



# **SERVICE & PARTS MANUAL**

## **16mm SOUND MOTION PICTURE PROJECTORS**

**MODELS**  
**40-A, 40-B, 40-BX, 55,**  
**56, 60-B, 60-2, 60-4,**  
**60-10, 60-25,**  
**AND**  
**G (BRITISH GREYLINE VICTOR)**

**PREPARED BY**  
**VICTOR ANIMATOGRAPH CORPORATION**  
**DAVENPORT, IOWA, U. S. A.**







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# **SERVICE SECTION**

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## FOREWORD

This Service and Parts Manual has been prepared for your information and guidance. It is given to you as confidential matter. (Additional copies of Manual \$3.00.)

It contains all data, photographs, and wiring diagrams for the servicing of Victor 16mm Sound Motion Picture Projectors from the Model 40 through 60 series. The Manual is organized so that data appears on left hand pages with corresponding photographs on right hand pages, opposite.

On pages that show general assemblies, a column will be found directly to the right of nomenclature giving page number of assembly breakdown.

At the right side of the nomenclature list appears a chart showing interchangeability of parts. The "G" in this chart denotes the British Greyline Victor Projector.

You will note that various parts are NOT numbered. These are factory operations and have been purposely excluded for reasons of simplification.

Parts that are complete assemblies have their photograph key number encircled.

Read and observe the following so there will be no misunderstanding in regard to the Victor Service Policy:

- A. All parts orders and correspondence pertaining to service should be sent directly to our Service Manager, and not included in correspondence for other departments.
- B. When ordering, the number of each part and its description should be given, as well as the model and serial number of equipment, if available.
- C. The Victor Warranty does not cover lamps or tubes, or the replacement of parts which become inoperative because of misuse, accident or negligence, nor if the part or parts have been repaired or altered in any way which, in our judgment, affects their condition or operation. Also, our Warranty does not cover labor charges unless the equipment is shipped prepaid to the factory at Davenport, Iowa, U. S. A., or to the Chicago or New York branches.
- D. All parts taken from equipment in guarantee must be returned to the factory for inspection before "No Charge" replacements can be made. Full information must be given as to serial number, model and date of sale of said equipment.
- E. Authorization must be received from the factory before any parts or equipment may be returned for credit. A ten percent (10%) handling charge will be deducted from all credits issued for parts that have been overstocked.

**VICTOR ANIMATOGRAPH CORPORATION**  
**Davenport, Iowa, U. S. A.**

## GENERAL INSPECTION

A general inspection will be adequate in most cases especially where the projector has been checked periodically and its general performance known in advance. In any case the preliminary check will soon indicate if there is any need to disassemble the projector for a more elaborate overhaul.

### PROCEDURE

#### A. INSPECTING THE PROJECTOR

**Set-up.** Set the machine up as for a show and check all cords and plugs in the process.

**Belts & Pulleys.** Replace belts if stretched or kinked. Check pulleys for excessive wear.

**Sprockets.** Make sure the sprocket guards have the proper clearance and see that the sprocket teeth are not worn. Worn teeth can be extremely damaging to film.

**Rollers.** Make sure all rollers are clean and revolve freely. If there is any question make a special check to see if the rollers have any flat surfaces anywhere. If so, replace.

**Gate.** Clean the gate, pressure plate, aperture and sound drum. An orangewood manicure stick is very good for removing encrusted emulsion and "fuzz" from corners of the aperture. Check carefully for wear of guides or "rails" on which the film rides.

**Shuttle.** Check for wear on shuttle teeth. Lower shuttle tooth should receive special attention.

**Lens.** Clean lens carefully. Use lens cleaning tissue in preference to a handkerchief although this is all right if laundered soft and the glass not pressed hard. (Remember that optical glass is much softer than ordinary glass.)

**Lamphouse.** Release the lamphouse locking screw and remove the lamphouse. Clean the condenser and reflector with tissue.

**Lamp.** Check the lamp for excessive blackening adjacent to the condenser, and wipe it clean. If the glass is blistered or if the filaments seem to sag, replace the lamp.

#### **Motor.**

- a. Check the motor brush accessible from the front. If worn, remove the projector from case and check the rear brush. Re-

place them if necessary.

- b. Make sure that the bearing surface of the brush is smooth and shiny. If rough and oily the commutator needs cleaning.
- c. The commutator can be cleaned moderately well if not in bad condition by using a small piece of cheesecloth or extra fine abrasive.

**Speeds.** Turn the motor on, listen to its sound and see that it operates at 16 and 24 speeds, forward and reverse. (Count 80 and 120 revolutions of the 12 tooth feed sprocket per minute for the 16 and 24 speeds respectively.) The operation of the switches can be determined at this time.

For sound film the projector **MUST** run at *exactly* 24 frames per second. Use the neon lamp stroboscope and check the teeth of the sound sprocket. Shade the teeth from outside light. By the neon lamp they will appear to stand still when the projector is running at the proper speed.

**Clutch and Trip.** These should operate freely.

**Takeups.** The operation of these is best checked with film threaded on the projector. Inadequate pull or jerkiness may mean new belts or adjustment of the clutch pulleys.

**Governor.** If projector is not running at proper speed, the governor should be adjusted.

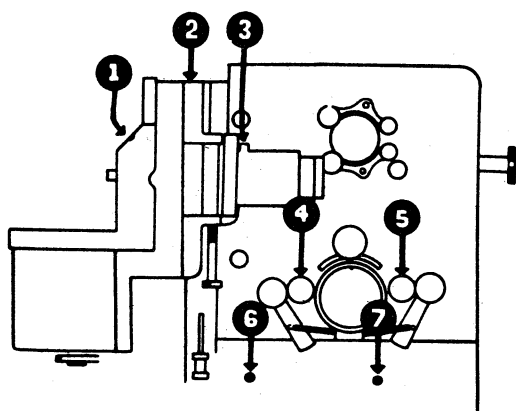
- a. First, clean the contact points and check the speed with the neon lamp again. Contacts controlling the sound speed (24 frames per second) are at the bottom. They can be recognized by the heavier spring and also by the fact that the silent speed (16 frames per second) contacts are held down by a straight lug while the other lugs are curved.
- b. If the speeds are still inaccurate, adjust the contacts until correct.
- c. Clean the commutator ring at the back of the governor and make sure the brushes are not worn and that they are making good contact.

**Illumination.** Turn on the lamp and make sure the light on the screen is constant all the way across. (A photocell type exposure meter will be found useful for this, although visual inspection will usually be satisfactory.) If necessary

adjust the lamp sideways in the lamphouse until illumination is properly centered.

**Still Picture.** This rarely needs attention, but check it for operation.

**Film Scratches.** Make a loop of about 18" of new (light struck) film which is very soft and run it through the projector a dozen times or so. This will quickly indicate any scratching at the gate. If any abrasion marks appear, the front and back gate plates and other parts such as sprocket guards must be cleaned and checked very carefully.



## OILING

More service problems result from over-oiling than under-oiling. Excess oil clogs the light slit of the sound lens, gums the brushes of motor and governor commutators and destroys wire insulation. This results in loss of sound quality, irregular speed and short circuiting of electrical components.

For this reason the oiling schedule as follows is recommended:

OILING POINTS	AMOUNT & FREQUENCY
1, 2 and 3....	Four drops every four hours of running time.
4 and 5.....	Two drops every fifteen hours of running time.
6 and 7.....	Two drops every four hours of operation.

Oiling points 6 and 7 will not be found on any projector having a ball bearing motor.

All oiling points should likewise be oiled as above when the equipment is installed and after prolonged periods of idleness.

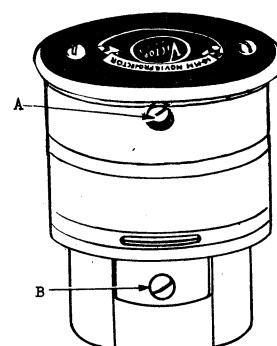


Illustration I

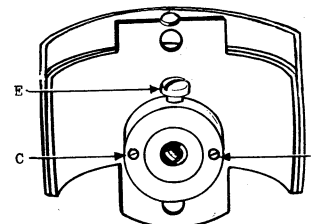


Illustration II

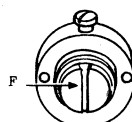


Illustration III

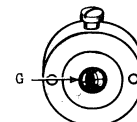


Illustration IV

## CLEANING SOUND LENS

### FIVE-HOUR CLEANING:

Remove sound drum by pulling directly out after loosening set screw. Use pipe cleaner to clean the film channel slot and the groove in the top of the sound lens. Also clean lower side of sound lens inside the sound drum. Be sure no lint remains on lens or slot. Also be sure sound drum is fully seated with slot in top position.

### FIFTY-HOUR CLEANING:

Remove sound drum as above. Remove screws 'A' and 'B' (Illustration I). Thereafter lift out sound channel and sound lens assembly and place in inverted position. Next remove screws 'C' and 'D' (Illustration II) and lift out sound lens unit. (WARNING — Do not tamper with or loosen screw 'E'. To do so will necessitate return of entire assembly to the factory or nearest Victor Service Center for resetting of lens.) With a clean lintless cloth polish sound slot 'F' (Illustration III) by placing cloth over thumb nail. Also polish condenser lens 'G' (Illustration IV). Thereafter, re-assemble sound drum being careful to have sound slot nearest screw 'B'. (Illustration I), as shown.

## B. INSPECTING THE SOUND REPRODUCTION SYSTEM.

**Exciter Lamp.** Remove and check for excessive blackening and for sagging filament. Wipe clean and replace. Make sure the lamp is aligned with the slit. This can be seen easily when photoelectric cell is removed and a piece of paper held in its place. Be certain solder contact base is clean.

**Photocell.** Remove cap, wipe clean. Correct functioning of the photocell can be determined by noting the hiss when the amplifier is turned on and without film, and with the photocell voltage adjusting screw set properly. (Not on all units.) Sometimes photocell breakdown will be checked best by listening to a test film with another photocell in the projector.

**Sound Drum and Slit.** Clean these very carefully. An ordinary pipe cleaner is effective. Lens tissue or even cheesecloth, with or without an orange-wood stick is satisfactory. Make sure the guides or "rails" are not worn. (See Page ix.)

**Tubes.** While the operating of the tubes can be gauged by listening to a test reel, it is preferable to remove and check in a standard tube tester. A good tester will show when a tube is near the end of its useful life and will avoid subsequent trouble.

**Fuse.** Some users replace the regular fuse with other fuses up to 10 amp. capacity. The fuse is for protection and 3 amp. is the maximum size to be used for all 110 V., A.C. or D.C. Models.

**Test Film.** Use a sound subject, preferably the S.M.P.T.E. test reel or some other good subject with which you are thoroughly familiar. Then you can quickly recognize any variation from standard and investigate further.

### Sound Quality.

- a. **WOWS.** Slow speed oscillations are usually caused by improper operation of the impedance roll assembly. Make sure that the flywheel is working smoothly and that the pressure roller runs free.
- b. **FLUTTER.** Relatively high speed oscillations are usually caused by improper functioning of the sound sprocket filter mechanism. Check the clearance and smoothness of the sound sprocket and its roller. (See Page xi.)

(Note: Wows are sometimes described as "mushy sound" and flutter as "sour sound." While inexact, they are quite descriptive and may have some definitive value.)

**Sound Controls.** Check the operation of switches, volume and tone controls. Listening to the sound while operating the latter will indicate whether the amplifier needs further attention.

