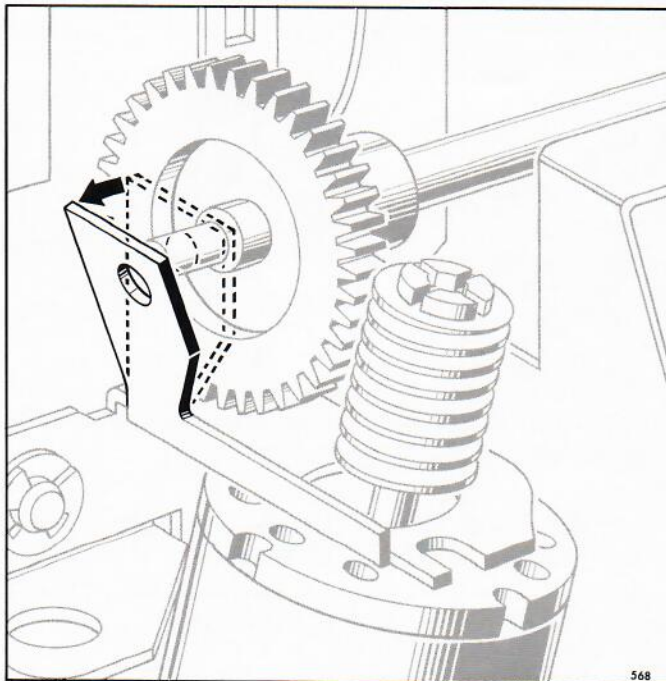


FIGURE 28 -- FOCUS MOTOR REMOVAL

Disengage focus worm shaft.

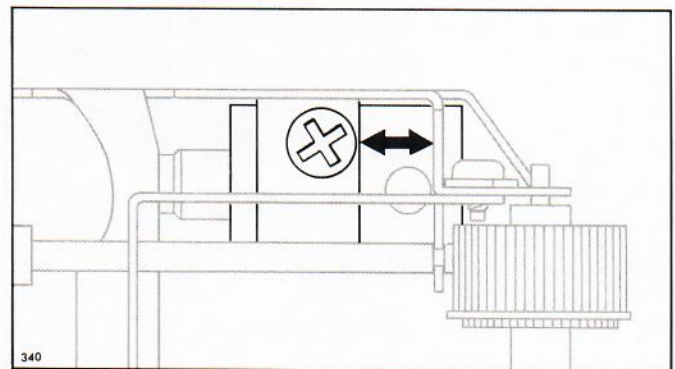


FIGURE 30 -- SOLENOID ADJUSTMENT

Loosen screw; move solenoid either  
direction as required.

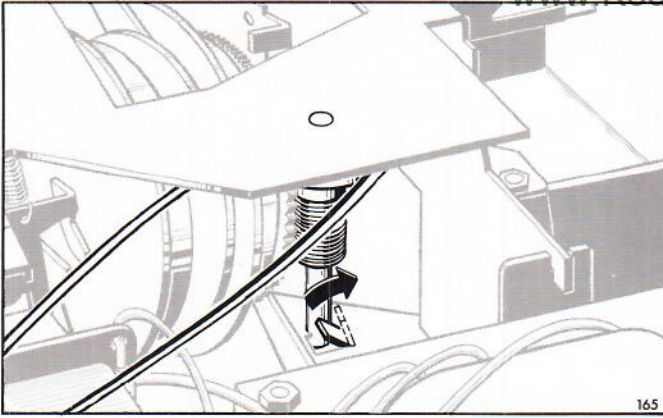


FIGURE 31 -- WORM PULLEY AND BELT

Form tab away from shaft. (Perform the forming slowly to prevent the tab from breaking off.)

Lubrication: Place small amount of lubricant (part No. 763002) on pulley shaft and on worm teeth.

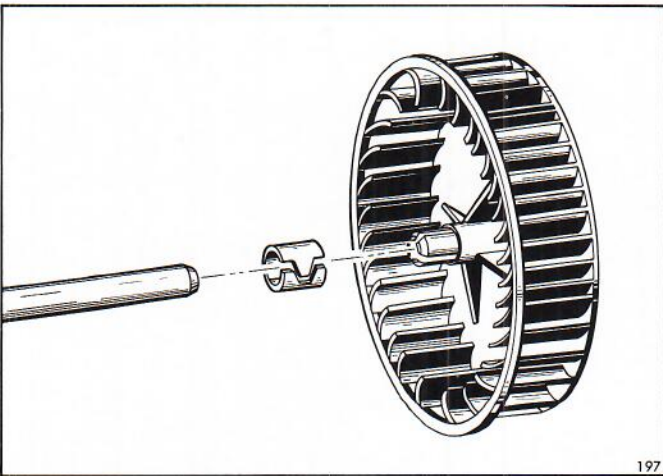


FIGURE 32 -- MOTOR FAN SHAFT AND FAN

Fan is normally cemented to shaft. Upon replacing fan, put compression ring on fan fingers, apply cement (part No. G135) to fan-cavity and press fan onto shaft. Be sure fan is fully seated on shaft. Allow cement to dry before operating motor.

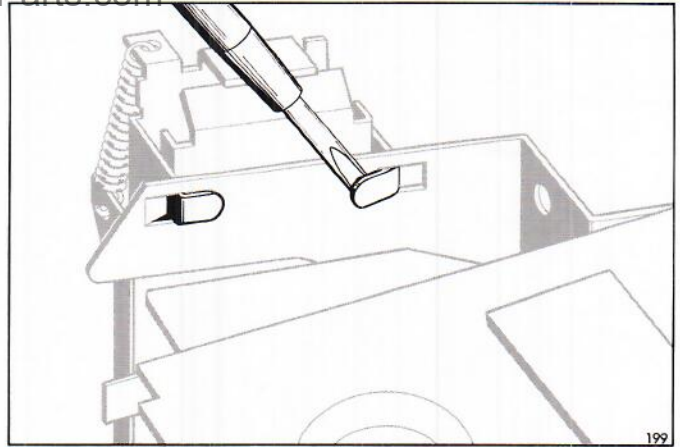


FIGURE 33 -- GATE ASSEMBLY (BOTTOM)

Be sure tabs draw gate assembly tight against lamphouse.

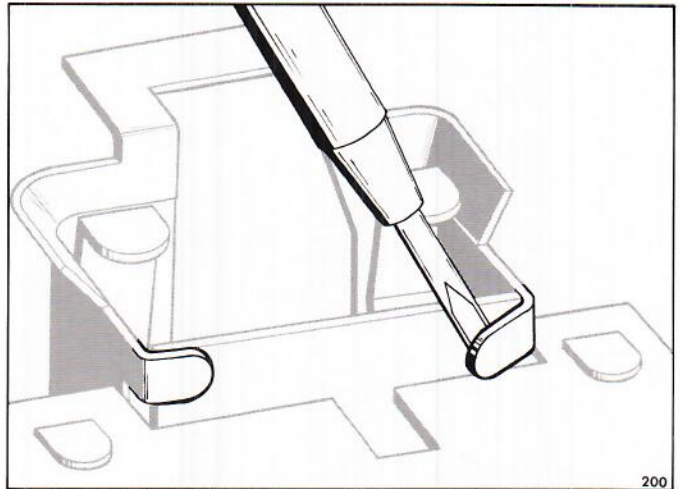


FIGURE 34 -- GATE ASSEMBLY (TOP)

Be sure tabs draw gate assembly tight against lamphouse.

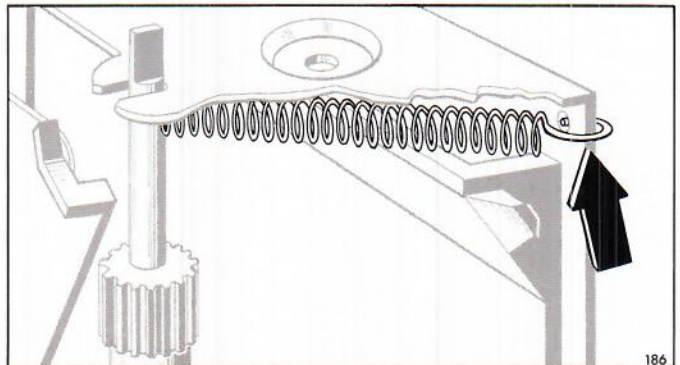


FIGURE 35 -- FOCUS SHAFT ASSEMBLY

Lubrication: Apply a thin coat of lubricant (part No. 763003) on shaft at spring slot and plate slot.



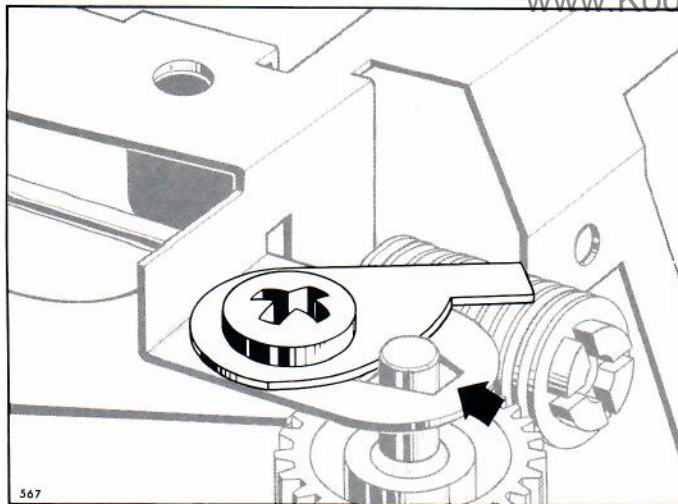


FIGURE 36 -- FOCUS CAM SHAFT

Reassembly: Cam should hold focus shaft against outer edge of bracket opening.

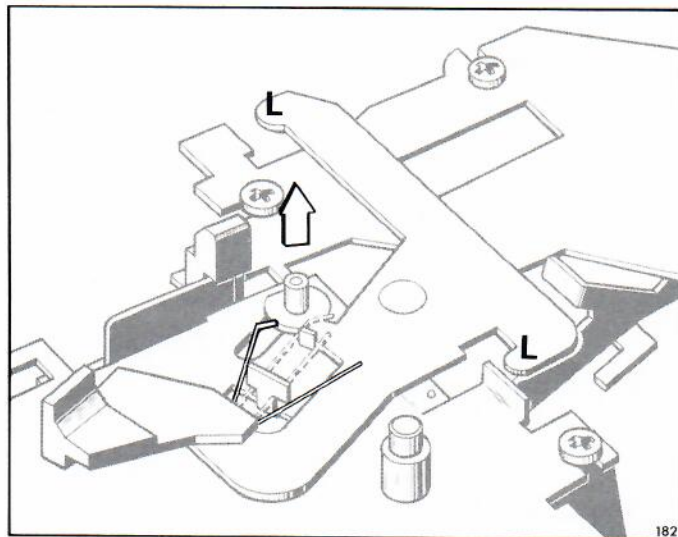


FIGURE 37 -- INDEXER

Spread spring and lift off.  
Lubrication: Apply a thin coat of lubricant (part No. 763003) on the underside of two tabs labeled "L".

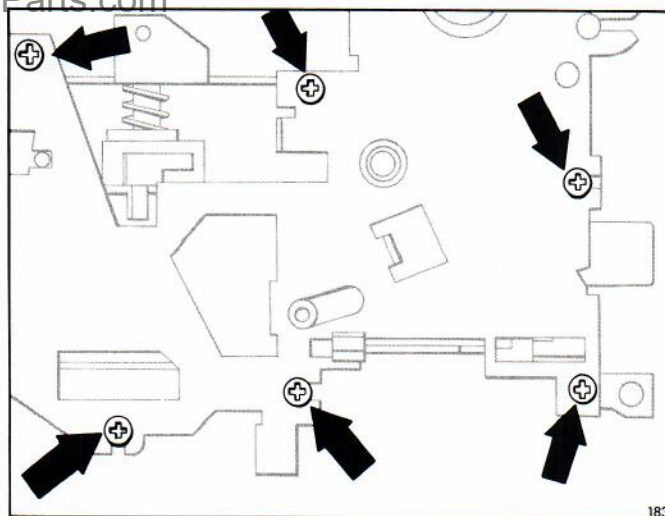


FIGURE 38 -- TOP PLATE

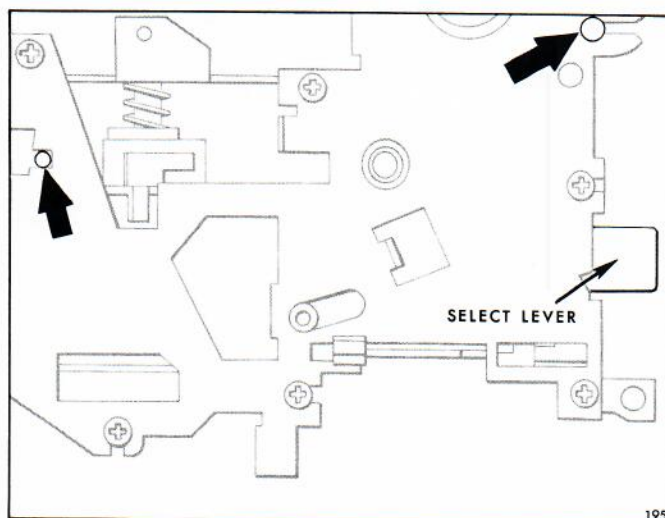


FIGURE 39 -- FOCUS SHAFT, WORM PULLEY SHAFT, AND SELECT LEVER

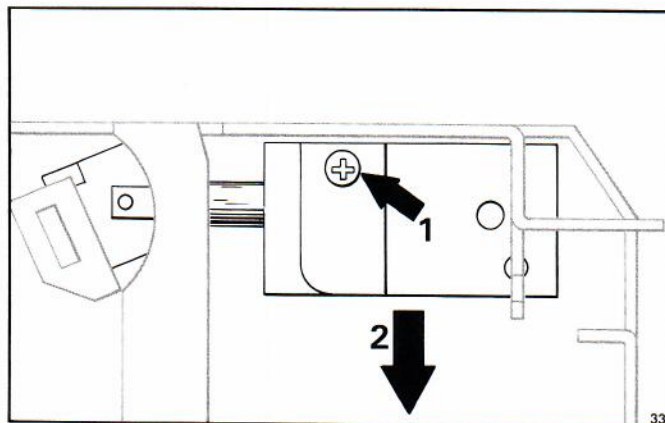


FIGURE 40 -- SOLENOID REMOVAL

With cam stack removed, solenoid is readily removed.



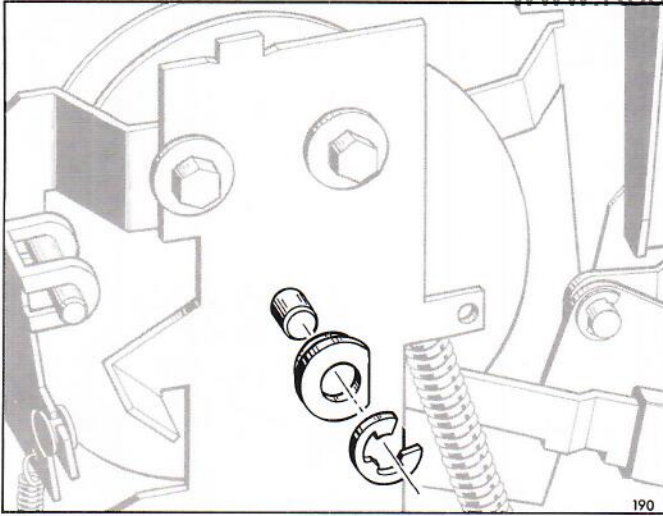


FIGURE 41 -- CAM STACK REMOVAL

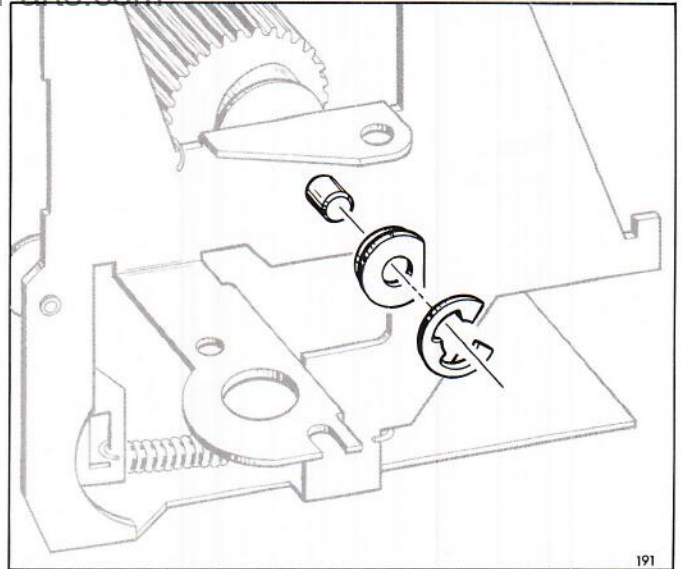


FIGURE 42 -- CAM STACK REMOVAL

Spread mechanism frame slide and  
lift out cam stack assembly.

NOTE: Refer to Theory of Operation  
for lever location on cams.

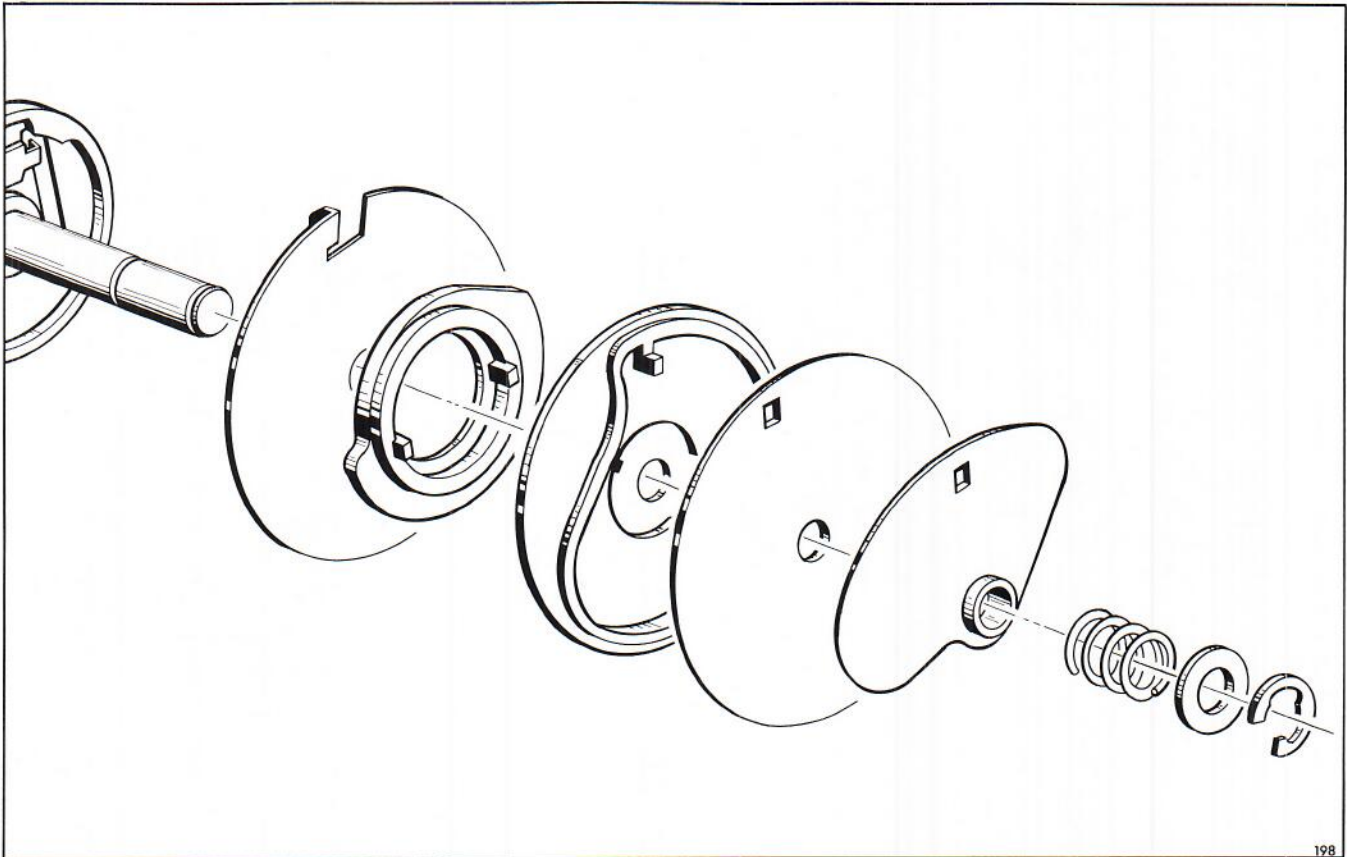


FIGURE 43 -- CAM STACK ASSEMBLY (CAM SIDE)

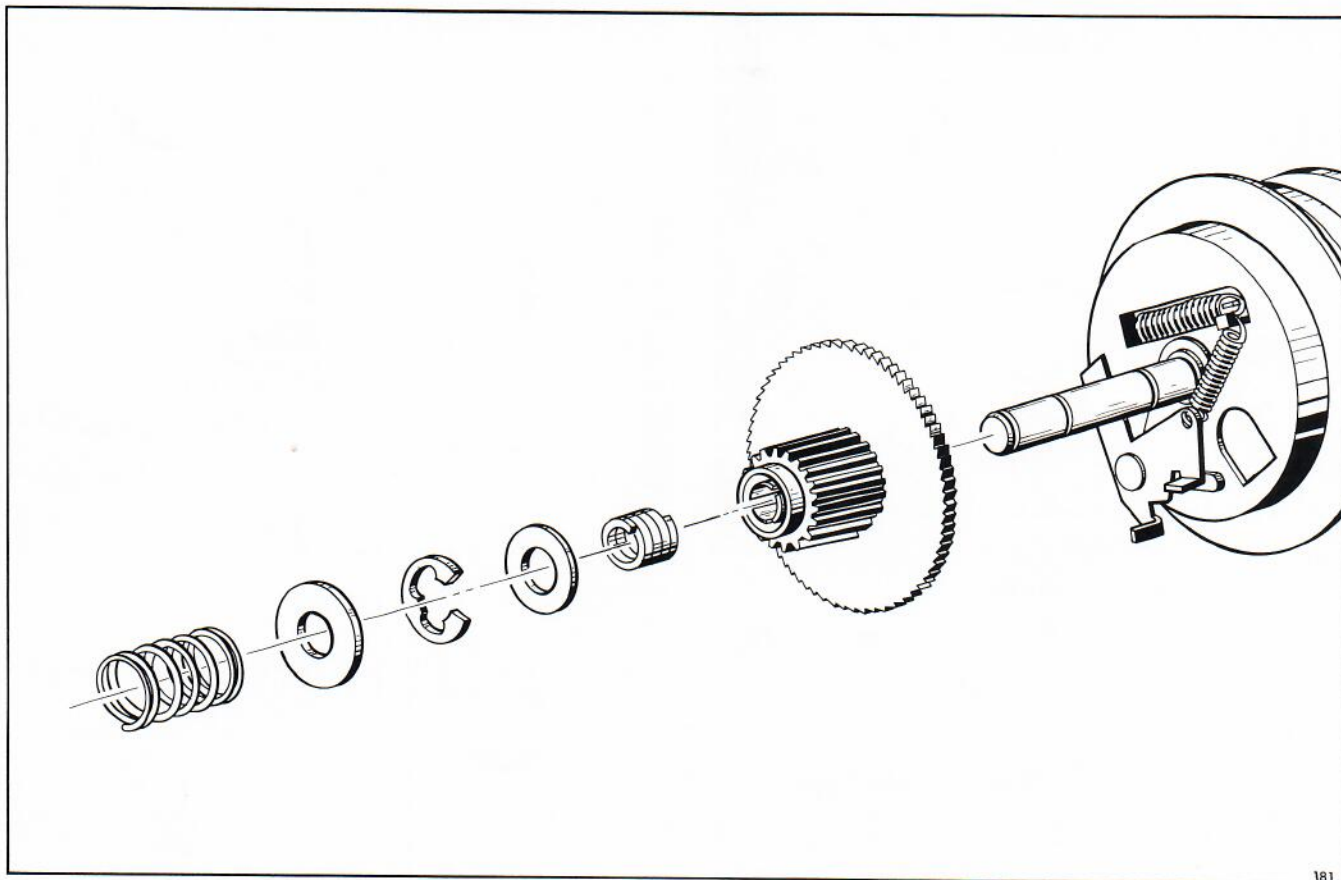


FIGURE 44 -- CAM STACK ASSEMBLY  
(DRIVE SIDE)