## GENERAL OVERHAUL

A periodical overhauling is indicated when the equipment has been in frequent use even though the General Inspection shows that it is functioning satisfactorily. Such an overhaul may be likened to the 10,000 and 20,000 mile checkups on your car.

The following overhaul procedure is indicated also where there is any question about the proper performance of the projector, irrespective of the amount of use it has had.

The General Overhaul involves dismantling the projector in four main operations as below:

### 1. REMOVE PROJECTOR FROM CASE:

The projector is held in the case by four screws at the bottom of the case. After removing the screws, tilt the projector forward carefully to gain access to the plugs connecting projector to the amplifier. Disconnect these plugs and remove projector.

### 2. REMOVE LAMPHOUSE:

Loosen the thumbscrew holding the lamp-house and remove same. Then remove the five screws holding the remaining part of the lamphouse unit to the main casting of the projector. This exposes the shutter and intermittent mechanism, etc.

### 3. REMOVE SIDE PLATE:

This plate is held by four screws and covers the takeups, clutch pulleys, flywheels, etc.

### 4. REMOVE THE MOTOR:

This is necessary only when the commutator or bearings need attention.

The Motor Armature, No. 26841 or 20261, should be checked when giving the projector a complete overhaul. The commutators, if rough, can be turned on a lathe. If the undercut taken on the commutator is too deep,



the armature will not operate satisfactorily and should be replaced.

Under the following headings are given the steps most often necessary for properly checking the projector mechanism. Owing to the extreme accessibility of the mechanism, replacements even of vital parts are easy and positive.

#### **5. SHUTTLE:**

This part, #20219-A, is the heart of the entire mechanism and must be checked carefully.

- a. Check for wear or looseness of the sides of the shuttle against the heart shaped cam. Replace if loose. Do not attempt to "bend" to fit. (It is possible to "stone" the shuttle to smooth out minor "grooves," but this is not recommended except with *extreme* caution.)
- b. Make sure the shuttle teeth are not badly worn or rough. Minor rough spots on the shuttle teeth can be "stoned" smooth provided care is used. (Caution is urged if this is attempted.)
- c. When replacing the Shuttle Bearings, #20222, make certain they are seated properly so that the shuttle will not strike them in its up and down motion. Also be certain that the shuttle retaining clamps are securely in place and the screw is tight.
- d. When it is found necessary to replace the shuttle, Shuttle Bearings, #20222, should be thoroughly checked. If they are beginning to show wear, they should be replaced.
- e. When installing a new Shuttle, #20219-A, the Oscillating Gear Assembly, #19479-A, should be adjusted to the proper position as this assembly controls the shuttle action. The shuttle teeth should not extend through the film channel more than 1/16 of an inch. This adjustment on the oscillating assembly can be made by using Tool #9159.

In the event of any question of the best functioning of this vital part, replace the entire shuttle to circumvent subsequent complaints.

#### **6. MAIN DRIVE BELT:**

- a. The Motor Drive Belt #19128, should be checked, and if it shows signs of wear, it should be replaced.
- b. Remove motor fan and upper safety shutter guide. Also remove shutter support plate.

#### **7. STARTING LEVER UNIT:**

If the roller is loose on the shaft, replace the entire assembly.

#### **8. SAFETY SHUTTER:**

It may be necessary to adjust the eccentric washer. This adjustment raises or lowers the safety shutter with relation to the main aperture. The alignment of the two can be readily seen.

Make certain that the shutter slides quite freely between the guide screws #19457 and #19471 so it will drop of its own weight.

If a dark shadow appears either at the top or bottom of the screen, undoubtedly the Safety Shutter, #19460-A, is out of adjustment. This can be corrected with the eccentric washer on this assembly.

#### **9. FLYWHEEL UNITS:**

The necessary end play for flywheel shafts is .004". Occasionally this tolerance will need adjusting. Use the feeler gauge to check this. Do NOT tighten them up too close to the bushing or too much drag will occur. This is worse than if they were a bit loose.

- a. The Filter Flywheel Assembly, #19270-A, should be checked to make certain that the filter springs are not touching the gear. This would result in an uneven action and poor sound reproduction. One of the filter springs is straight, while the other one has a small bend or angle.

#### **10. TAKEUP PULLEYS:**

Uneven action of these pulleys causes a jumpy action of the takeup and may result in the film "spilling over." This uneven action, in turn, may be caused by wear or oil and grease in the assembly.

The assembly should be checked for worn parts and cleaned.

The Takeup Clutch Assembly, #26836-A, should be checked to see if it is working correctly and is clean. This assembly must be removed from the projector to disassemble. Extreme caution should be exercised in taking this assembly apart so that the small clutch balls will not become lost. This should be assembled dry. Carbon tetrachloride may be used to clean it.

#### **11. GOVERNOR:**

Occasionally the brushes need replacement. (The governor itself rarely needs replacement.)

To remove the governor, first remove the end plate and speed switch from the motor housing. Then loosen the locking screw on the governor hub and slide off the motor shaft. In replacing, allow proper ( $\frac{1}{8}$ " ) clearance for the brushes.

- a. The Motor Governor, #19533 or #26708-A, should be checked to make certain that the points are smooth. If the points are found to be rough, a regular point file may be used.
- b. The governor rings can be polished if mounted on an Arbor either in a lathe or drill press.
- c. When replacing the governor, be sure that there is at least  $\frac{1}{8}$ " clearance between the governor brush holders and the governor.

#### **12. FILM SHOES — UPPER AND LOWER:**

Rollers should roll freely and show no wear. Film shoes should be properly seated on drive sprocket. Tolerance should be approximately two thicknesses of film.

#### **13. FEED SPROCKET:**

The Feed Sprocket, #21184-A, should be checked after excessive use for grooves in the sprocket teeth which will result in film noise. If this should occur, the sprocket should be replaced making certain the proper end play (.004) is set.

#### **14. SOUND SPROCKET:**

The teeth of the Sound Sprocket, #30368-A, will also become grooved after extensive use which will result in flutter in sound reproduction. This should also be replaced when sprocket is worn.

#### **15. HAND CONTROL SHAFT:**

The Hand Control Shaft, #20739-AR, requires very little grease or oil. However, this shaft should be checked when the projector is given a complete overhaul.

#### **16. FILM CHANNEL CLIPS:**

Film Channel Clips, #19316, should be cleaned thoroughly and checked for wear to make certain they are functioning properly. If it is found necessary to replace the clips, the simplest way to do this is to loosen the four screws on the film channel enough to slip out the old clips and slip in the new ones. The Film Channel Retaining Screws should then be tightened into place.

#### **17. FILM CHANNEL:**

The Film Channel, #19315, should be checked for worn rails. If these show wear, the channel should be replaced.

#### **18. APERTURE PLATE:**

The tension of the Aperture Plate, #30151-A, should be four ounces and not more than six ounces. If too much tension is applied to the aperture plate, it will result in loss of loop when running new film.

#### **19. LENS MOUNT:**

A picture that is out of focus on one side may be corrected by adjusting the Lens Mount Stop Screw, #19301, located under and to the inside of the Lens Mount.

#### **20. LAMP ADJUSTING NUT:**

If shaded areas appear on either side of the screen, this would indicate that the projection lamp is not in correct alignment. This can be corrected by loosening the Lamp Adjusting Nut, #20496, and moving from side to side to clear up dark areas. This is located directly beneath the lamphouse assembly.

## 21. PROJECTION LAMP:

The Projection Lamp should always be replaced when blisters or bubbles appear on it. The greatest damage is done to a projection lamp immediately after the lamp is turned off. Blisters or bubbles can be prevented by turning on the motor switch and letting it run for two or three minutes after the lamp switch has been turned off, thus cooling the lamphouse and lamp.

## 22. PROJECTION LAMP SWITCH:

When the Projection Lamp Switch, #23330, is turned on and the projection lamp burns but the motor will not run, this would indicate a faulty lamp switch.

## 23. OSCILLATING GEAR ASSEMBLY:

The Oscillating Gear Assembly, #19479-A, should be checked for wear making certain that there is not over .003 end play as this assembly controls the action of the shuttle.

## 24. CAM BEARING:

The Cam Bearing, #20563, should be checked very carefully for wear and if found to be worn should be replaced. Before disassembling the Cam Pulley Assembly, #20565-A, a mark should be put on the pulley to indicate the exact location of the cam so that when assembling this unit, the cam can be put back into the exact position. This is done to prevent the Cam Pulley getting out of balance.

- a. When replacing the Cam Pulley Assembly, #20565-A, make certain to place the small washer, #19113, on the cam shaft in front of the pulley assembly. One washer is usually sufficient and not more than two should be used.

## 25. SHUTTER SUPPORT PLATE:

The Shutter Support Plate, #26210-A, is adjustable. If there appears to be excessive gear noise in the shutter support plate, it can be adjusted by loosening the nut on the jack shaft and adjusting the eccentric screw.

## 26. EXCITER LAMP:

If the Exciter Lamp, #19299, lights inter-

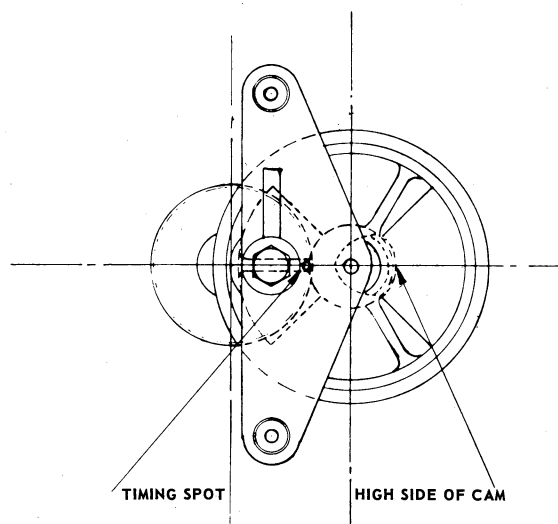
mittently, check for a corroded contact. This can be quickly corrected by polishing with a piece of emery cloth.

## 27. SNAP-ACTION MICRO SWITCH:

The Models 60-4, 60-10 and 60-25 are equipped with a Snap-Action Micro Switch, #26949, in conjunction with the motor wiring. If the motor races when the projector is not in operation, this would indicate that an adjustment is necessary on the switch arm or that the switch is in need of replacement.

## 28. IMPEDANCE LOOP ROLL ASSEMBLY:

The Impedance Loop Roll Assembly, #30369-A, should be checked to make certain there are no flat spots on it and also that this assembly with the flywheel is free and spins easily.



*Shutter to be in this position when spot on oscillating gear is in line with rib of cam pulley—with high side of cam in position as shown.*

## 29. TIMING THE PROJECTOR:

The Victor projector is the simplest to time and it is almost impossible to do it incorrectly. Only TWO simple precautions have to be observed.

- a. Replace the Cam Pulley Shutter and Gear Assembly, #20565-A, with the small end of the cam centered (horizontally) against the punch mark on the large Cam Oscillating Gear, #19479-A. (It will be noticed that one "spoke" of the pulley is

over the center punch mark of the oscillating gear.)

- b. While the two gears are still set horizontally as above, set the Shutter Assembly, #20580-A, so that the blades are horizontal also. This places the open part of the shutter at the top and at the bottom. Then replace the Support Plate, #26210-A.