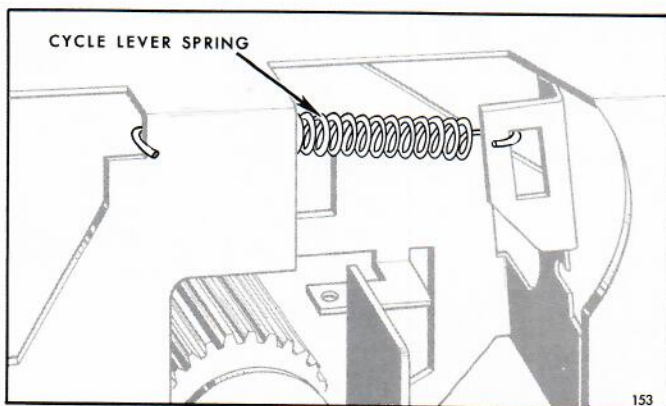


FIGURE 45 -- CYCLE LEVER SPRING

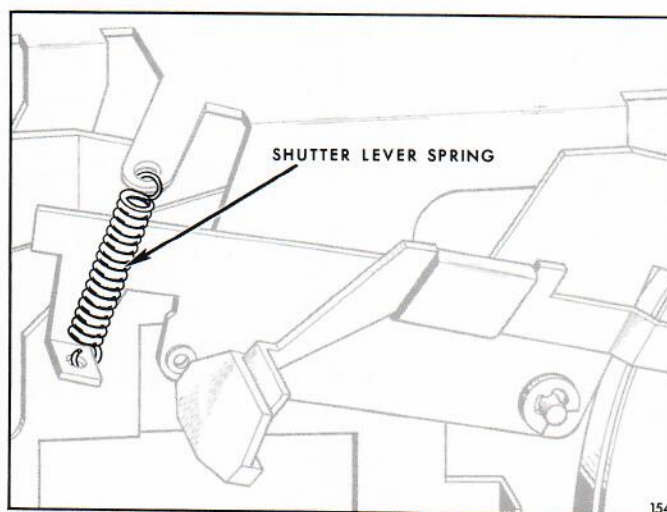


FIGURE 46 -- SHUTTER LEVER SPRING

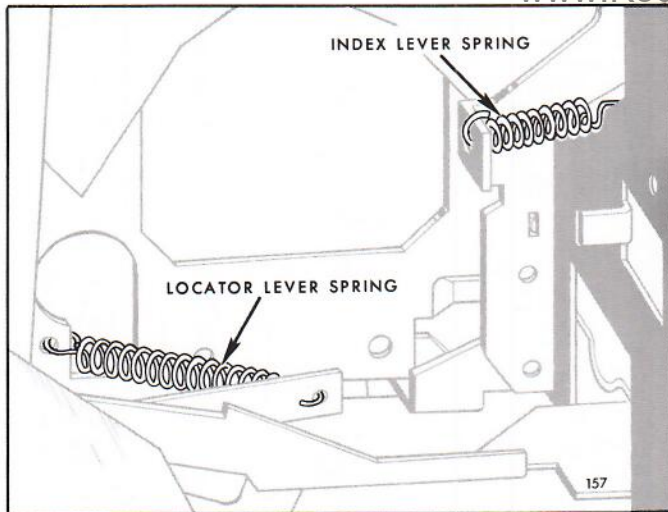


FIGURE 47 -- INDEX LEVER AND LOCATOR LEVER SPRINGS

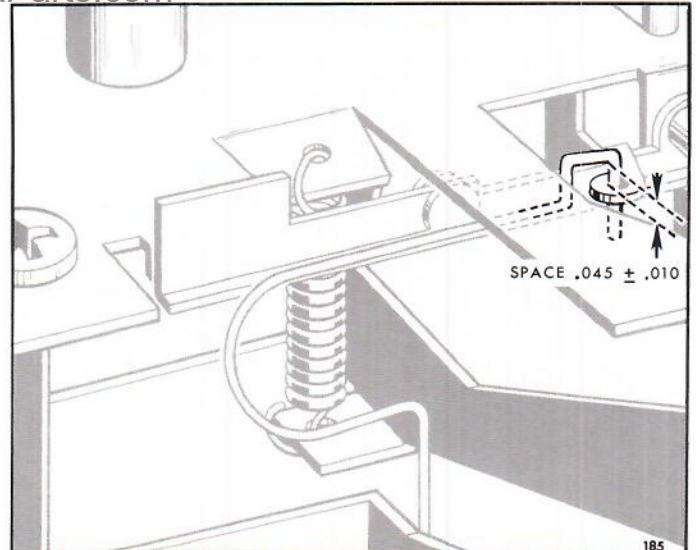


FIGURE 50 -- DIRECTION LEVER LINK

Adjust space as shown. Use arm on Forming Tool (Tool #TL1828).

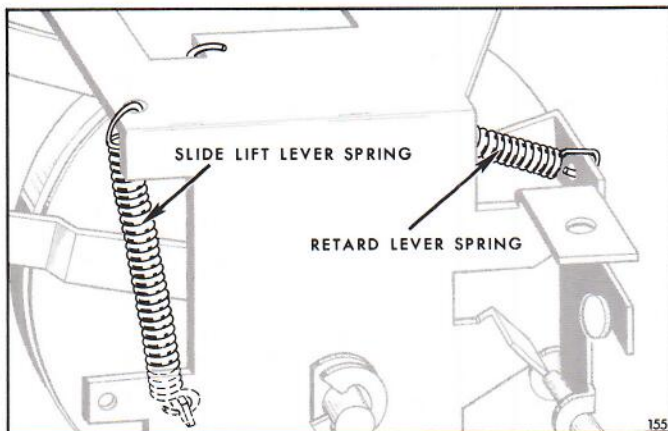


FIGURE 48 -- SLIDE LIFT LEVER AND RETARD LEVER SPRINGS

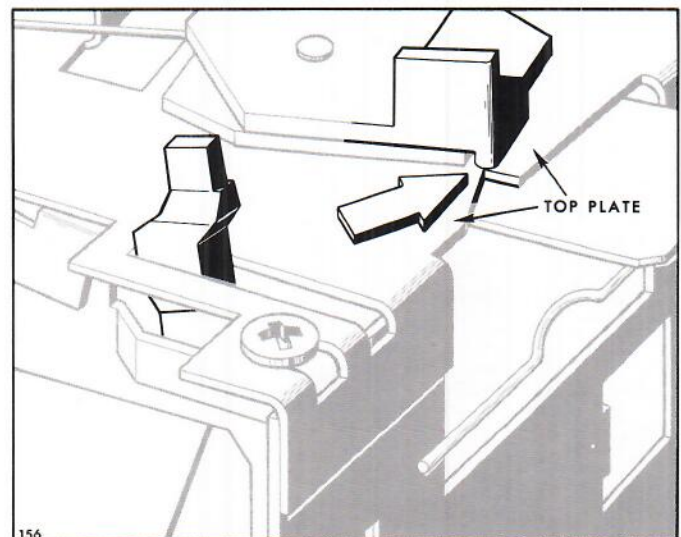


FIGURE 51 -- ADJUST INDEXER

When cam stack has been rotated so indexer is at its farthest travel.

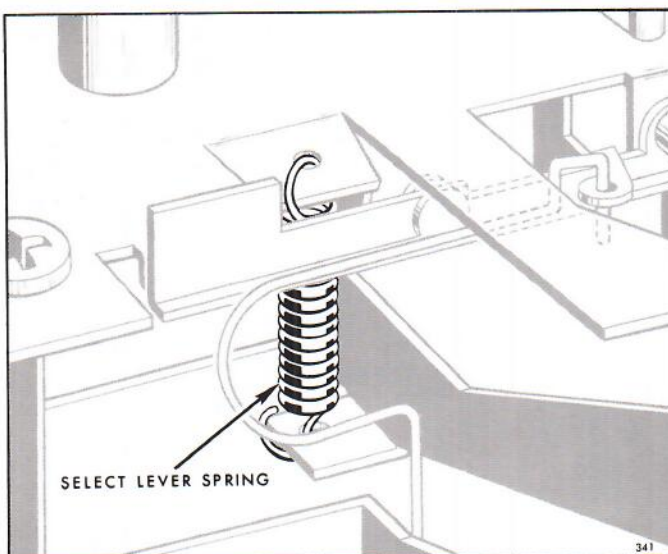


FIGURE 49 -- SELECT LEVER SPRING



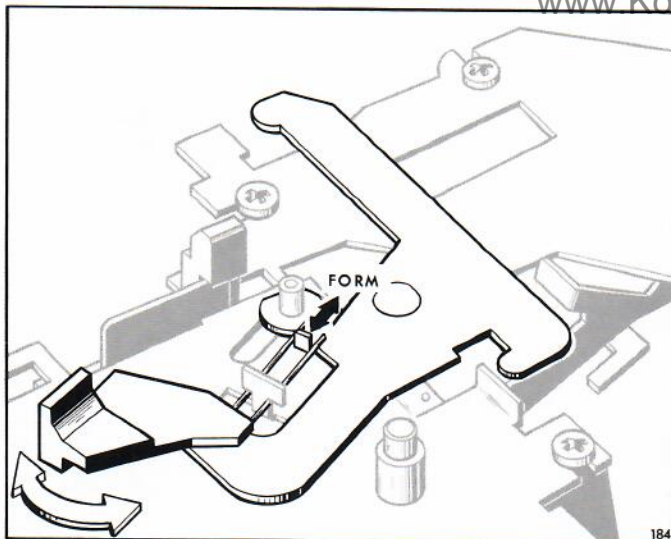


FIGURE 52 -- ADJUST INDEXER

If alignment is not as shown in Figure 51, form neck of piece, as indicated, to move tip for proper alignment.

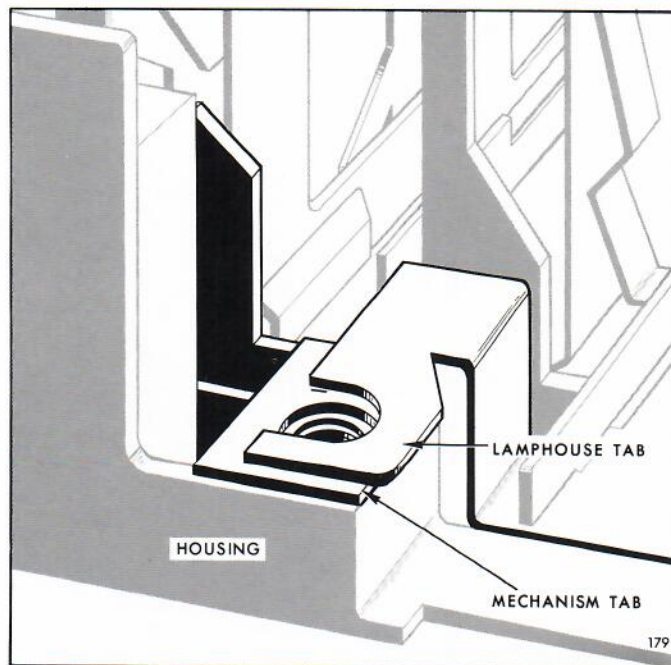


FIGURE 53 -- REASSEMBLY OF LAMPHOUSE AND MECHANISM ASSEMBLY

When reassembling, the mechanism tabs should be closer to the housing than the lamphouse tabs.

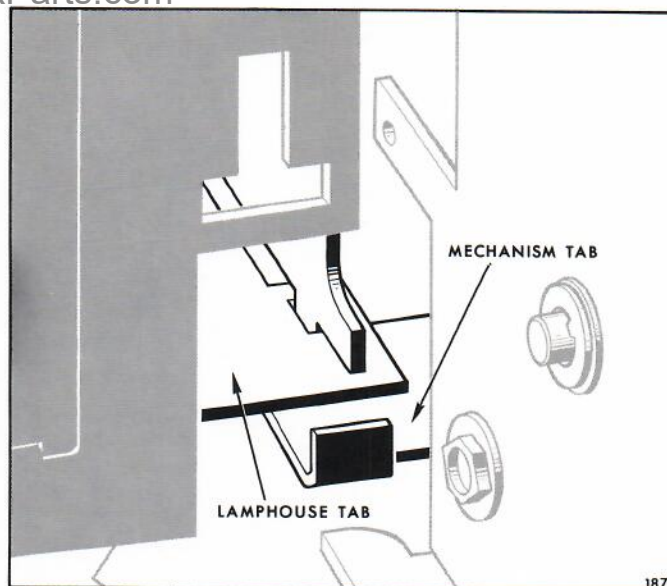


FIGURE 54 -- REASSEMBLY OF LAMPHOUSE AND MECHANISM ASSEMBLY

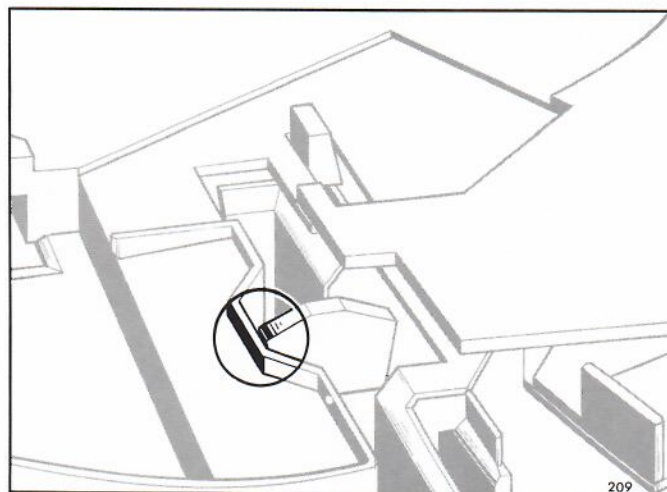


FIGURE 55 -- ADJUST SLIDE LIFT LEVER

Operate projector to select position and shut off. Observe slide lift lever ramp; alignment should be as shown.

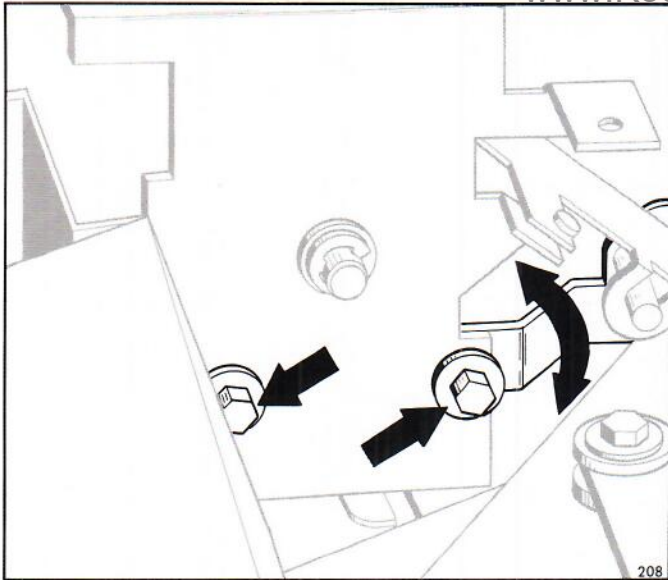


FIGURE 56 -- ADJUST SLIDE LIFT LEVER

If alignment is not as shown in Figure 55, loosen screws slightly and move mounting bracket up or down to bring slide lift lever to proper alignment. Tighten screws.

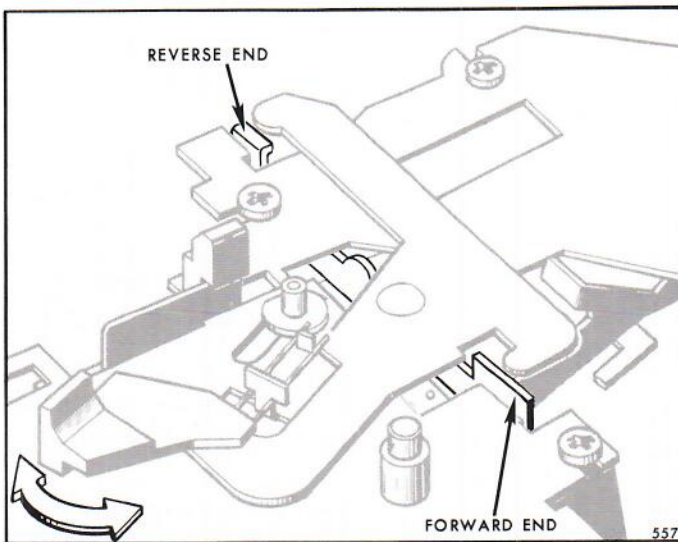
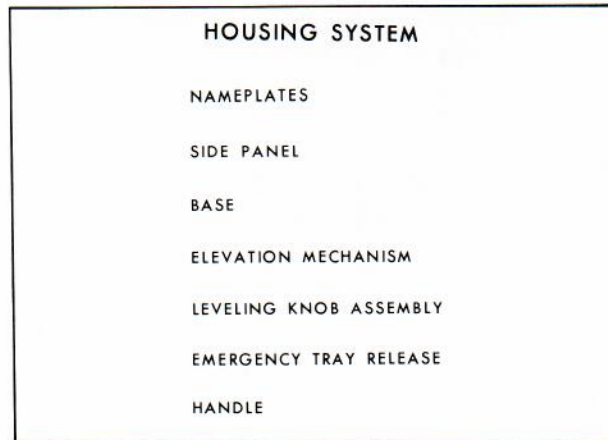


FIGURE 57 -- DIRECTION LEVER



## DESCRIPTION

The housing and base cover supply the frame to which all other systems are attached.



## SPECIFICATIONS

Elevation mechanism should operate firmly but smoothly throughout 10 degrees and hold the projector in any elevated position without slippage.

Leveling knob assembly should operate smoothly throughout full actuation (approximately 5 3/4 rotations) and hold position during actuation.

Movement of coin-slotted tray removal spindle in either direction should release the tray so that it may be removed at any slide position.

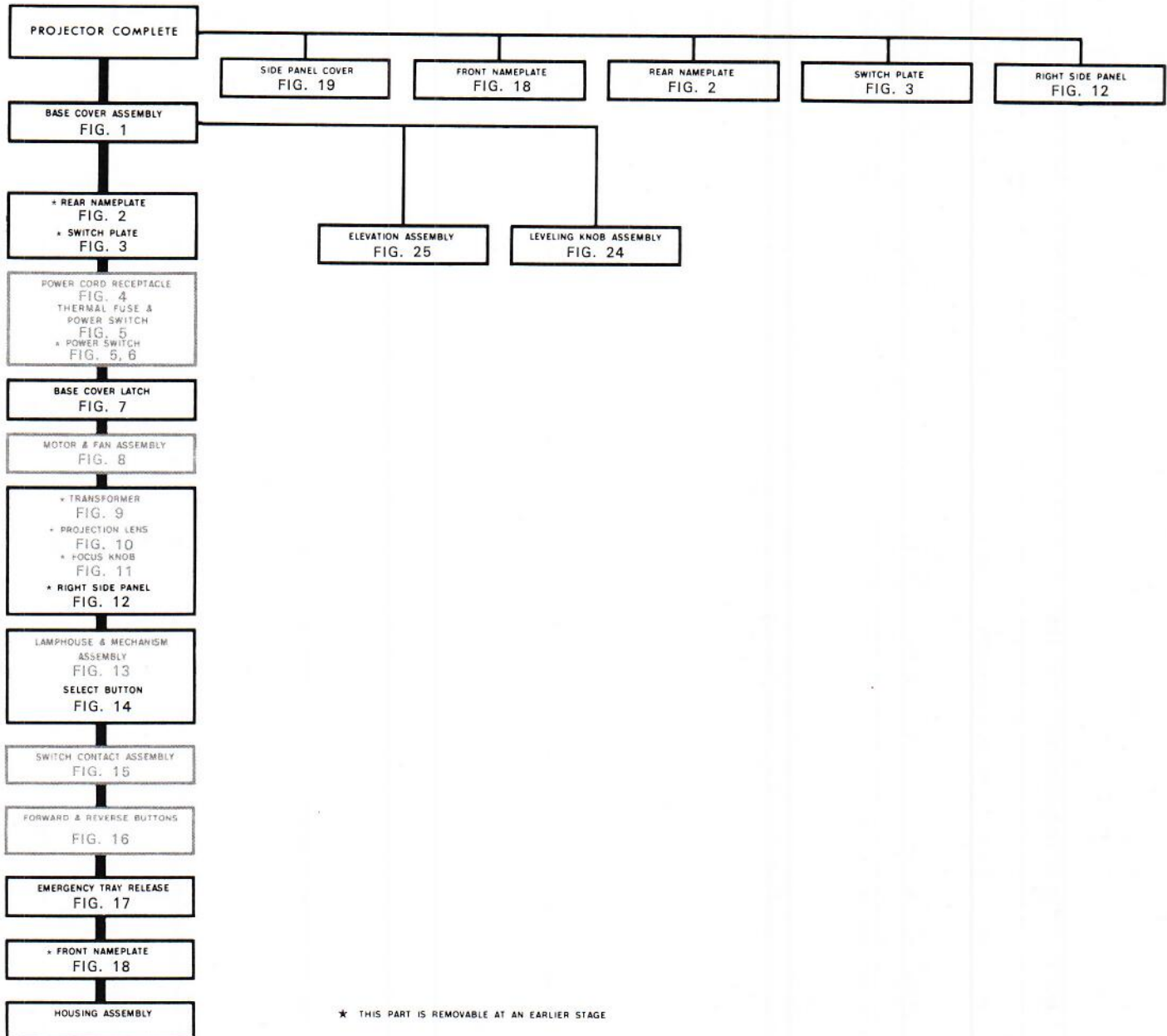
Right side panel should fit without interference and be readily removed and replaced.

Projector must withstand electrical insulation test. Leakage current must not exceed 4.0 mA with 900V, 60 Hz, applied for one minute between the shorted prongs of the power plug and the frame, with the power switch in the lamp position.

The use of Tool #TL1513 performs the electrical insulation test. "Breakdown" and "Leakage" lamps should not light.

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# CHART OF DISASSEMBLY OF HOUSING SYSTEM



## SPECIFICATIONS

Power Switch -- OFF; shut off projector completely.  
FAN; turn on motor with fan.  
LAMP; turn on motor with fan and lamp.

Slide "Popping" -- Slides should not "pop" in or out of focus during normal projection. If slides are changed very rapidly or shown separately, without tray, "popping" may occur because the slides have not been conditioned sufficiently.

Vibration -- Projector should be free of vibration which affects the projected image when viewed at a distance of 2 1/2 screen widths.

Cords -- Power cord and remote control cord should have no broken wires or cracked insulation.

Motor -- Minimum motor speed should be 3000 rpm. Check only on complaint of motor speed or ventilation problems.

Dielectric Test -- Projector must withstand electrical insulation test. Leakage current must not exceed 4.0 mA with 900V, 60 Hz, applied for one minute between the shorted prongs of the power plug and the frame, with the power switch in the lamp position.

The use of Tool #TL1513 performs the electrical insulation test. "Breakage" and "Leakage" lamps should not light.

## TESTS AND CHECKS

WARNING: DANGEROUS VOLTAGE Use caution to make the following checks:

If, when the power switch is turned on, the motor does not operate, check all components in the power and cooling system for continuity or voltage.

Cord plug -- check voltage across prongs inside projector (110-125V).

Thermal fuse -- check continuity between violet lead at switch and violet lead at power cord receptacle. (Power off.)

Switch and motor -- check voltage at white and brown leads at wire connectors (110-125V).

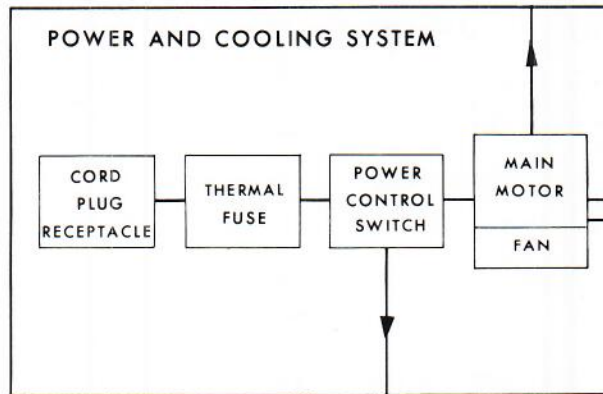
[See Electrical Diagram and Test Point Sheet (pages 46 and 47).]



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**POWER AND COOLING SYSTEM**

DESCRIPTION

The power and cooling system consists of the motor and fan, power switch, thermal fuse, cord and receptacle. A drive belt supplies mechanical power to the slide transport system and the transformer supplies electrical power to the illumination system. Taps on the main motor supply low voltage to the cycle solenoid and the focus motor.



THEORY OF OPERATION

When the switch is moved from the OFF position to the FAN position, the motor runs and the fan draws air through various openings in the projector and exhausts this air through the pre-heater duct and the opening in the rear of the projector. When the motor is operating, mechanical power is continuously supplied by the drive belt to the slide transport system. Low voltage is also available to operate the cycle solenoid and the focus motor. When the switch is moved from FAN to LAMP, the power is now supplied to the lamp transformer.