If these things are done the projector will be set correctly but it is always a good idea to turn it over by hand and make sure. Check to see that the shuttle teeth start to pull down while the shutter is closed.

### TOLERANCES

19061-A	Impedance Roll (end play)	.004 - or - .001
30368-A	Sound Sprocket (end play)	.004 - or - .001
19185-A	Feed Sprocket Clutch and Shaft Assembly (end play)	.004 - or - .001
20261	Motor Armature Shaft (end play)	.004 - or - .001
19479-A	Oscillating Gear Assembly (end play)	.000 to .002
19533	Governor Setting $\frac{1}{8}$ " clearance between Brush Holders and Commutator	
30151-A	Aperture Plate (Float) $\frac{1}{32}$ " Side to Side, .020" in and out, tension 4 oz. not over 6 oz.	

20219-A	Shuttle Pawls Extend Through Film Channel $\frac{1}{16}$ "	
	Distance between upper and lower pawl	.272
	Distance between upper and lower cam race	.654
20041-A	Film Shoe Roll 18218 should ride lightly on flange of 21184-A Feed Sprocket	
20040-A	Film Shoe Roll 18218 should ride lightly on flange of 21184-A Feed Sprocket	

### MOTOR WIRING COLOR CODE

One side of field Red  
 One side of field Green  
 Left motor brush Blue  
 Right motor brush White  
 Outside governor brush Black  
 Inside governor brush Yellow  
 (Center Governor Brush Wire 19528A connects motor brush with governor brush)

### TERMINAL STRIP COLOR CODE

Right side of speed switch Black  
 Right side and center of reverse switch White  
 Left side of resistor Blue  
 Right side bottom reverse switch Green  
 Left side bottom reverse switch Red

### Speaker

Wipe dust from speaker cone and make certain it is not cracked or broken.

## SOME COMMON PROJECTOR TROUBLES AND THEIR REMEDIES

### 1. Premature Lamp Blow Out

#### a. High Line Voltage:

This is nearly always the cause of the trouble. Check line with a good meter. The power companies often boost the supply voltage to compensate for heavy loads in outlying districts. Voltages also tend to vary with the general industrial load and may vary greatly in different parts of the same area at the same time.

#### b. Incorrect Lamp Used:

The lamps usually stocked by the dealer are rated for 110 volts and are suitable for line voltages of from 100 volts to 115 volts. While they can be used on 120 volt lines, their life will be curtailed, especially the ten hour lamps.

Lamps rated at 100 V, 105 V, 115 V, 120 V, and 125 V can be obtained on order. (Use of a low rating lamp increases illumination at the expense of lamp life.) Occasionally we run into line voltages of 130 and 135 volts. Obviously,

even a 125 volt lamp will burn out on such a line.

## **2. Main Line Fuse Blows**

This indicates a short or ground in the wiring. Test the projector and amplifier separately. Localize the fault by disconnecting motor, lamp, governor, etc., as necessary until the faulty part is found.

## **3. Motor Will Not Run**

- a. Check cords and plugs.
- b. Check motor brushes.
- c. Check main switch contacts.
- d. Check governor brushes and contacts.
- e. Check line fuse.

## **4. Speed Variation**

Clean governor contact points and readjust setting if necessary.

## **5. Loss of Top Loop**

Check for:

- a. Friction washer on feed arm spindle may be sticking due to dirt (Model 40 only). Try oiling before disassembling.
- b. Improper seating of upper film shoe.
- c. Torn film perforations.

## **6. Loss of Lower Loop**

Check for:

- a. Torn film perforations.
- b. Film not threaded properly at gate.
- c. Film shoes and gate clearance.
- d. Excessive wear of shuttle.

## **7. Film Scratches**

This is usually due to an accumulation of hardened emulsion on aperture plates or film channel because these parts have not been kept clean. It may also be due to physical damage to extremely smooth surface of gate plates or wear of guides on back film channel, aperture plate, or sound drum. If so, replacement is indicated.

## **8. Pictures Unsteady**

- a. Film badly shrunk and perforations chipped.
- b. Wear on shuttle or other parts of intermittent mechanism.
- c. Projector used on shaky table.
- d. Pressure plate not properly seated in film channel.

## **9. Flicker**

- a. Governor set too slow.
- b. Cam gear replaced "out of time".
- c. Light shutter "out of time".

## **10. Film Spills Over**

- a. Insufficient friction on feed spindle.
- b. Worn takeup clutch.
- c. Rewind belt not in place on reel arm. (Applies to all projectors in metal cases.)

## **11. "Motor-Boating"**

- a. Sound drum not replaced properly, causing film misalignment.
- b. Impedance roll sticking.

## **12. Film Tears at Drive Sprocket**

- a. If sprocket is replaced without hardened thrust washer between it and the casting, the sprocket teeth will not align with groove of idler rollers.
- b. Film shoes too tight. Adjust with 2 thicknesses of film.

## **13. Film Perforations Chip**

- a. Worn sprocket teeth.
- b. Worn shuttle or shuttle teeth.
- c. Tension at gate insufficient.
- d. Badly shrunk film.

## **14. Insufficient Light on Screen**

- a. Still picture shutter "up". (Not furnished on all models.)
- b. Dirty lens, condenser, or reflector.
- c. Lamp old, blackened or dirty.
- d. Low line voltage.
- e. Dirty screen.
- f. Lamp improperly seated.

## **15. Picture Partly Out of Focus**

- a. Aperture plate improperly aligned — must be parallel to film channel.
- b. Too little tension at gate allows film to move in and out of focus.
- c. Dirt on lens.
- d. Projector not at 90° angle with screen.

## **16. Travel Ghost**

A picture with a streaked effect, particularly on white scenes, is caused by light shutter not properly timed.

## POSSIBLE AMPLIFIER TROUBLES AND THEIR REMEDIES

### 1. Hum:

- a. Shield off of 1st stage tube or P. E. Cell.
- b. Excessive voltage on P. E. Cell. Check the setting of the P. E. potentiometer screw on models that are so equipped.
- c. Check all condensers, particularly filter condensers.

### 2. Noise:

- a. Try reversing plug in power supply line.
- b. Check speaker cord and connections.
- c. Defective or microphonic 1st stage tube. Try one or two other tubes.
- d. A loose connection, particularly in the plugs connecting to the projector.
- e. Check resistors.
- f. Check condensers.

### 3. Low Volume:

- a. Check P. E. Cell adjustment on models so equipped. Make certain the proper type of cell is in use.
- b. Defective tubes, P. E. Cell, or exciter lamp.
- c. Make certain exciter lamp is aligned with slit.

- d. Dirt or oil on optical slit or lens.
- e. Low line voltage.

### 4. No Sound Response:

- a. Check power source, cords, etc. Check fuse (see items listed under FUSE).
- b. Check output transformer, speaker, etc.
- c. Check speaker for ground, short, or open circuit.

### 5. Fuse:

- a. Blows as power is switched on — probably a short in power transformer.
- b. If amplifier warms up and then fuse blows, check the rectifier and output tubes and then the filter condensers.

### 6. P. E. Cell:

- a. Short life; caused by excessive voltage setting of potentiometer screw (on models so equipped). (This ionizes the cell.)
- b. Excessive “rushing” sound or hiss in speaker line when exciter lamp is off is caused by slightly high setting of potentiometer screw (on models so equipped).



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# **PARTS SECTION**

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## **16mm SOUND MOTION PICTURE PROJECTORS**

**MODELS**  
**40-A, 40-B, 40-BX, 55,**  
**56, 60-B, 60-2, 60-4,**  
**60-10, 60-25,**  
**AND**  
**G (BRITISH GREYLINE VICTOR)**

**PREPARED BY**  
**VICTOR ANIMATOGRAPH CORPORATION**  
**DAVENPORT, IOWA, U. S. A.**

**OPERATOR'S  
VIEW  
MODEL  
60-25  
PROJECTOR  
HEAD**

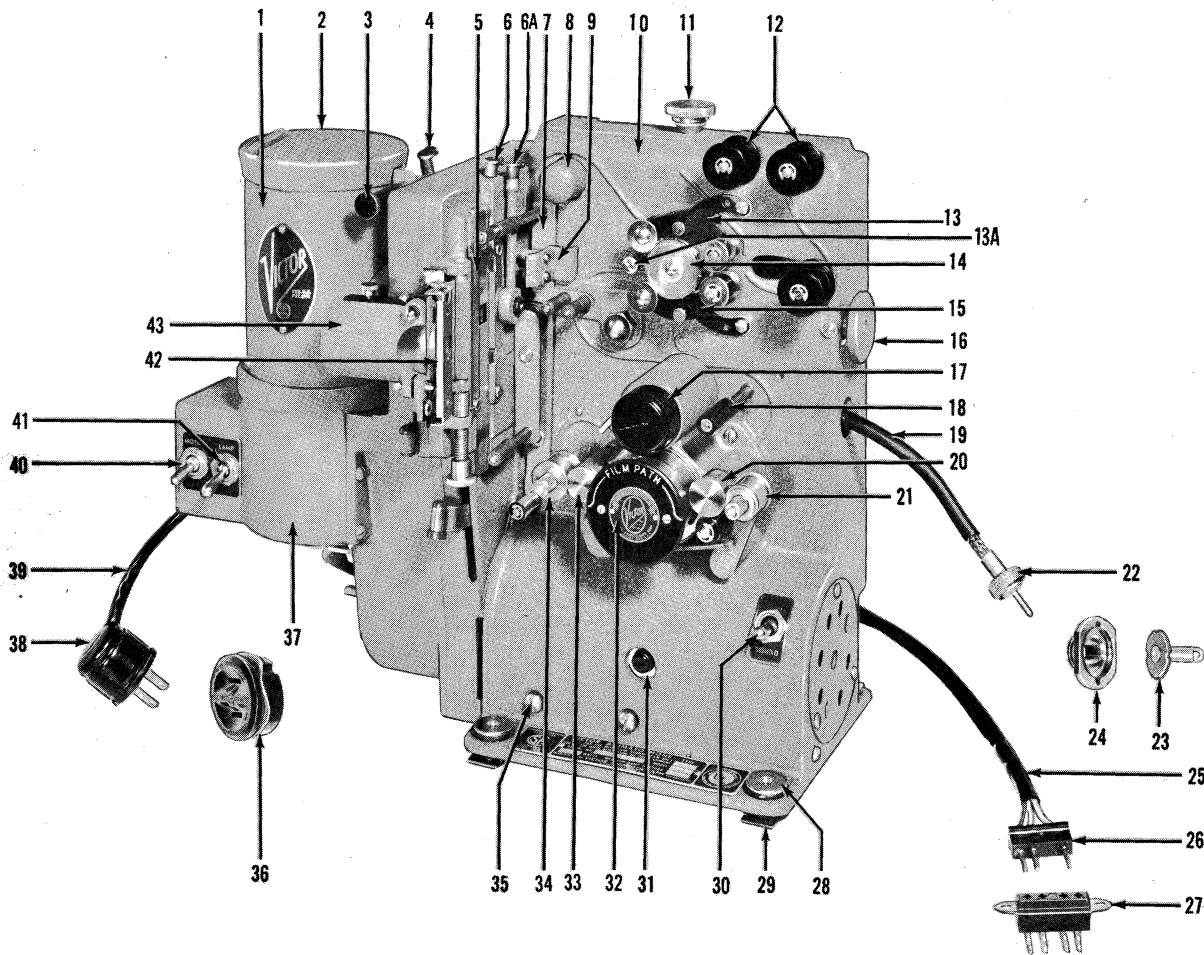
**(USE AS  
REFERENCE  
FOR MODEL  
60-2)**