DIAGRAM OF POWER AND COOLING SYSTEM----FAN POSITION

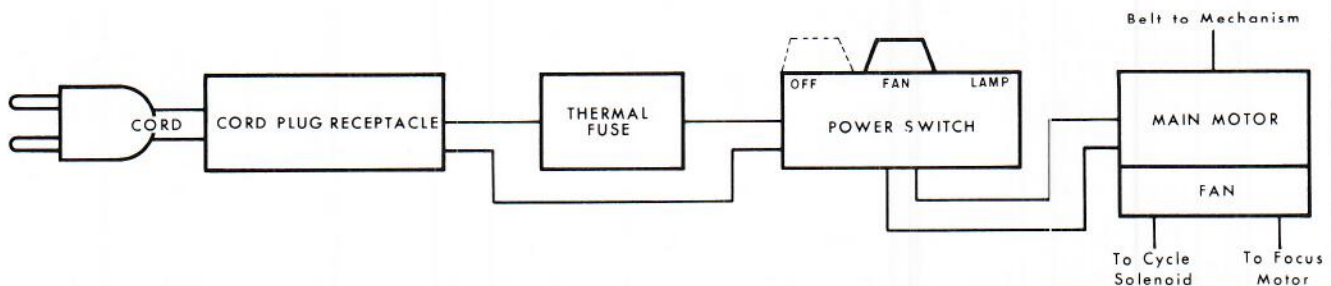
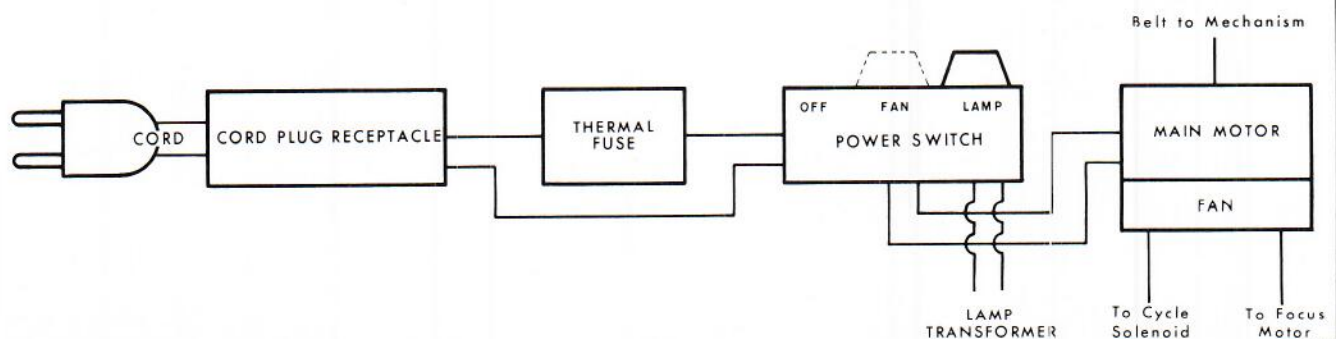
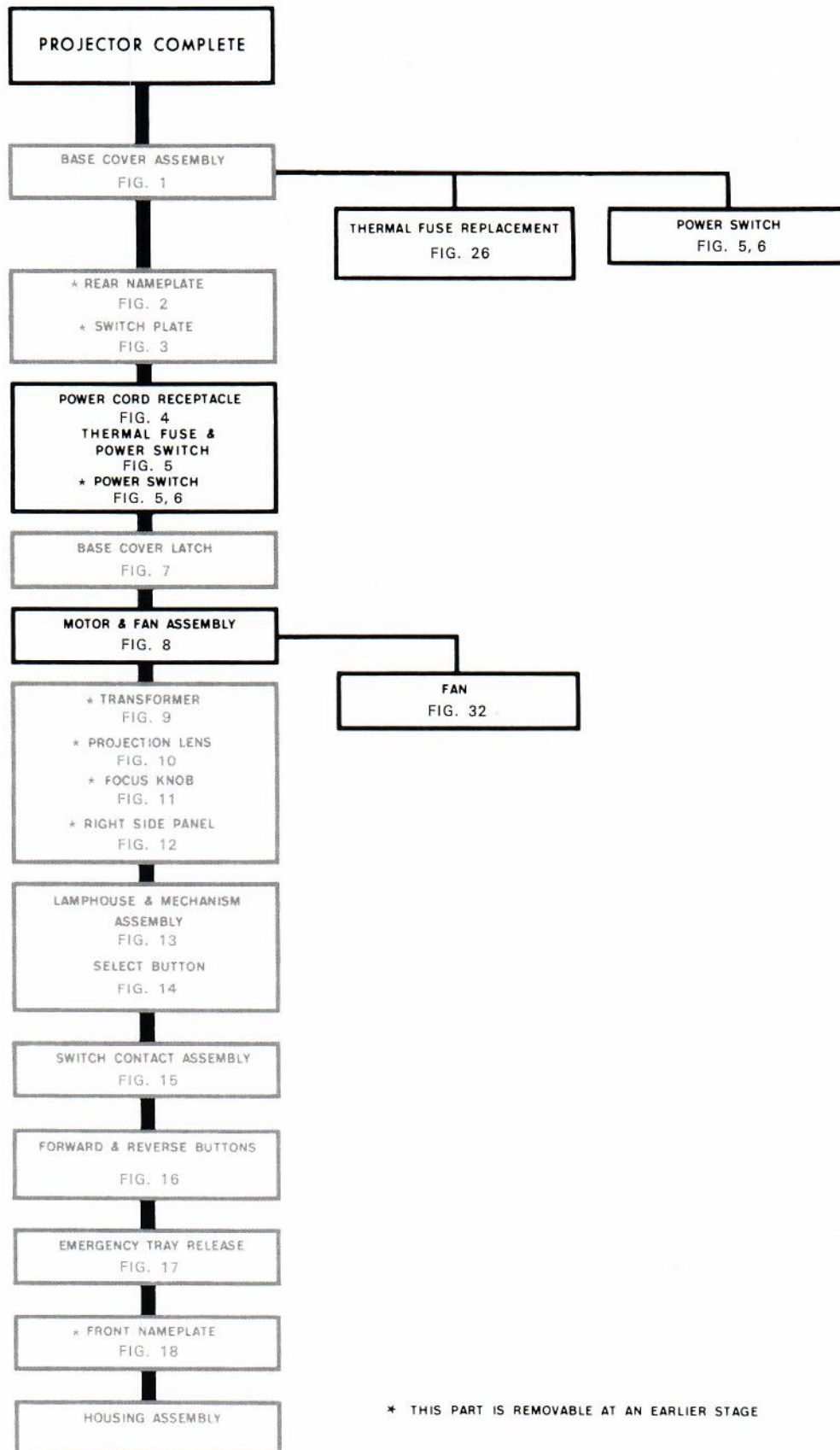


DIAGRAM OF POWER AND COOLING SYSTEM----LAMP POSITION



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# CHART OF DISASSEMBLY OF POWER & COOLING SYSTEM



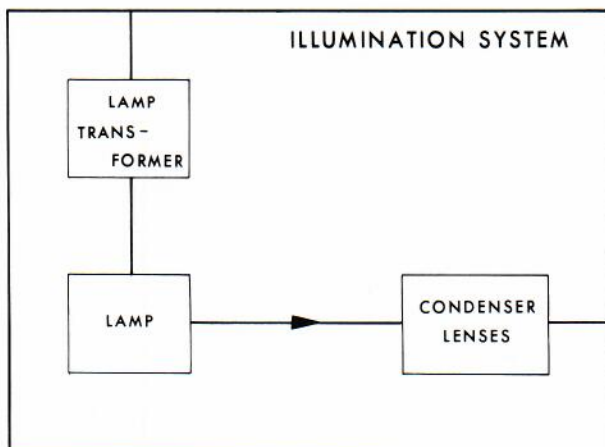
\* THIS PART IS REMOVABLE AT AN EARLIER STAGE

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## DESCRIPTION

The illumination system consists of the step-down transformer, the projection lamp, and the condenser lens assembly. Reduced voltage (24V ac) is supplied to the lamp through the step-down transformer. The lamp supplies the light through the condensers to illuminate the slide for projection.



## SPECIFICATIONS

Lamp Ejector - Ejector should push used lamp out of socket so lamp can be easily removed with fingers. Lamp ejector should not interfere with seating of replacement lamp.

Condenser Mount - Optical system components (projection lens, condenser lens, heat-absorbing glass condenser lens) should be secure, clean, and free of chips or cracks which may affect screen illumination.

Lamp - Burn-out of lamp before or during repair; should be replaced with a new lamp of same ANSI designation.

Dielectric Test - Projector must withstand electrical insulation test. Leakage current must not exceed 4.0 mA with 900V, 60 Hz, applied for one minute between the shorted prongs of the power plug and the frame, with the power switch in the lamp position.

The use of Tool #TL1513 performs the electrical insulation test. "Breakdown" and "Leakage" lamps should not light.

## TESTS AND CHECKS

WARNING: DANGEROUS VOLTAGE Use caution to make the following checks:

Lamp Transformer Input -- 110-125V ac at black and white leads at wire connectors

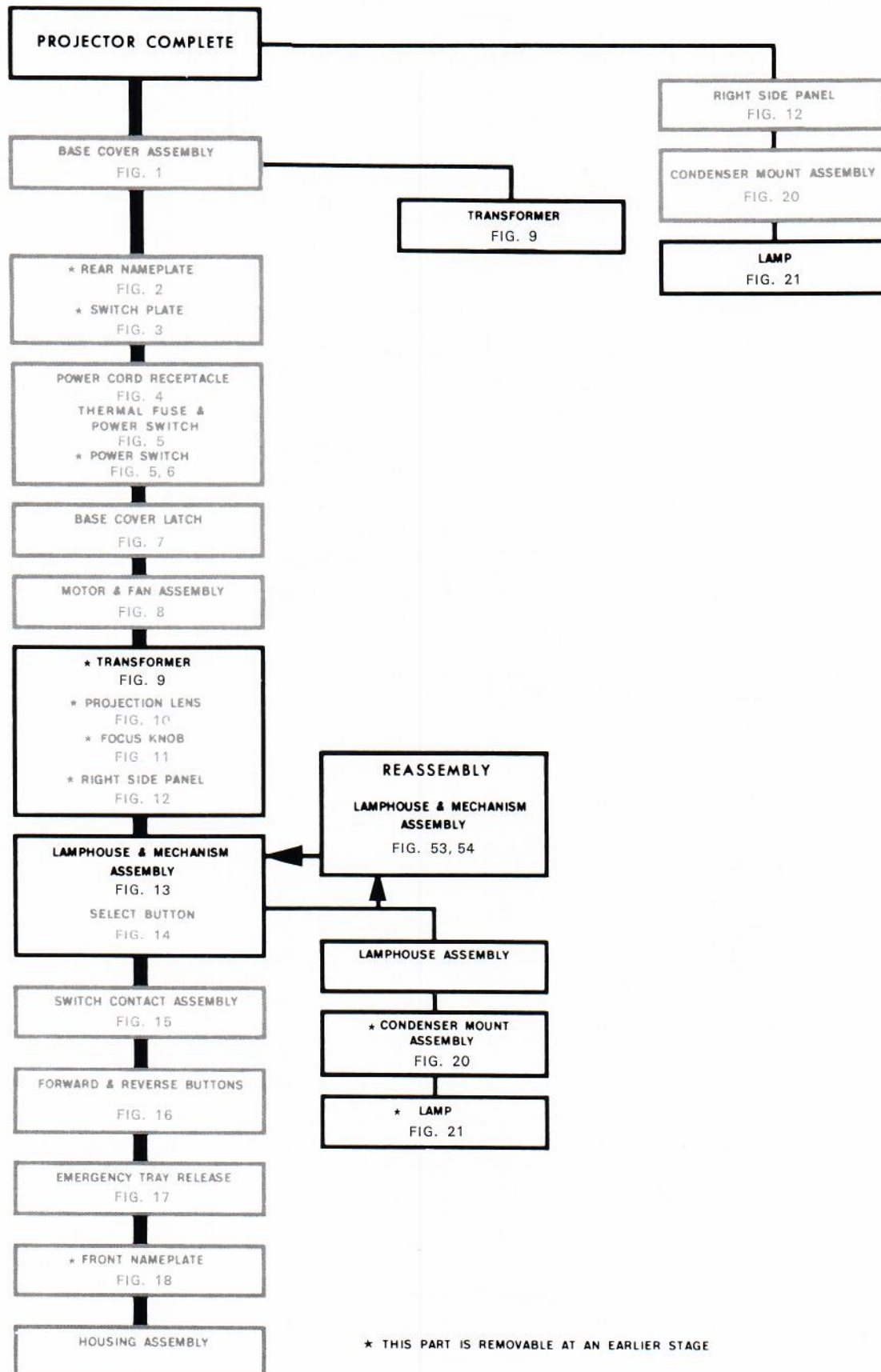
Lamp Transformer Output -- at lamp socket connections 24V  $\pm$  1V with 120V input.

For voltage check points see Electrical Diagram and Test Point Sheet (pages 46 and 47 ).

Condenser Lenses -- Check for broken, cracked or missing lens(es).

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# CHART OF DISASSEMBLY OF ILLUMINATION SYSTEM



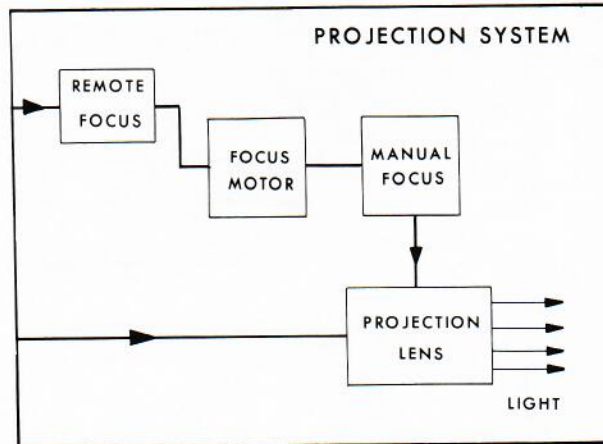
★ THIS PART IS REMOVABLE AT AN EARLIER STAGE





## DESCRIPTION

The projection system consists of the focus knob, focus shaft assembly, focus worm shaft assembly, focus motor, and projection lens.



## SPECIFICATIONS

Focus Knob -- Focus knob should move projection lens smoothly throughout its maximum travel. Moving focus knob towards the right edge of projector should disengage gear drive of projection lens so lens may be removed or pushed in all the way for storage.

Remote Focus -- Movement of the remote control cord focus lever should activate the focus motor to drive the lens either forward or backward.

Projection Lens -- Front and rear exterior lens surfaces should be free of all foreign matter. Lens should project an acceptable image; if it does not, a separate lens repair is indicated.

Dielectric Test -- Projector must withstand electrical insulation test. Leakage current must not exceed 4.0 mA with 900V, 60 Hz, applied for one minute between the shorted prongs of the power plug and the frame, with the power switch in the lamp position.

The use of Tool #TL1513 performs the electrical insulation test. "Breakdown" and "Leakage" indicators should not light.

Focus -- Focus should be sharp and clear across entire image.

## TESTS AND CHECKS

Check focus using focus test slide (Tool #TL1827).