USED ON MODELS												
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10 60-21
1	20587-50-AR	Lamp house assembly	11									
2	20466-50-AR	Lamp house cover	11									
3	19402	Lamp house lock screw	11									
4	23135-A	Support bar oil tube	35									
5	19315	Film channel	17									
6	20224-50	Shuttle oiler										
	36147	Oil wick (not shown)									2	2 2
6-A	19245-50A	Cam shaft support & oiler assembly										
7	19491-A	Automatic trip assembly	21									
8	20230	Pilot lamp cap	23									
9	19302	Lens mount lock plate	23									
10	26902-AR	Body casting										
11	30254	Reel arm lock screw	13									
12	26208	Take-off feed roll	13				6	6		6	6	6 6
13	20040-A	Film shoe (upper)	15									
13-A	20047-A	Film guard	17									
14	21184-A	Feed sprocket	71									
15	20041-A	Film shoe (lower)	15									
16	20739-AR	Hand control knob & shaft assembly	75									
17	30488-A	P.E. Cell cover assembly	17									
18	19086	Film support roll	23									
19	30523-A	P.E. Cell contact (female)	67									
20	30368-A	Sound sprocket*										
21	19233-A	Tension roll	19									
22	26561-A	P.E. Cell connector (male)	67									
23	26917	P.E. Cell contact (female)	67									
24	26918	P.E. Cell connector	67									
25	19547-50A	Exciter cord assembly	63									
26	20628	Exciter plug (male)	63									
27	20629	Exciter socket (female)	63									
28	30366-A	Base support sleeve	73		4	4	4	4	4	4	4	4 4
29	23110	Base support bar (front)	73									
30	18640	Silent-sound switch	65									
31	20264	Motor brush plug	79			2	2	2	2	2	2	2 2
32	30428-A	Sound lens core complete	17									
33	30369-A	Loop roll assembly†										
34	18058-A	Tension roll	19									
35		8/32 x 3/4 Truss Head (Motor mounting) screw									4	4 4
36	20169	AC line plug										
37	26901-AR	Lamp house casting	41									
38	19747	AC line plug (male)										
39	19034-50A	Power lead assembly	45									
40	18641	Motor switch	65									
41	23330	Lamp switch	45									
42	30151-A	Aperture plate assembly	21									
43	19254-A	Lens mount assembly	21									

\*No. 20, 30368-A, is interchangeable with 19497-A (Page 9) and replaces this assembly.

†No. 33, 30369-A, is interchangeable with 19061-A (Page 9) and replaces this assembly.





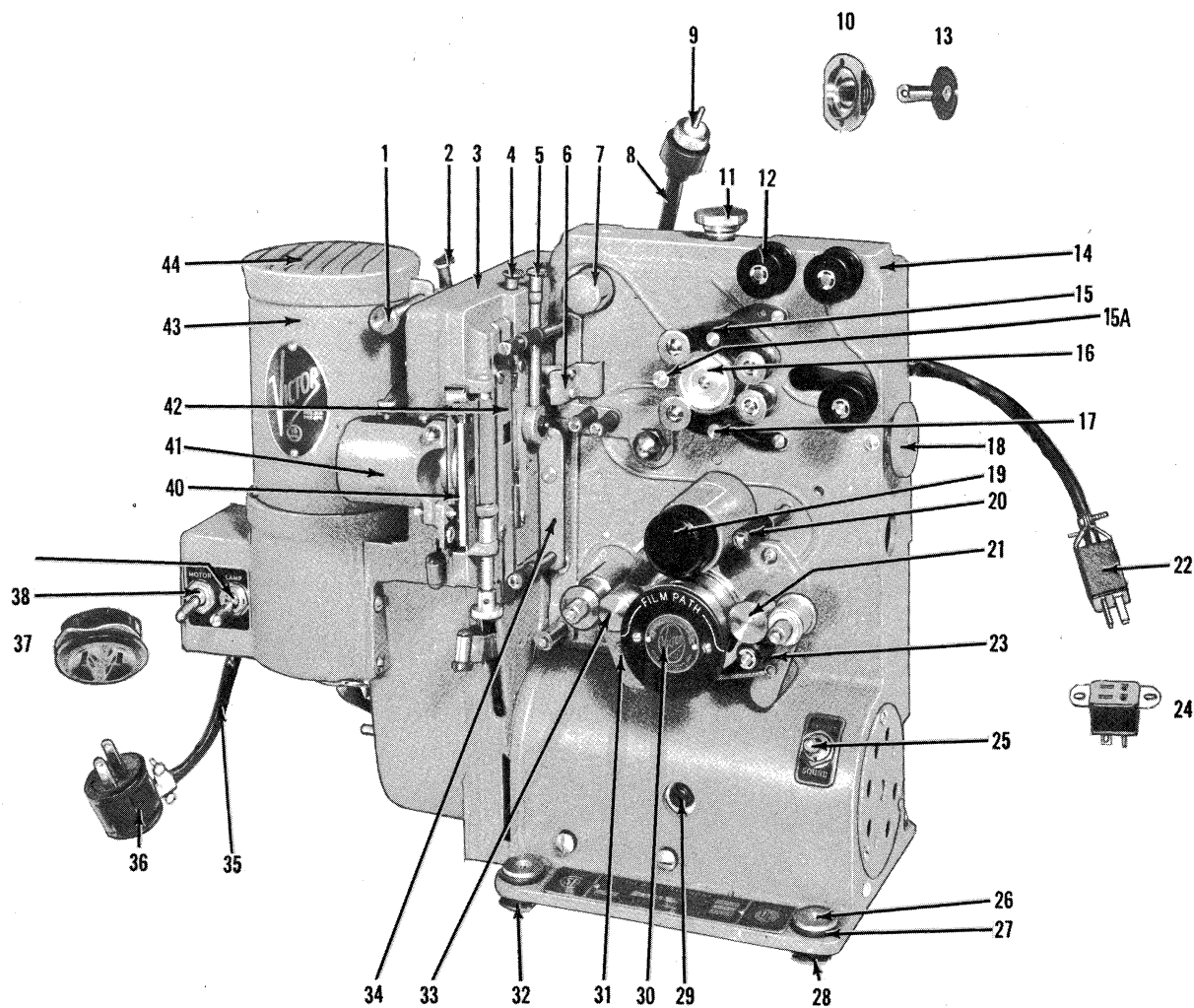
**OPERATOR'S  
VIEW  
MODEL  
60-25  
PROJECTOR  
HEAD**

**(USE AS  
REFERENCE  
FOR MODEL  
60-2)**

**OPERATOR'S  
VIEW  
MODELS  
60-10  
AND 60-4  
PROJECTOR  
HEAD**

**(USE AS  
REFERENCE  
FOR MODELS  
55, 56)**

USED ON MODELS												
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10
1	19402	Lamp house lock screw	11									
2	23135-A	Support bar oil tube	35									
3	19130	Shutter housing										
4	20224	Shutter oiler with wick										
5	19245-50A	Cam shaft support & oiler assy.	23									
6	19302	Lens lock plate	23									
7	20230	Pilot lamp cap	23									
8	26759-A	P.E. Cell cord assembly	67									
9	26561-A	P.E. Cell connector (male)	67									
10	26918	P.E. Cell connector base	67									
11	30254-A	Reel arm holder screw assembly	13									
12	26208	Take-off feed roll (2 per assy.)	13				6	4		6	6	6
13	26917	P.E. Cell contact (female)	67									
14	26902-AR	Body casting assembly										
15	20040-A	Film shoe (upper)	15									
15-A	20047-A	Film guard	17									
16	21184-A	Feed sprocket	71									
17	20041-A	Film shoe (lower)	15									
18	20739-AR	Hand operating knob & shaft assy.	75									
19	30488-A	P.E. Cell cover assembly	17									
20	19086	Film support roll	23									
21	30368-A	Sound sprocket assembly										
22	23298	Exciter four contact plug (male)	75									
23	26726-AR	Sound sprocket tension arm assy.	19									
24	30586	Four contact exciter socket (female)	75									
25	26587	Silent-sound speed switch	65									
26	30366-A	Base support sleeve	73	4	4	4	4	4	4	4	4	4
27	22091	Base support washers (rubber)	73	8	8	8	8	8	8	8	8	8
28	26908-A	Base support bar (front)	73									
29	20264	Motor brush plugs	79			2	2	2	2	2	2	2
30	30428-A	Sound lens assembly	17									
31	26725-AR	Loop tension arm assembly	19									
32	26907-A	Base support bar (rear)	73									
33	30369-A	Loop roll shaft assembly										
34	26644-AR	Automatic trip lever assembly	21									
35	19034-50A	Power lamp wire assembly	45									
36	19747	Main line plug (male)	45									
37	20169	AC outlet for amplifier	45									
38	23340	Motor switch	65									
39	23330	Lamp switch	45									
40	30151-A	Aperture plate	21									
41	19254-AR	Lens mount assembly	21									
42	19315	Film channel	17									
43	26583-AR	Lamp house assembly	11									
44	20466-50R	Lamp house cap	11									



**OPERATOR'S  
VIEW  
MODELS  
60-10  
AND 60-4  
PROJECTOR  
HEAD**

**(USE AS  
REFERENCE  
FOR MODELS  
55, 56)**

**OPERATOR'S  
VIEW  
MODEL  
60-B  
PROJECTOR  
HEAD**

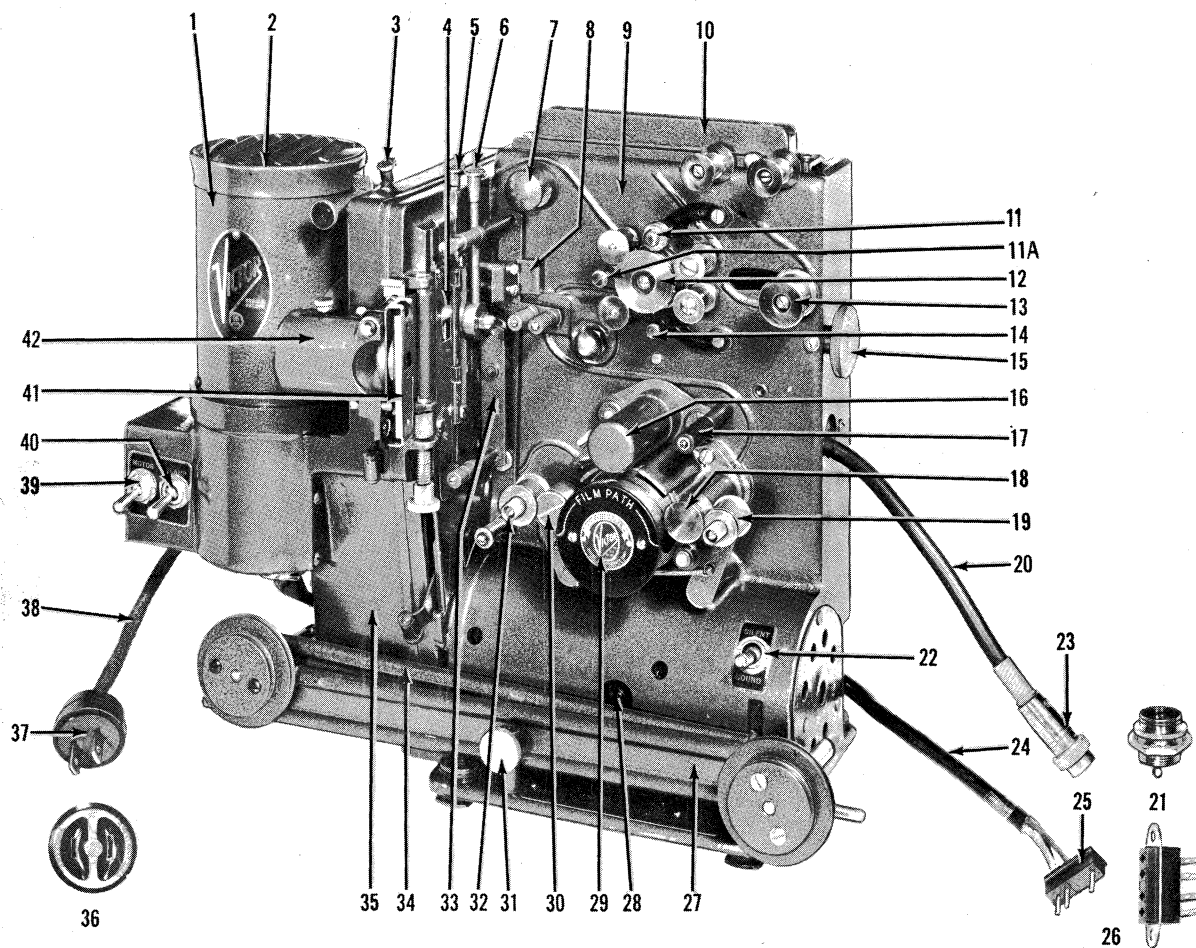
USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	26583-AK	Lamp house assembly	11										
2	20466-50R	Lamp house cap cover	11										
3	23135-A	Support bar oil tube	35										
4	19315	Film channel	17										
5	20224-50	Shuttle oiler											
6	19245-50A	Cam shaft support & oiler assy.	23										
7	20230-K	Pilot lamp cap	23										
8	19302-K	Lens mount lock plate	23										
9	20790-2	Body casting											
10	23186-A	Reel arm socket assembly	13										
11	20040-A	Film shoe (upper)	15										
11-A	20047-A	Film guard	17										
12	21184-A	Feed sprocket	71										
13	19847	Take-off feed roll	75										
14	20041-A	Film shoe (lower)	15										
15	20739-40	Hand control knob*	75										
16	20595-A	P.E. Cell cover	17										
17	19086	Film support roll	23										
18	30368-A	Sound sprocket											
19	19561-A	Tension arm assembly†	19										
20	20717-A	P.E. Cell cord assembly	67										
21	19818	P.E. Cell connector (female)	67										
22	18640	Silent-sound switch	65										
23	19819	P.E. Cell connector (male)	67										
24	19547-50A	Exciter cord assembly	63										
25	20628	Exciter cord plug (male)	63										
26	20629	Exciter cord socket (female)	63										
27	23184-A	Reel arm (front)	77										
28	20264	Motor brush plug	87			2	2	2	2	2	2	2	2
29	30428-A	Sound lens assembly	17										
30	30369-A	Loop roll assembly											
31	19598	Reel arm holder screw											
32	19563-A	Tension arm loop roll**	19	2	2	2	2	2	2				
33	26644-AK	Automatic film trip assembly	21										
34	23184-50A	Reel arm (rear)	77										
35	19390-3	Lamp house casting	43										
36	20169	AC receptacle	43										
37	19747	AC plug (male)	43										
38	19034-50A	Power lead assembly	45										
39	18641	Motor switch	45	2	2	2			2	2			2
40	23330	Lamp switch	45										
41	30151-A	Aperture plate assembly	21										
42	19254-A	Lens mount assembly	21										

\*No. 15, 20739-40 and 19501-40 (not shown) are replaced by 20739-AR (Page 75).

†No. 19, 19561-A is replaced by 26726-AR (Page 19).

\*\*No. 32, 19563-A is replaced by 26725-AR (Page 19).





**OPERATOR'S  
VIEW  
MODEL  
60-B  
PROJECTOR  
HEAD**

**OPERATOR'S  
VIEW  
MODEL  
40-B  
PROJECTOR  
HEAD**

**(USE AS  
REFERENCE  
FOR MODEL  
40-A)**

			USED ON MODELS											
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-18	60-25	
1	20587-A	Lamp house assembly*	11											
2	20466-50	Lamp house cover	11											
3	19315	Film channel	17											
4	20224-50	Shuttle oiler												
4-A	19245-50A	Cam shaft support & oiler assy.	23											
5	19491-A	Automatic trip assembly	21											
6	20230	Pilot lamp cap	23											
7	19302	Lens lock plate	23											
8	20790-2	Body casting												
9	19850-A	Reel arm socket assembly	13											
10	20040-A	Film shoe (upper)	15											
11	21184-A	Feed sprocket	71											
11-A	20047-A	Film guard	17											
12	19847	Take-off feed roll	75											
13	20041-A	Film shoe (lower)	15											
14	20595-A	P.E. Cell cover	17											
15	19086	Support roll	23											
16	19497-A	Sound sprocket assembly†												
17	19561-A	Sound sprocket tension arm**	19											
18	20717-A	P.E. Cell cord assembly	67											
19	19819	P.E. Cell connector (male)	67											
20	19818	P.E. Cell socket (female)	67											
21	20619	Exciter plug socket	63											
22	20618	Exciter plug (male)	63											
23	19547-A	Exciter cord assembly	63											
24	18640	Silent-sound switch	69											
25	20591-A	Complete sound lens core assy.‡	17											
26	19598	Reel arm holder screw												
27	19061-A	Impedance loop roll shaft assy.***												
28	19563-A	Loop tension arm assembly††	19											
29	30002-AR	Model 40 complete rear reel arm assembly	77											
30	30002-AF	Model 40 complete front reel arm assembly	77											
31	20169	AC receptacle (Female)	45											
32	19747	Main line plug in projector head	45											
33	19034-50A	Power lead assembly	45											
34	18641	Motor rewind switch — also exciter switch	45		2	2			2	2			2	
35	23330	Lamp switch	45											
36	30151-A	Aperture plate assembly	21											
37	19254-A	Lens mount assembly	21											

\*No. 1, 20587-A is replaced by 26583-AR with the exception of color. (Page 11).

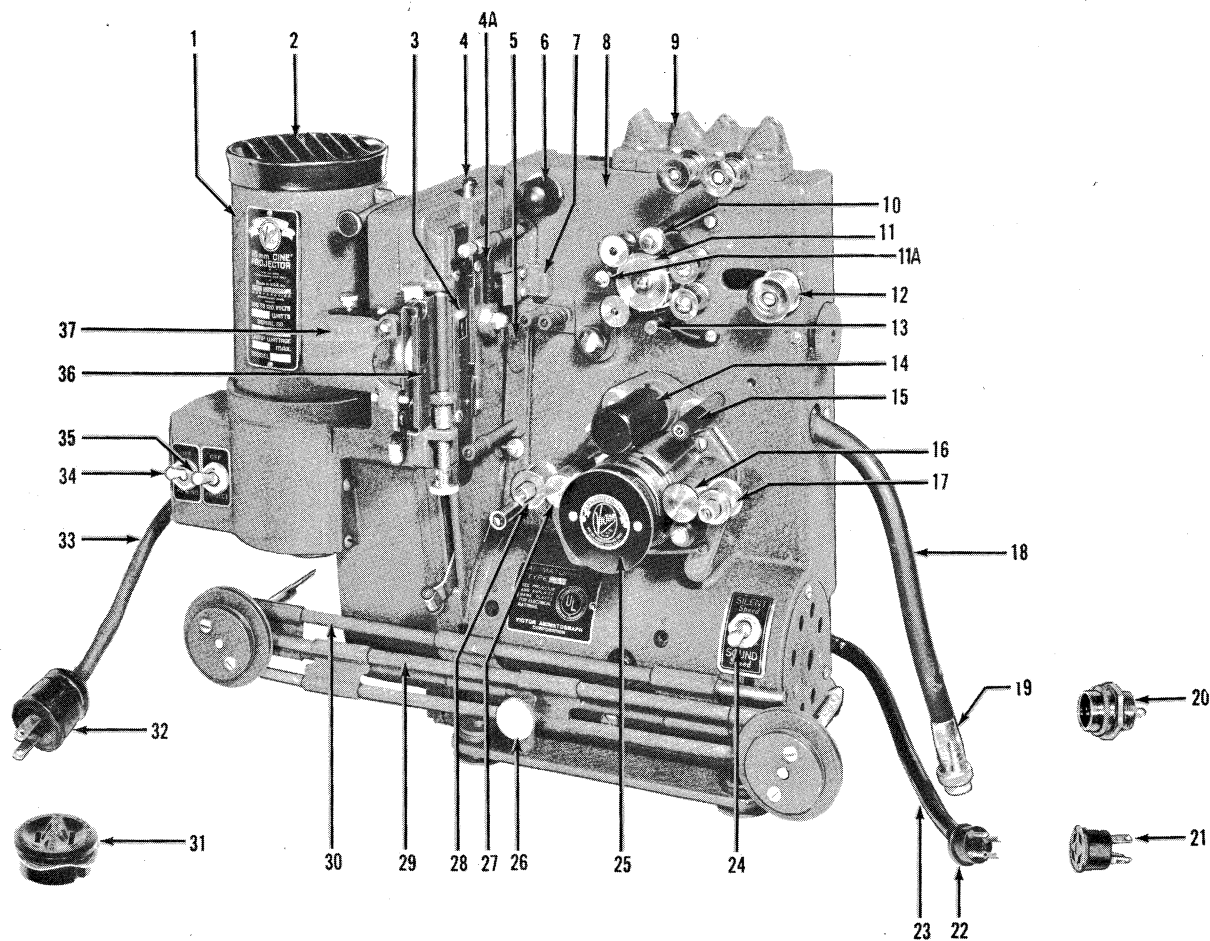
†No. 16, 19497-A is replaced by 30368-A (Page 3).

\*\*No. 17, 19561-A is replaced by 26726-AR (Page 19).

‡No. 25, 20591-A is replaced by 30428-A (Page 17).

\*\*\*No. 27, 19061-A is replaced by 30369-A (Page 3).

††No. 28, 19563-A is replaced by 26725-AR (Page 19).