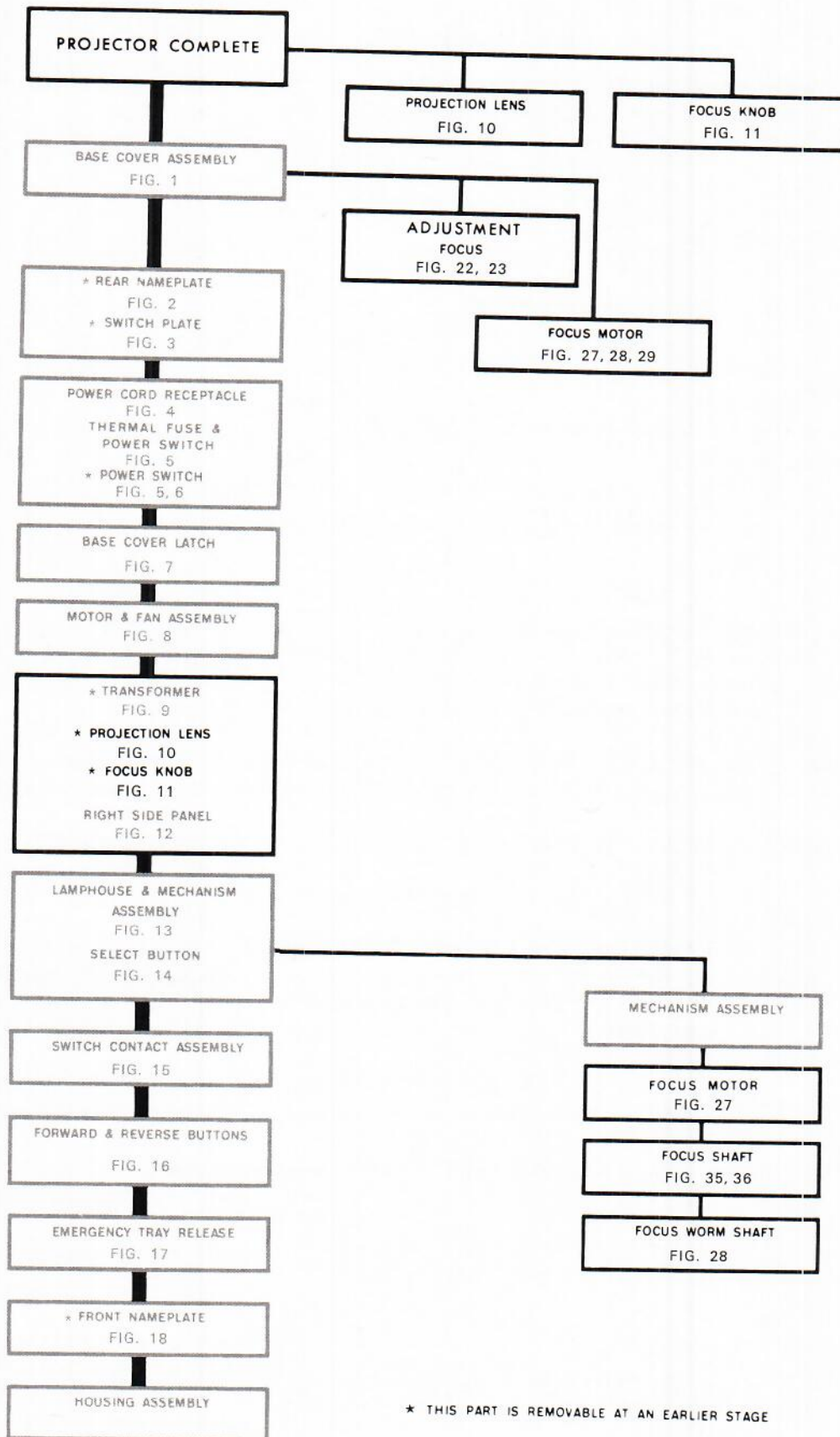
### Procedure

Focus for best image on the right side series of circles. The left side series of circles should be of equal quality.

Focus top series of circles. Bottom series of circles should be of equal quality.

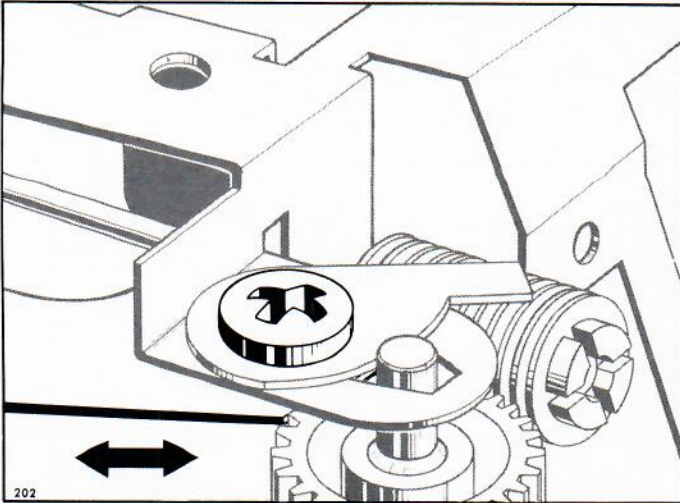
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# CHART OF DISASSEMBLY OF PROJECTION SYSTEM



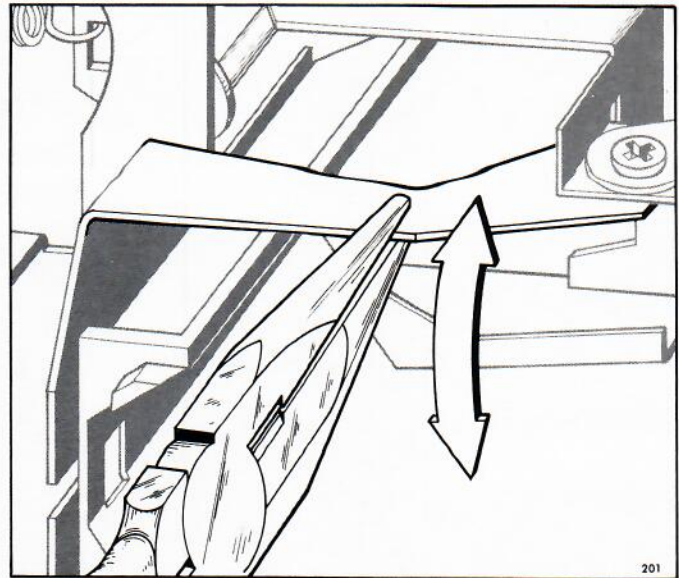


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**PROJECTION SYSTEM ADJUSTMENTS**



**FOCUS (HORIZONTAL)**

Loosen screw and move arm left or right. Tighten screw.



**FOCUS (VERTICAL)**

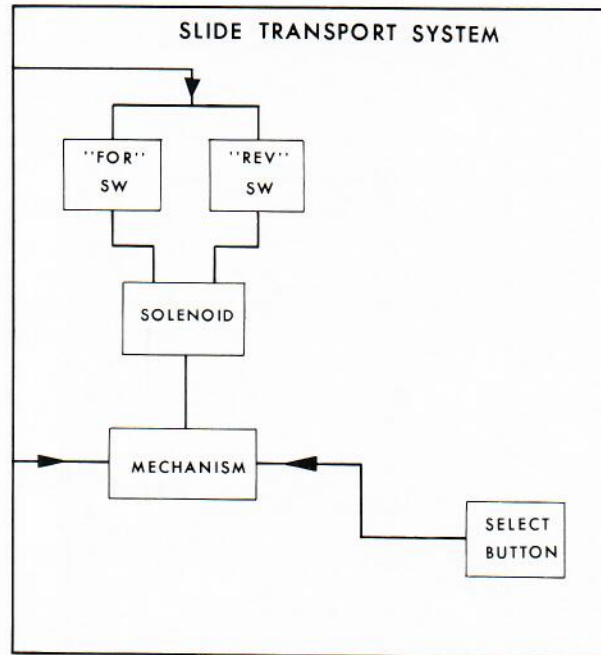
Form bracket arm up or down.

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www.KodakParts.com  
**SLIDE TRANSPORT SYSTEM**

### DESCRIPTION

The slide transport system is the prime mechanical means by which the slides in the tray are projected, moved, and stored.



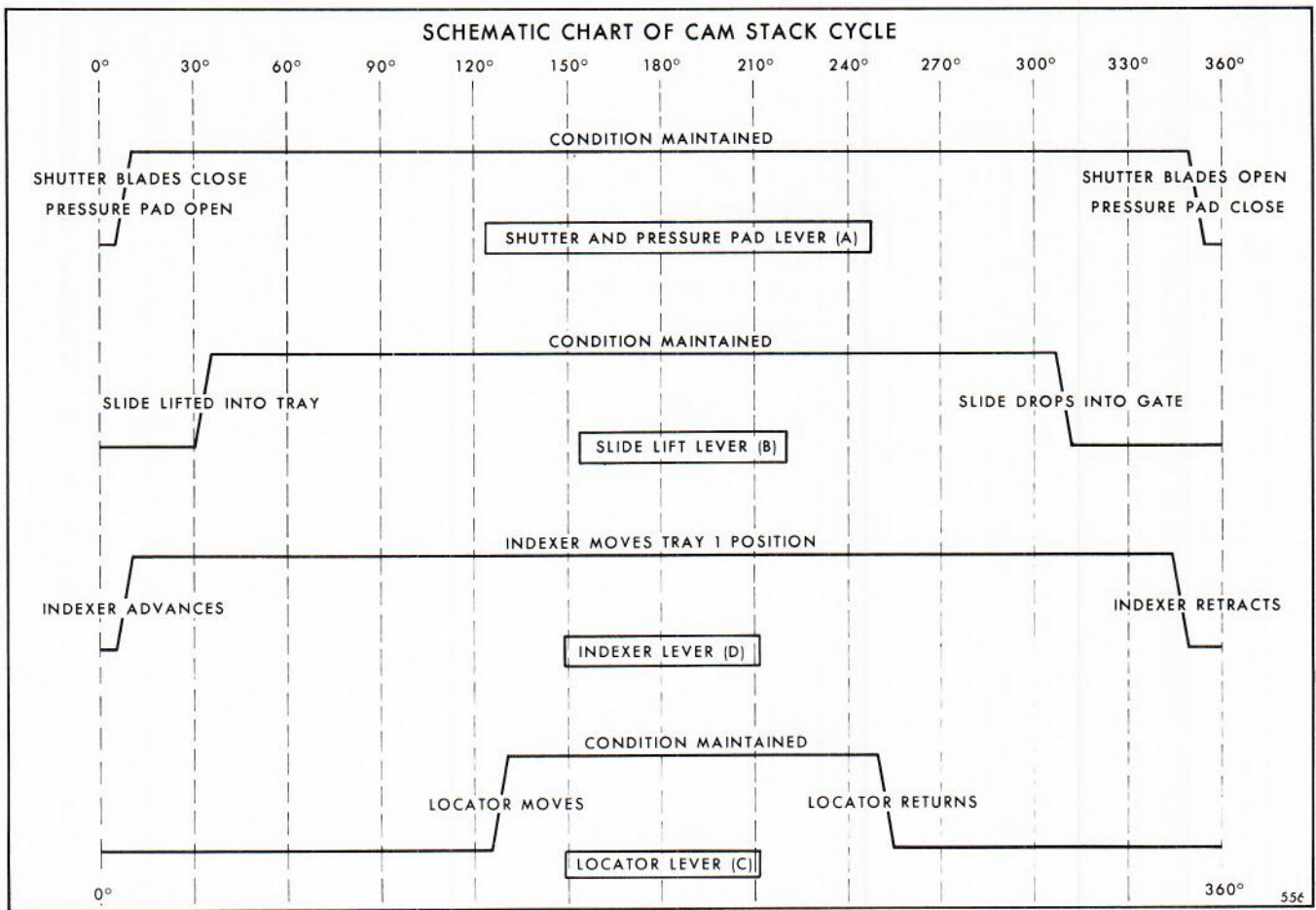
### THEORY OF OPERATION

When the projector is plugged into the proper electrical outlet and turned on, the projector motor runs continuously, driving the worm pulley (1), and cam drive gear (5). The clutch on the cam stack is in the relaxed position [that is, the drive pawl (4) is held away from engagement with the cam drive gear (5) by the cycle lever (3) and no further action occurs at this time.]

A cycle is started by momentarily pressing the forward button either on the projector or on the remote control cord. This actuates the cycle solenoid. The cycle solenoid pulls up the cycle lever (3) releasing the drive pawl (4) which moves into position to engage the drive gear (5) and the cam stack (6) starts to rotate. The cams actuate four levers; they are: the shutter and pressure pad lever (A), the slide lift lever (B), the locator lever (C), and the index lever (D). A retard lever (8) maintains pressure on the cam stack at the slide lift cam to retard the cam movement and prevent backlash or overtravel.

Lever (A) closes the shutter blades (7) and the pressure pads (not shown) open. The slide in the gate is lifted into tray by lever (B). In Figure 60, locator (9) moved by lever (C), disengages from the tray bosses and in Figure 61, the indexer (10) moved by lever (D) moves the tray forward one position. The locator (9) reengages the tray bosses to lock the tray in the next slide position over the gate; slide in the new position now drops into the gate, the pressure pads close and the shutter opens. The drive pawl (4) engages the cycle lever (3) contact and disengages from the drive gear (5). The cam stack stops rotating. This completes the 360-degree rotation of the cam stack cycle as shown.