**OPERATOR'S  
VIEW  
MODEL  
40-B  
PROJECTOR  
HEAD**

**(USE AS  
REFERENCE  
FOR MODEL  
40-A)**

# LAMP HOUSE ASSEMBLY

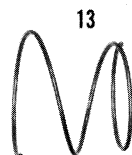
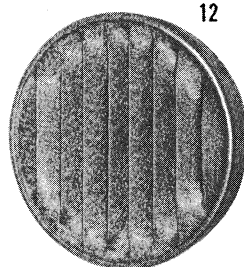
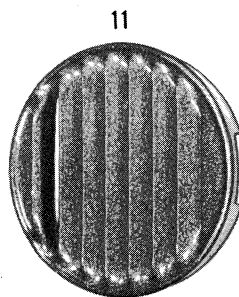
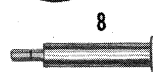
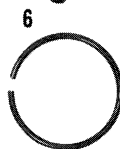
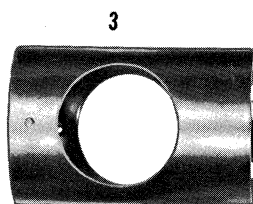
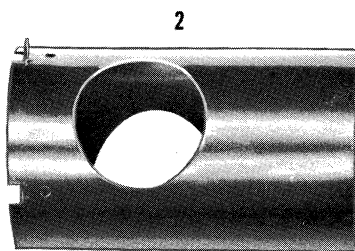
			USED ON MODELS										
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	26583-AR	Lamp house assembly*											
2	20586-50	Lamp house sleeve (inner)											
3	20585	Lamp house sleeve											
4	20584	Reflector											
5	20500	Reflector											
6	19276	Retaining ring†											
7	20510	Conza condenser											
8	19402	Lamp house lock screw											
9		4/40 x 1/8 R.H. screw			2	2	2	2	2	2	2	2	2
10	20587-A	Lamp house assembly‡											
11	20466-50R	Lamp house cover											
12	20466	Lamp house cover											
13	20514	Condenser spring†											
14	19277-R	Condenser mount											
15		4/40 x 5/8 R.H. screw			3	3	3	3	3	3	3	3	3
16	26875	Condenser retaining spring†											

\*No. 1, 26583-AR, is interchangeable and replaces No. 10, 20587-A, with the exception of color.

†No. 6, 19276 Retaining ring and No. 13, 20514 condenser spring are replaced with No. 16, 26875 condenser retaining spring.

‡No. 10, 20587-A, is used on Model 40 wood cases and cannot be used on projectors having metal cases.





# LAMP HOUSE ASSEMBLY

## PILOT LAMP

## P.E. CELL

## EXCITER LAMP

## PROJECTION LAMP

USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	28130	Pilot lamp											
2	19210	P.E. cell*											
3	19299	Exciter lamp† <i>BRS or BRK</i>											
4		750 W. 115 V. Projection lamp											

\*No. 2, 19210, is used on Models starting with Model 40 through Model 60 series.

†Beginning with Model 40 Serial No. 63930, No. 3, 19299 (5 V-6.5 amp. S.C. prefocus base) is used through Model 60 series.

Model 40-A, 63018 to 64055 used 8 1/2 V. 4 amp. S.C. prefocus base exciter lamp.

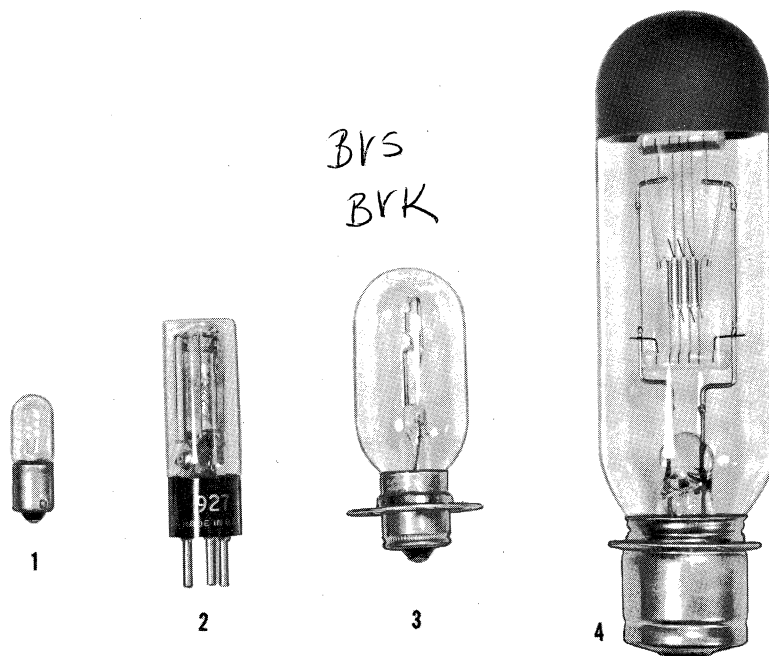
Model 40, 63017 and lower require 8 1/2 V. 4 amp. S.C. bayonet base exciter lamp.

All models can use 750 W. or 1000 W. prefocus projection lamp except AC-DC Series 40, 55, 56 and 60-4 which require 750-115 only.

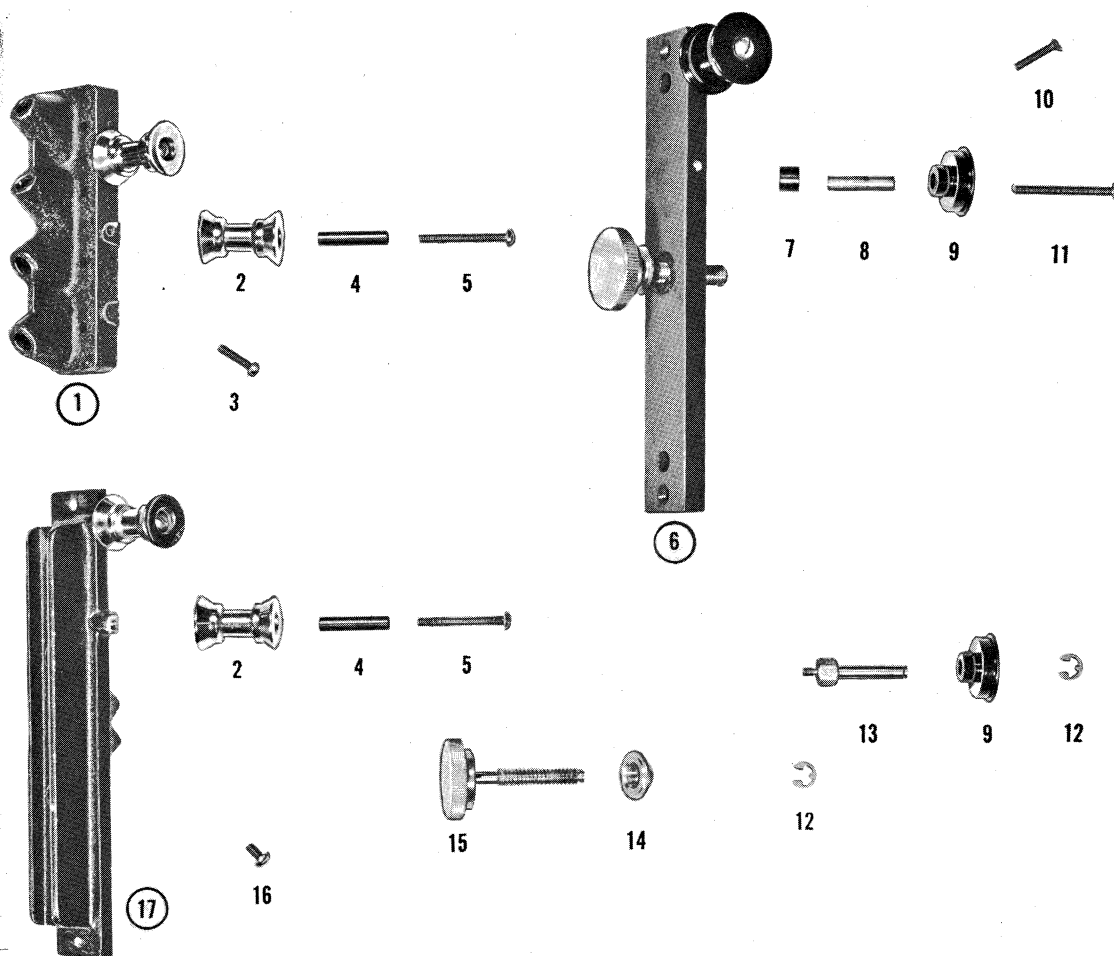
## REEL ARM SOCKETS

USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	19850-A	Reel arm holder assembly		1	1	1							
2	19848	Take-off film rollers		2	2	2	2		2				
3		5/40 x 3/4 F.H. reel arm holder retaining screw			4	4							
4	19849	Take-off film roller bushing		2	2	2	2		2				
5		6/32 x 1-1/8 R.H. take-up film roller retaining screw			2	2	2		2				
6	30252-A	Reel arm holder assembly					1	1		1			
7	30168	Film trap roller spacer					2	2		2			
8	26580	Film trap roll sleeve					2	2		2			
9	26208	Take-off feed roll					6	4		6	6	6	6
10		5/40 x 3/4 F.H. reel arm holder retaining screw					2	2		2			
11		6/32 x 1-1/8 R.H. take-up film roller retaining screw			2	2	2		2				
12		#3 "C" Washer take-off feed roll retainer					3	2		3	3	3	3
13	26749	Film trap roll shaft									2	2	2
14	26767	Reel arm locking wedge					1	1		1	1	1	1
15	30254	Reel arm lock screw					1	1		1	1	1	1
16		5/40 x 3/8 R.H. reel arm holder retaining screw					2		2				
17	23186-A	Reel arm holder assembly					1		1				

BVS  
BRK



PILOT LAMP  
P.E. CELL  
EXCITER LAMP  
PROJECTION LAMP



REEL ARM  
SOCKETS

## FILM SHOE (UPPER)

USED ON MODELS												
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10 60-25
1		5/40 x 3/16 B.H. screw			2	2	2	2	2	2	2	2
2		5/40 x 3/16 B.H. screw			2	2	2	2	2	2	2	2
3		5/40 x 3/16 B.H. screw			2	2	2	2	2	2	2	2
4	20028	Film shoe plate (upper)		1	1	1	1	1	1	1	1	1
5	20028	Film shoe plate (upper)		1	1	1	1	1	1	1	1	1
6	20028	Film shoe plate (upper)		1	1	1	1	1	1	1	1	1
7		#3 "C" Washer								2	2	2
8		2/56 x 1/8 R.H. screw			2	2	4	4	4	2	2	2
9		2/56 x 1/8 R.H. screw			2	2	4	4	4	2	2	2
10	T-78	Film shoe roll		2	2	2	2	2	2	2	2	2
11	T-78	Film shoe roll		2	2	2	2	2	2	2	2	2
12	18217	Film shoe roll		2	2	2	2	2	2			
13	T-78	Film shoe roll		2	2	2	2	2	2	2	2	2
14	18217	Film shoe roll		2	2	2	2	2	2			
15	20040-A	Film shoe — plastic*		1	1	1	1	1	1	1	1	1
16	20040-2	Film shoe — metal*		1	1	1	1	1	1			
17	20040-2	Film shoe — metal*		1	1	1	1	1	1			
18	T-89	Film shoe roll		2	2	2	2	2	2	2	2	2
19	18220	Film shoe roll								2	2	2
20	T-89	Film shoe roll		2	2	2	2	2	2	2	2	2
21	18218	Film shoe roll shaft		2	2	2	2	2	2			
22	T-89	Film shoe roll		2	2	2	2	2	2	2	2	2
23	18220	Film shoe roll								2	2	2
24	26729	Film shoe pivot								2	2	2
25		2/56 x 1/8 R.H. screw			2	2	4	4	4	2	2	2
26		2/56 x 1/8 R.H. screw			2	2	4	4	4	2	2	2
27		10/32 Hex nut								2	2	2
28	20040-A	Film shoe assembly (upper)		1	1	1	1	1	1	1	1	1
29	20040-A	Film shoe assembly (upper)		1	1	1	1	1	1	1	1	1
30	20040-A	Film shoe assembly (upper)		1	1	1	1	1	1	1	1	1

\*No. 15, 20040-A Plastic film shoe replaces Nos. 16, 17, 20040-2 metal shoe.

Because of the method of assembly, 20040-2 is no longer available. 20040-A will be supplied.

Film shoe rolls may be obtained for metal film shoes.

## FILM SHOE (LOWER)

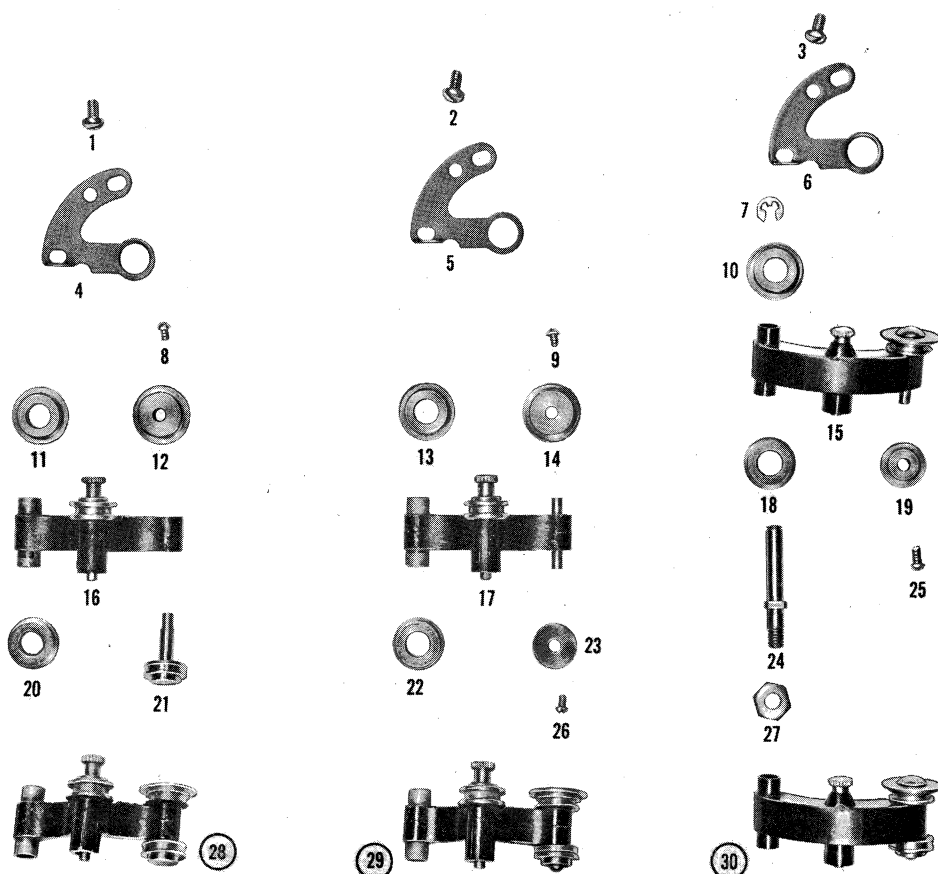
USED ON MODELS												
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10 60-25
1		5/40 x 3/16 B.H. screw			1	1	1	1	1	1	1	1
2		5/40 x 3/16 B.H. screw			1	1	1	1	1	1	1	1
3		5/40 x 3/16 B.H. screw			1	1	1	1	1	1	1	1
4	20029	Film shoe guide (lower)		1	1	1	1	1	1	1	1	1
5	20029	Film shoe guide (lower)		1	1	1	1	1	1	1	1	1
6	20029	Film shoe guide (lower)			1	1	1	1	1	1	1	1
7		2/56 x 1/8 R.H. screw			2	2	2	2	2	2	2	2
8		2/56 x 1/8 R.H. screw			2	2	2	2	2	2	2	2
9		#3 "C" Washer					2	2		2	2	2
10	T-78	Film shoe roll		2	2	2	2	2	2	2	2	2
11	18217	Film shoe roll		2	2	2	2	2	2			
12	T-78	Film shoe roll			2	2	2	2	2	2	2	2
13	18217	Film shoe roll		2	2	2	2	2	2			
14	T-78	Film shoe roll			2	2	2	2	2	2	2	2
15	20041-A	Film shoe — plastic*		1	1	1	1	1	1	1	1	1
16	20041-2	Film shoe — metal*		1	1	1	1	1	1	1	1	1
17	20041-2	Film shoe — metal*		1	1	1	1	1	1	1	1	1
18	18220	Film shoe roll					2	2		2	2	2
19	T-89	Film shoe roll		2	2	2	2	2	2	2	2	2
20	18218	Film roll shaft			2	2			2			
21	T-89	Film shoe roll			2	2	2	2	2	2	2	2
22	18220	Film shoe roll					2	2		2	2	2
23	T-89	Film shoe roll			2	2	2	2	2	2	2	2
24	26729	Pivot									2	2
25		2/56 x 1/8 R.H. screw			2	2	2	2	2	2	2	2
26		10/32 Hex nut									2	2
27	20041-A	Film shoe (lower) metal			1	1	1	1	1	1	1	1
28	20041-A	Film shoe (lower) metal			1	1	1	1	1	1	1	1
29	20041-A	Film shoe (lower) plastic			1	1	1	1	1	1	1	1
30		2/56 x 1/8 R.H. screw					1	1		1	1	1

\*No. 15, 20040-A Plastic film shoe replaces Nos. 16, 17, 20040-2 metal shoe.

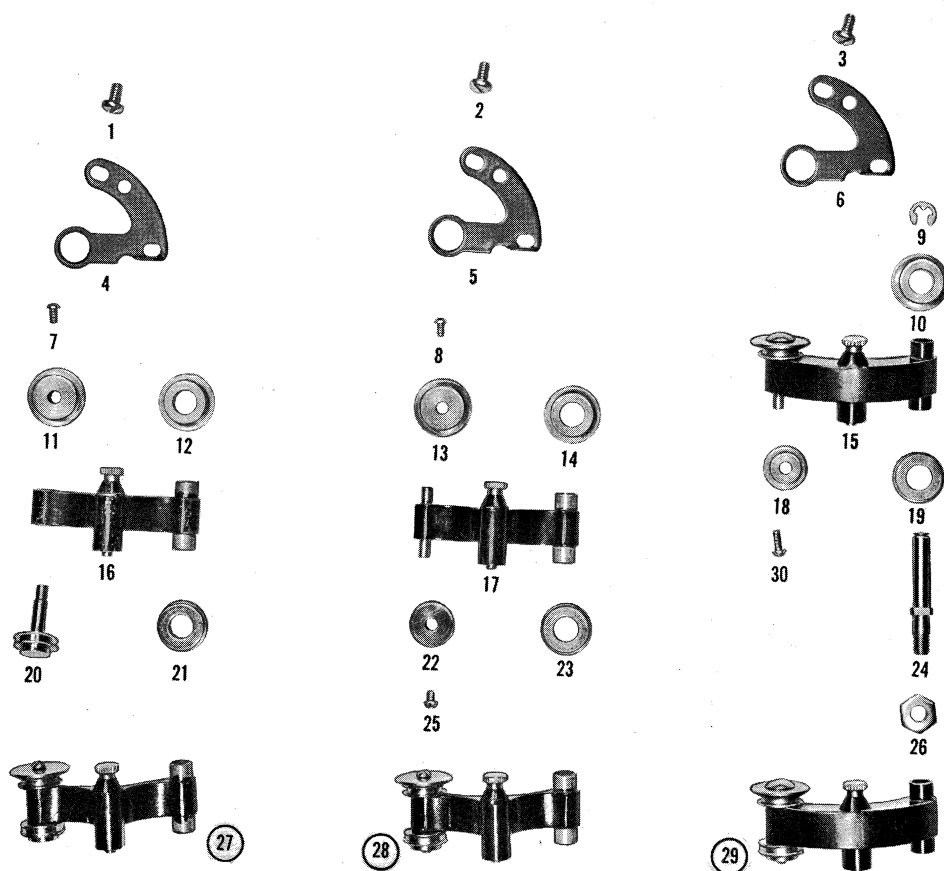
Because of the method of assembly, 20040-2 is no longer available. 20040-A will be supplied.

Film shoe rolls may be obtained for metal film shoes.

# FILM SHOE (UPPER)



# FILM SHOE (LOWER)



**REEL ARM HOLDER****P.E. CELL COVERS****FILM GUARD****FILM CHANNEL****TENSION CLIP  
AND SPRING**

			USED ON MODELS										
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1		5/40 x 3/8 F.H. retainer screw for 23315-A holder					2		2				
2	23315-A	Reel arm holder assembly					1		1				
3	30488-A	P.E. cell cover assembly									1	1	1
4	19217	P.E. cell cover			1								
5	20595-A	P.E. cell cover assembly		1		1	1		1	1			
6	23071-A	P.E. cell cover assembly						1					
7	19089	Film guard spacer			1	1	1	1	1	1	1	1	1
8	19088	Film guard			1	1	1	1	1	1	1	1	1
9	19875	Film guard roller			1	1	1	1	1	1	1	1	1
10	20047	Film guard screw			1	1	1	1	1	1	1	1	1
11	19315	Film channel		1	1	1	1	1	1	1	1	1	1
12	19316	Film channel tension clip		2	2	2	2	2	2	2	2	2	2
13	19317	Film channel clip tension spring			1	1	1	1	1	1	1	1	1

**SOUND CORE  
ASSEMBLY**

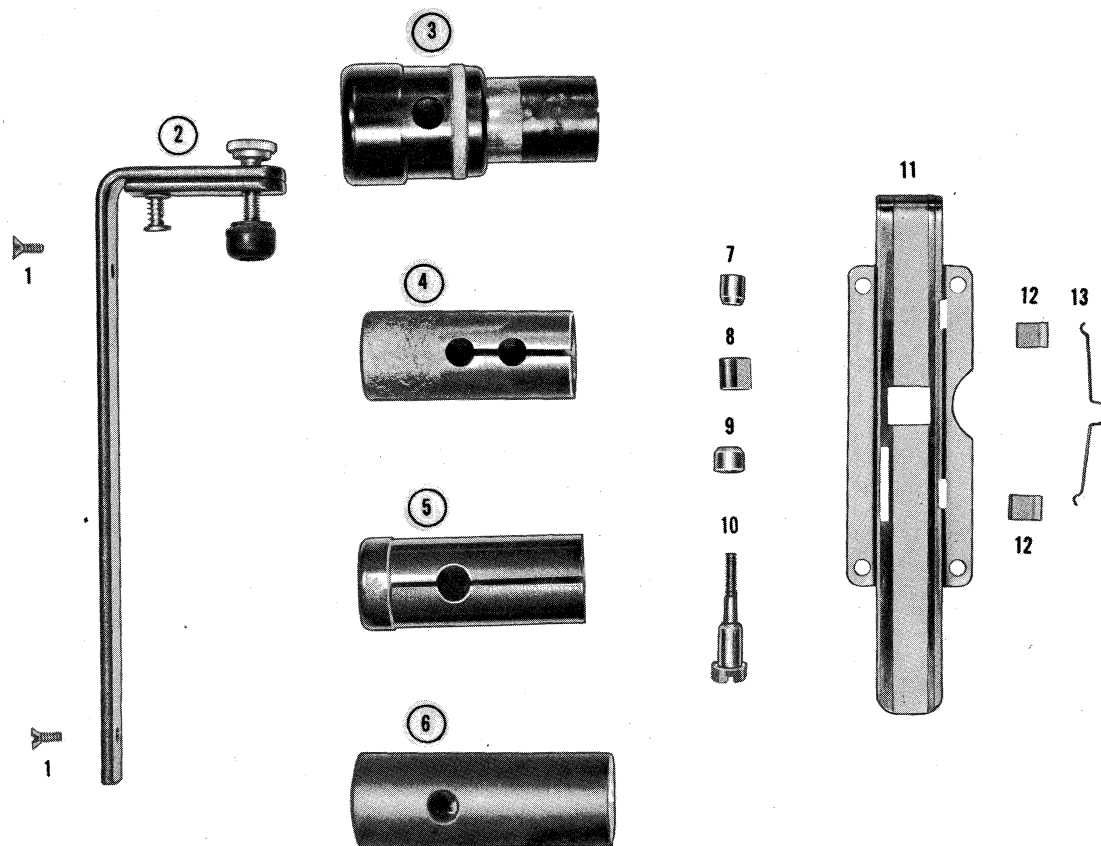
			USED ON MODELS										
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	20710-A	Sound channel assembly*		1		1			1				
	19259	Sound channel only (not shown)			1								
2	19265-A	Sound slit assembly		1	1	1	1	1	1	1	1	1	1
3	20593	Sound lens holder		1		1	1	1	1	1	1	1	1
4	20761	Lens holder screw				2	2	2	2	2	2	2	2
5	26545	Sound channel core		1		1	1	1	1	1	1	1	1
6	19550-A	Core cap				1	1	1	1	1	1	1	1
7		3/48 x 1/4 R.H. screw				2	2	2	2	2	2	2	2
8		5/40 x 3/16 Fil. H. screw				3	3	3	3	3	3	3	3
9	30428-3	Sound channel assembly*				1	1	1	1	1	1	1	1
10	30428-A	Sound core assembly†		1	1	1	1	1	1	1	1	1	1
11		5/40 x 1/8 F.H. screw		2	2	2	2	2	2	2	2	2	2