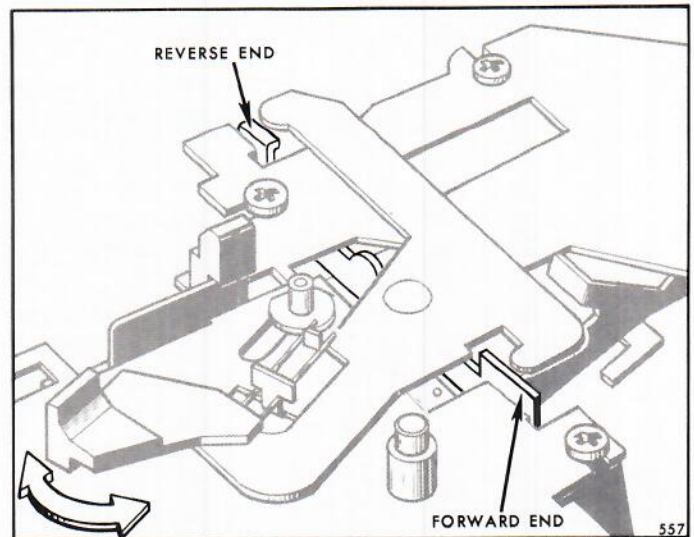




### Reversing

Forward or reverse is determined by the position of direction lever (see Figure 57). Normal or "at rest" position is forward operation.

When reverse button is pushed and held for a slightly longer time than required for forward operation, the cycle lever pivots "reverse" end of direction lever up for a long enough time to trap the index lever as it moves. The index lever then pivots in opposite (or reverse) direction from forward operation. Cycle solenoid is actuated for as long as reverse button is held.



### Half Cycle

The purposes of half cycle or use of the "Select" button are to:  
Return slide from gate to tray for editing,

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

When "Select" button is depressed ALL THE WAY DOWN AND HELD, the select lever (2) moves cycle lever (3) to disengage drive pawl (4). The drive pawl engages drive gear (5) and cam stack starts to rotate.

The index lever (D) is pushed off its cam by select lever (2) blocking its movement.

All other levers operate as in first half of full cycle forward. Shutter (7) closes, slide lift lever (B) pushes slide into tray, and locator (9) pulls out of contact with lugs of tray.

With "Select" button still pressed ALL THE WAY DOWN, the drive pawl (4) stopped by half cycle arm (not shown) of cycle lever, approximately 180 degrees from its starting position. The cam stack stops rotating and all lever action stops at this point.

When "Select" button is released, the half cycle arm of cycle lever releases drive pawl (4) and remaining half cycle is performed as in full cycle; locator (9) positions tray, slide lift lever (B) descends, pressure pads close, and shutter (7) opens.

#### SPECIFICATIONS

Forward and Reverse -- Proper operation of the forward and reverse buttons on remote control and projector housing:

1. Forward operation is controlled by momentary pressure all the way down on the "FOR." button, then release.
2. Reverse operation requires a slightly longer hold all the way down on the "REV." button, then release. If the 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.
3. Solenoid should not be noisy and should be positive in action. To adjust, see Figure 30.

Select Button -- The function of the select button is to permit editing of a particular slide or manual rotation of tray. Button must not bind in down position.

1. The select button is not designed to advance the slide tray.
2. When select button is DEPRESSED ALL THE WAY and HELD:
  - a. Slide being shown is raised back up into tray for editing or examination.
  - b. Slide tray may be rotated by hand to any numbered slide position, either forward or backward. When button is released, slide opposite gate index will drop into gate and be shown.
  - c. Slide tray may be rotated to "zero" and removed from the projector.



Emergency Clutch Release -- The emergency clutch release must actuate when any of the following are restricted in their initial movement: slide lift lever, tray locator, or tray indexer.

Shutter -- The shutter should cover aperture during all movement of slides in gate.

Dielectric Test -- Projector must withstand electrical insulation test. Leakage current must not exceed 4.0 mA with 900V, 60 Hz, applied for one minute between the shorted prongs of the power plug and the frame, with the power switch in the lamp position.

The use of Tool #TL1513 performs the electrical insulation test. "Breakdown" and "Leakage" lamps should not light.

#### TESTS AND CHECKS

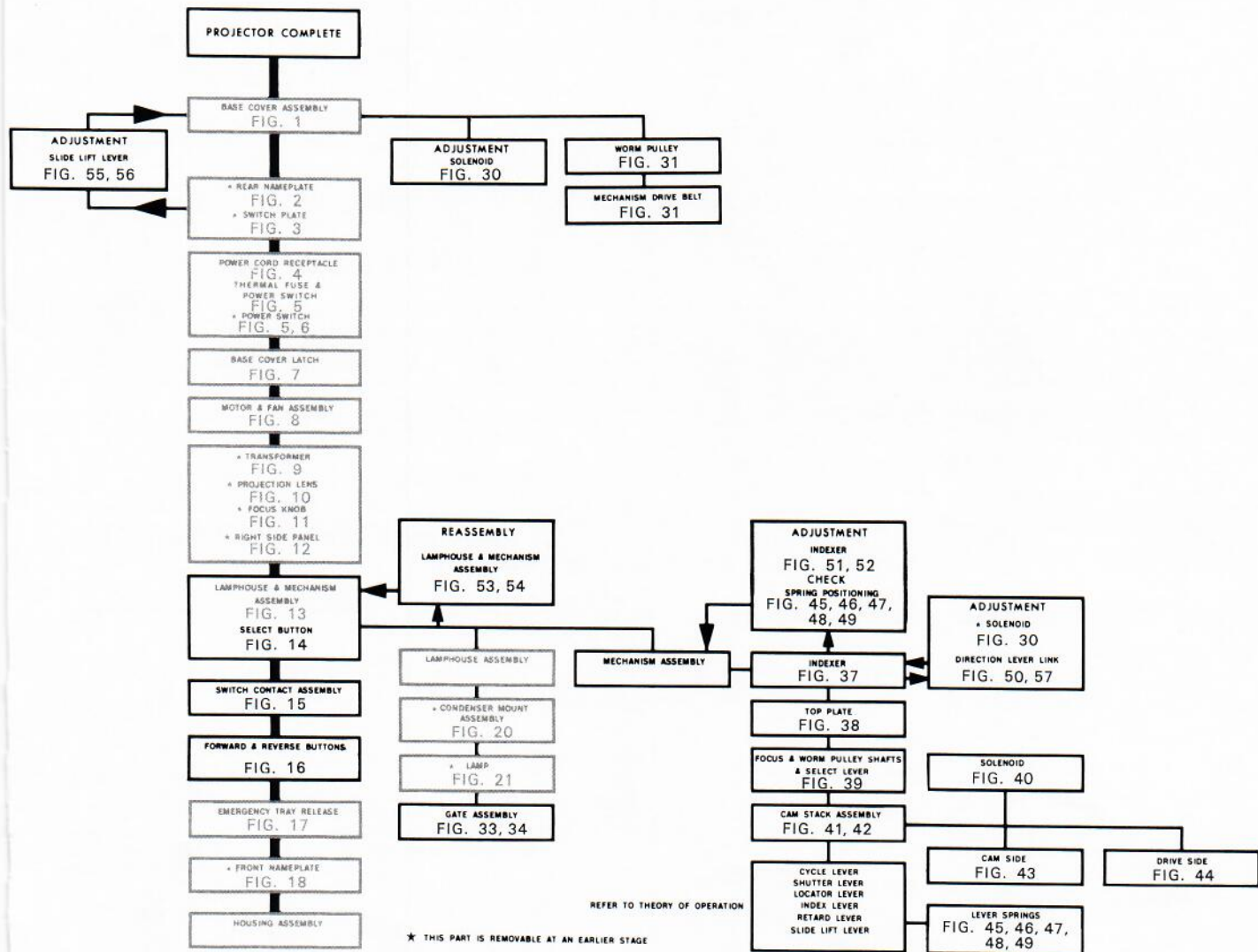
Power to the Cycle Solenoid -- Test Points 10 and 11

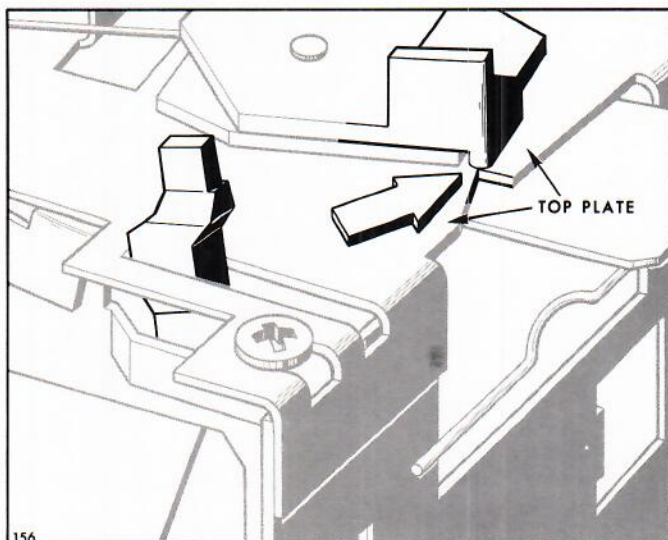
[For voltage checkpoints, see Electrical Diagram and Test Point Sheet (pages 46 and 47).]



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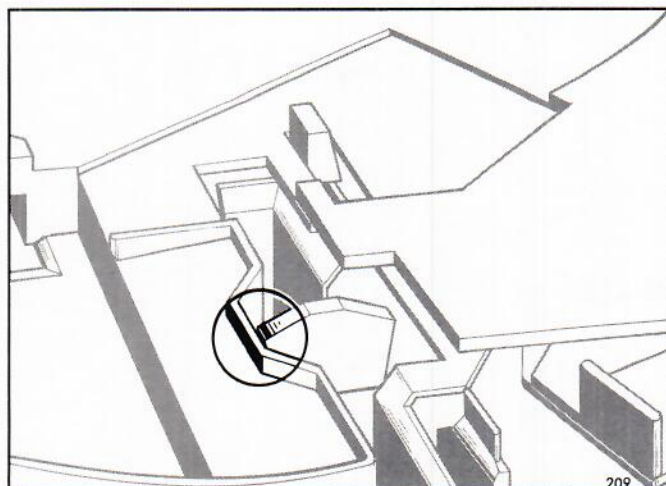
## CHART OF DISASSEMBLY OF SLIDE TRANSPORT SYSTEM





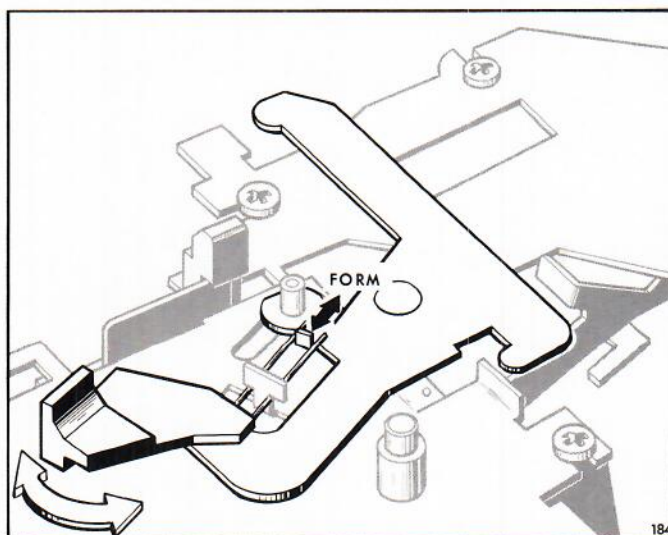
**INDEXER**

When cam stack has been rotated so indexer is at its farthest travel.



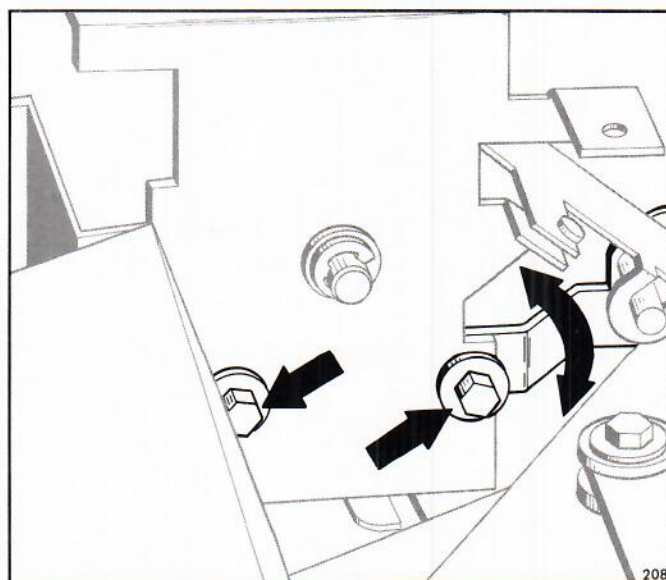
**SLIDE LIFT LEVER**

Operate projector to select position and shut off. Observe slide lift lever ramp: alignment should be as shown.



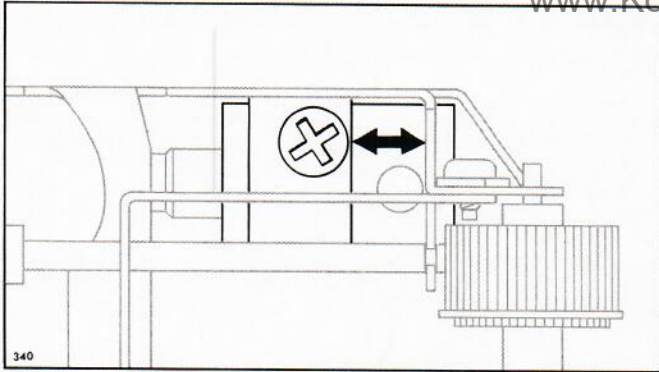
**INDEXER**

If alignment is not as shown in illustration above, form neck of piece, as indicated, to move tip for proper alignment.



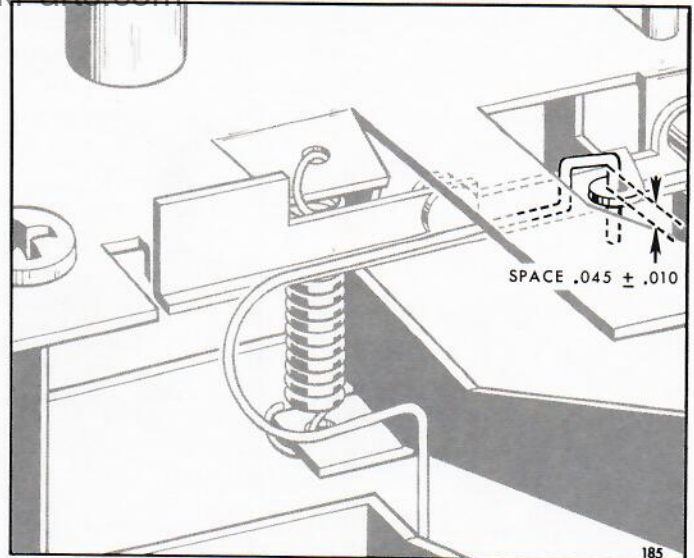
**SLIDE LIFT LEVER**

If alignment is not as shown in illustration above, loosen screws slightly and move mounting bracket up or down to bring slide lift lever to proper alignment. Tighten screws.



### SOLENOID

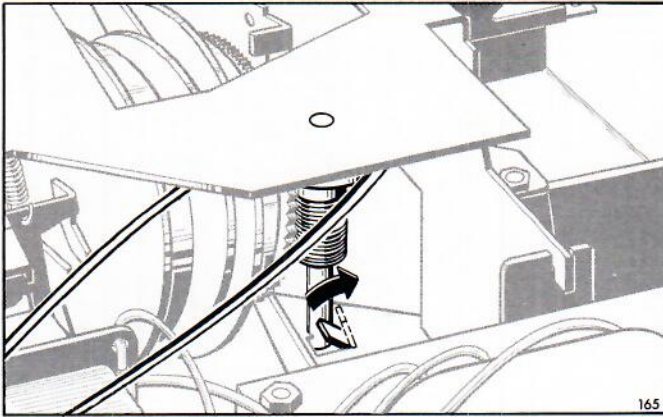
Loosen screw; move solenoid either direction as required.



### DIRECTION LEVER LINK

Adjust space as shown. Use arm on Forming Tool (Tool #TL1828).

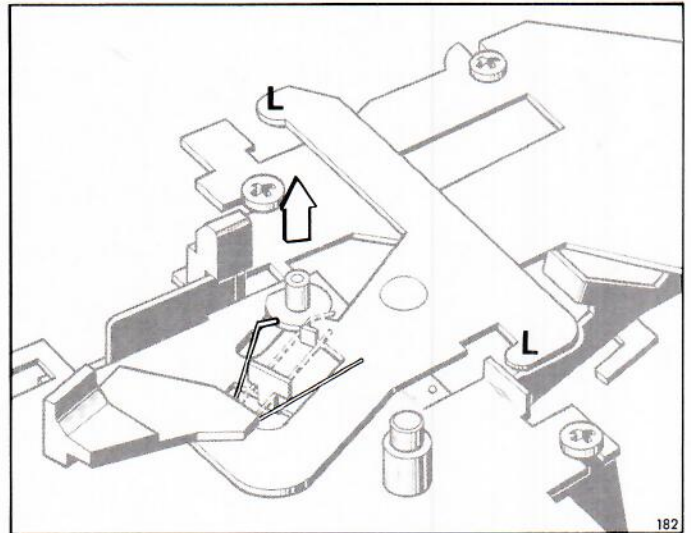




WORM PULLEY AND BELT

Form tab away from shaft. (Perform the forming slowly to prevent the tab from breaking off.)

Lubrication: Place small amount of lubricant (part No. 763002) on pulley shaft and on worm teeth.



INDEXER

Spread spring and lift off.  
Lubrication: Apply a thin coat of lubricant (part No. 763003) on the underside of two tabs labeled "L".

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**TOOLS, CEMENTS AND LUBRICANTS**

TOOLS

- |            |  |
|------------|--|
| 1. #TL1827 | Focus test slide                       |
| 2. #TL1828 | Forming tool                           |
| 3. #TL1829 | Mechanism operating fixture (optional) |

CEMENTS

- |                 |                       |
|-----------------|-----------------------|
| Part No. 763098 | 3M SCOTCH-GRIP Cement |
| Part No. G135   | Vulcalac              |

LUBRICANTS

- |                 |                          |
|-----------------|--------------------------|
| Part No. 763001 | SAE #20 Oil              |
| Part No. 763002 | Plastilube               |
| Part No. 763003 | Plastilube with 12% Moly |

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**ELECTRICAL CHECKPOINTS AND SPECIFICATIONS**

WARNING: DANGEROUS VOLTAGE Use caution to make the following checks.

ELECTRICAL CHECKPOINTS

1. Main Power Supply -- 110-125V ac, 60 Hz -- Test Points 1 and 2
2. Continuity through Thermal Fuse -- Test Points 2 and 3 (Power off.)
3. Power to Main Motor -- 110-125V ac, 60 Hz -- Test Points 4 and 5
4. Power to Transformer -- 110-125V ac, 60 Hz -- Test Points 5 and 6
5. Power to Transformer -- Transformer Output  

110V input -- 22V + 1%	
120V input -- 24.2V + 1%	Test Points 7 and 8
125V input -- 25V $\pm$ 1%	
6. Power to Focus Motor -- Test Points 9 and 10
7. Power to Cycle Solenoid -- Test Points 10 and 11

SPECIFICATIONS

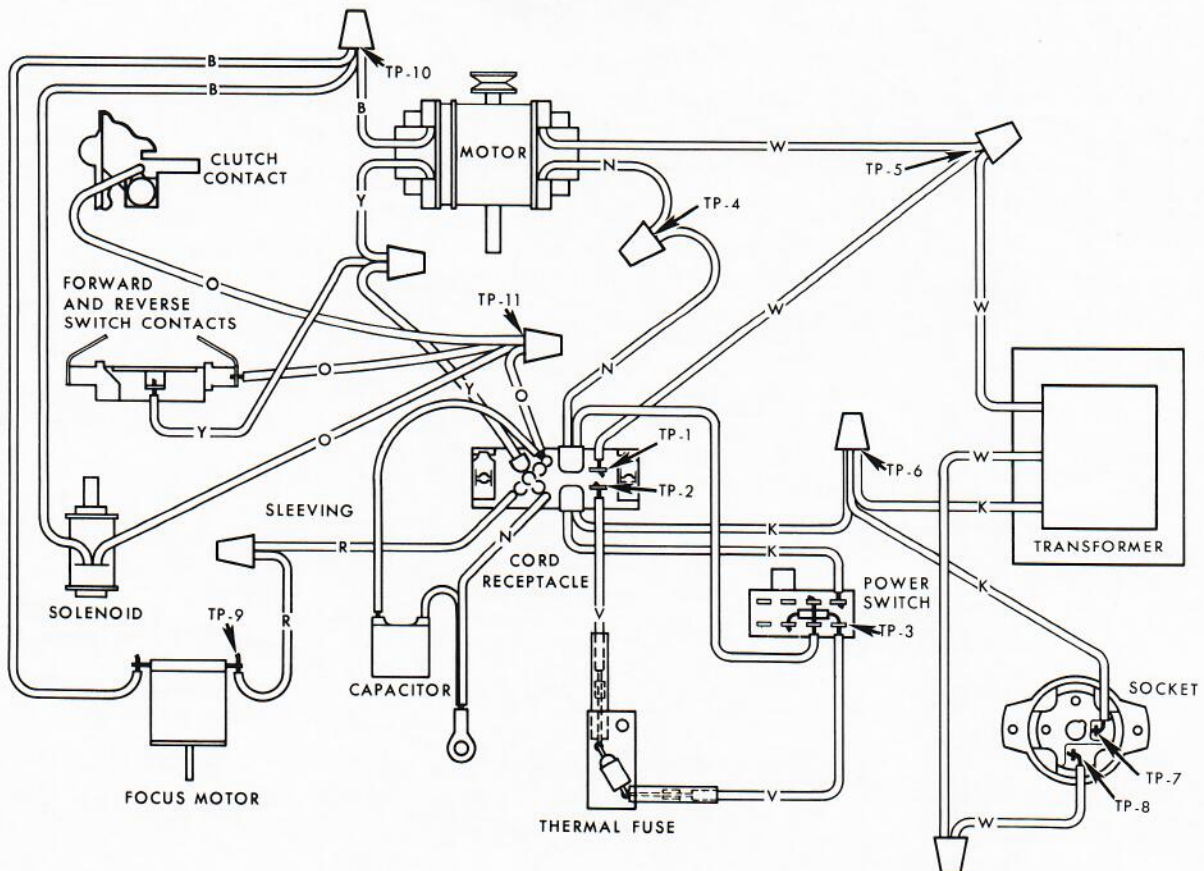
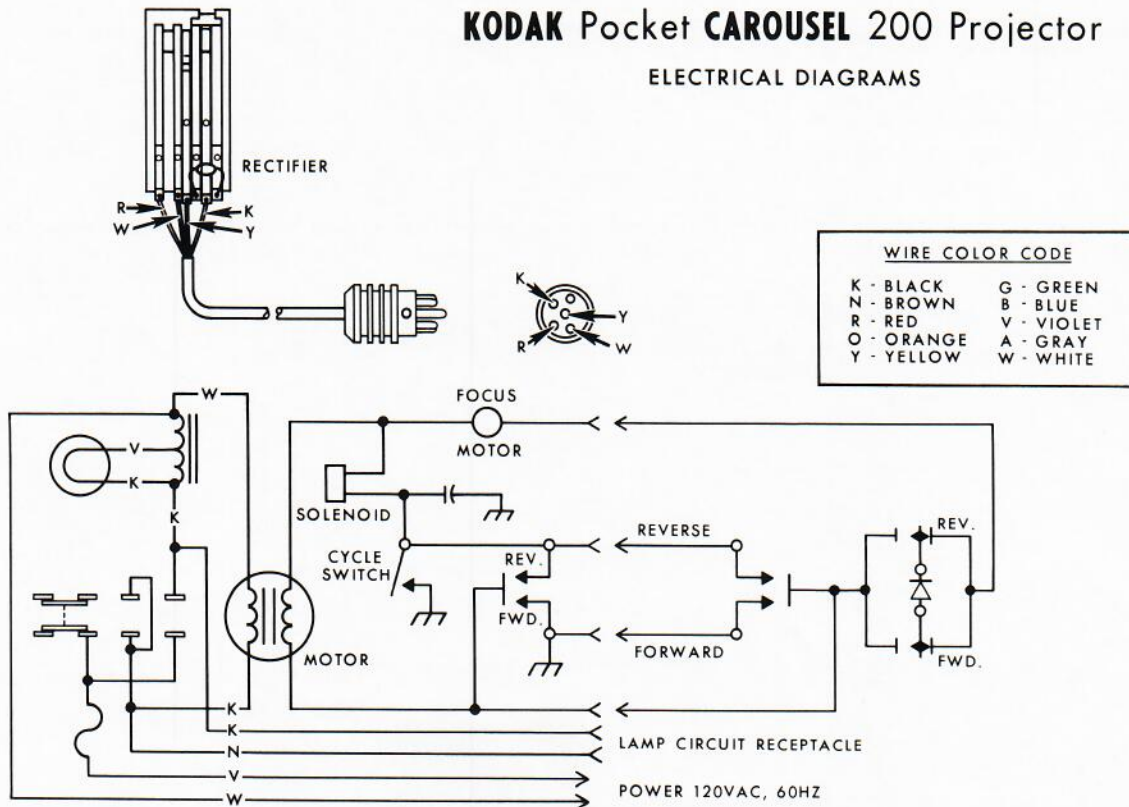
Projector must withstand electrical insulation test. Leakage current must not exceed 4.0 mA with 900V, 60 Hz, applied for one minute between the shorted prongs of the power plug and the frame, with the power switch in the lamp position.

The use of Tool #TL1513 performs the electrical insulation test. "Breakdown" and "Leakage" lamps should not light.



# KODAK Pocket CAROUSEL 200 Projector

## ELECTRICAL DIAGRAMS



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