\*No. 1, 20710-A, replaces No. 9, 30428-3.

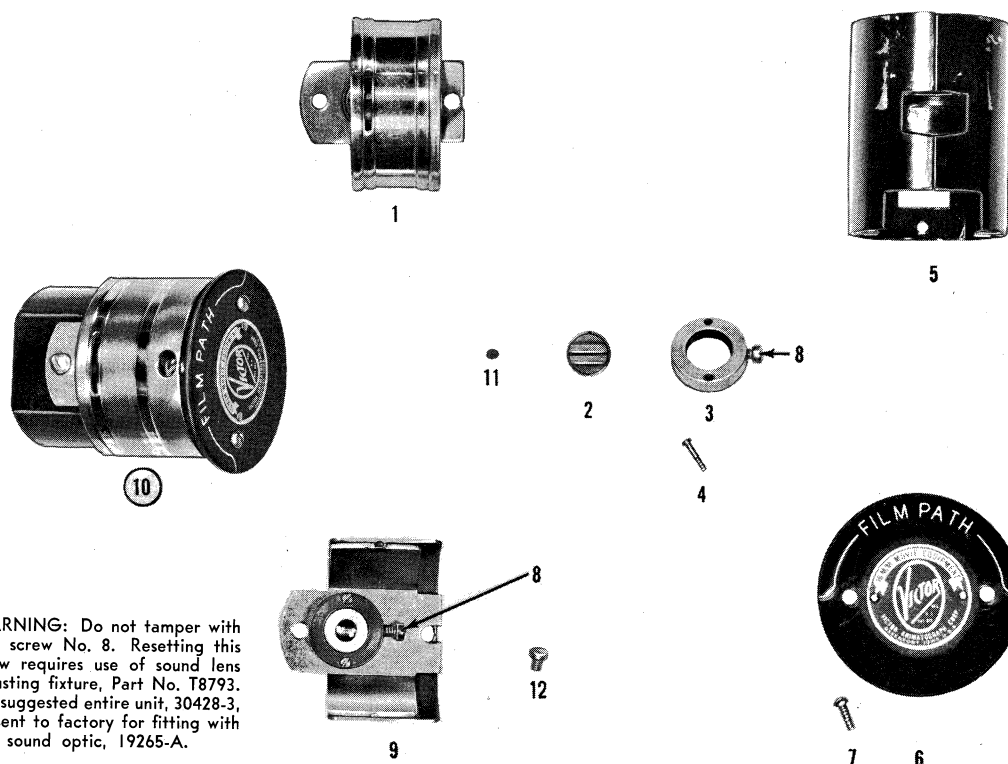
†No. 10, 30428-A Sound lens assembly replaces 19545-A, 20591-A & 26545-A (Obsolete).

All parts of these assemblies are interchangeable.





REEL ARM HOLDER  
P.E. CELL COVER  
FILM GUARD  
FILM CHANNEL  
TENSION CLIP  
AND SPRING



SOUND CORE  
ASSEMBLY

**WARNING:** Do not tamper with lock screw No. 8. Resetting this screw requires use of sound lens adjusting fixture, Part No. T8793. It is suggested entire unit, 30428-3, be sent to factory for fitting with new sound optic, 19265-A.

# **SOUND SPROCKET TENSION ARM**

USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	26997-A	Sound sprocket tension arm assy.						1					
2	26726-AR	Sound sprocket tension arm assy.*			1	1	1		1	1	1	1	1
3	19561-A	Sound sprocket tension arm assy.*		1	1	1			1				
4		#2 "C" Washer					1			1	1	1	1
5		#2 "C" Washer					1			1	1	1	1
6	26727	Tension roll grip					2	2		2	2	2	2
7	26727	Tension roll grip					2	2		2	2	2	2
8		#3 "C" Washer					1			1	1	1	1
9		4/36 x 3/16 R.H. screw			2	2			2				
10		4/36 x 3/16 R.H. screw			1	1	1		1	1	1	1	1
11	18062	Finger grip		1	1	1			1				
12	20030	Idler roll washer			1	1	1		1	1	1	1	1
13	19233-A	Sound sprocket tension roll		1	1	1	1	1	1	1	1	1	1
14	19233-A	Sound sprocket tension roll		1	1	1	1	1	1	1	1	1	1
15	19579	Idler roll		1	1	1	1		1	1	1	1	1
16	19233-A	Sound sprocket tension roll		1	1	1	1	1	1	1	1	1	1
17	19579	Idler roll		1	1	1	1		1	1	1	1	1
18	26997-2	Tension arm						1					
19	26726-2R	Tension arm					1			1	1	1	1
20	19561-2	Tension arm		1	1	1			1				

\*No. 2, 26726-AR, is interchangeable and replaces No. 3, 19561-A.

Parts that make up these assemblies are not interchangeable, except Nos. 13, 14, 19233-A, used on all models.

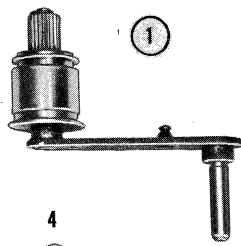
# **LOOP TENSION ARM ASSEMBLY**

USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	26539-A	Loop tension arm assembly						1					
2	26725-AR	Loop tension arm assembly*		1	1	1	1		1	1	1	1	1
3	19563-A	Loop tension arm assembly*		1	1	1	1		1	1	1	1	1
4		#2 "C" Washer					1	1		1	1	1	1
5		#2 "C" Washer					1	1		1	1	1	1
6	26727	Finger grip					1	1		1	1	1	1
7	26727	Finger grip					1	1		1	1	1	1
8		4/36 x 3/16 R.H. screw			1	1	1	1	1				
9	18058-A	Tension roll		1	1	1	1	1	1	1	1	1	1
10	18058-A	Tension roll		1	1	1	1	1	1	1	1	1	1
11	18062	Finger grip		1	1	1	1	1	1				
12	26539-2	Tension arm						1					
13	26725-2R	Tension arm					1			1	1	1	1
14	18058-A	Tension roll		1	1	1	1	1	1	1	1	1	1
15	19563-2	Tension arm			1	1			1				

\*No. 2, 26725-AR, is interchangeable with and replaces No. 3, 19563-A.

Parts that make up these assemblies are not interchangeable except Nos. 9, 10, 18058-A, used on all assemblies.





1

4



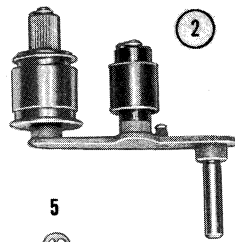
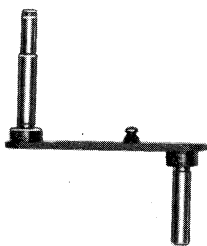
6



13



18



2

5



7



14



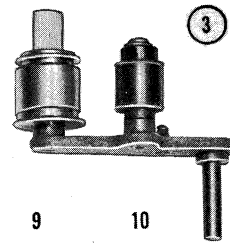
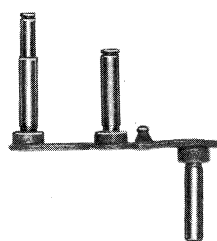
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15



19



3

9



10



11



12



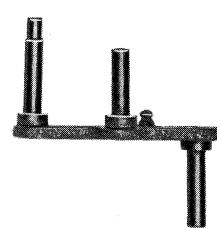
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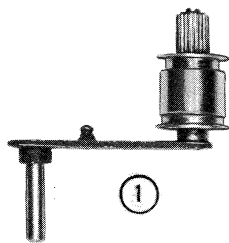
17



20



# **SOUND SPROCKET TENSION ARM**



1

4



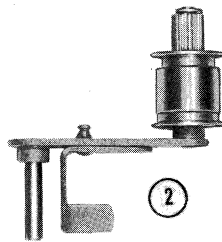
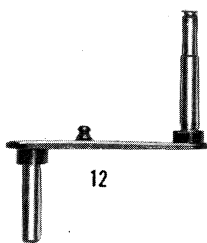
6



9



12



2

5



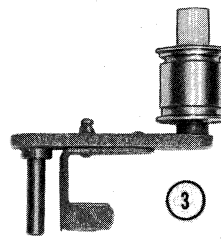
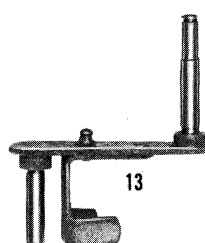
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10



13



3

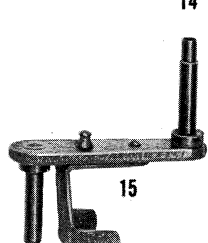
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11



14



15

# **LOOP TENSION ARM ASSEMBLY**

## LENS MOUNT ASSEMBLY

USED ON MODELS												
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-1
1	13327	Lens lock screw										
2	19254-AR	Lens mount assembly										
3	19832	Framing screw										
4	19833	Framing screw knob*										
5	30151-A	Aperture plate										
6	30165	Lens mount lock plunger										
7	19149	Lens mount spring										
8	19254-2	Lens mount										
9	19209	Aperture plate guide										
10	30163	Lens mount lock spring										
11	30100-A	Tension spring										
12	19301	Stop screw										
13		6/32 x 1/8 B.H. screw			2	2	2	2	2	2	2	2
14		4/36 x 3/16 R.H. screw										
15	20045	Tension spring screw										
16	20046	Lens mount plate screw										

\*5/40 x 1/8 Headless set screw is used on No. 4, 19833.

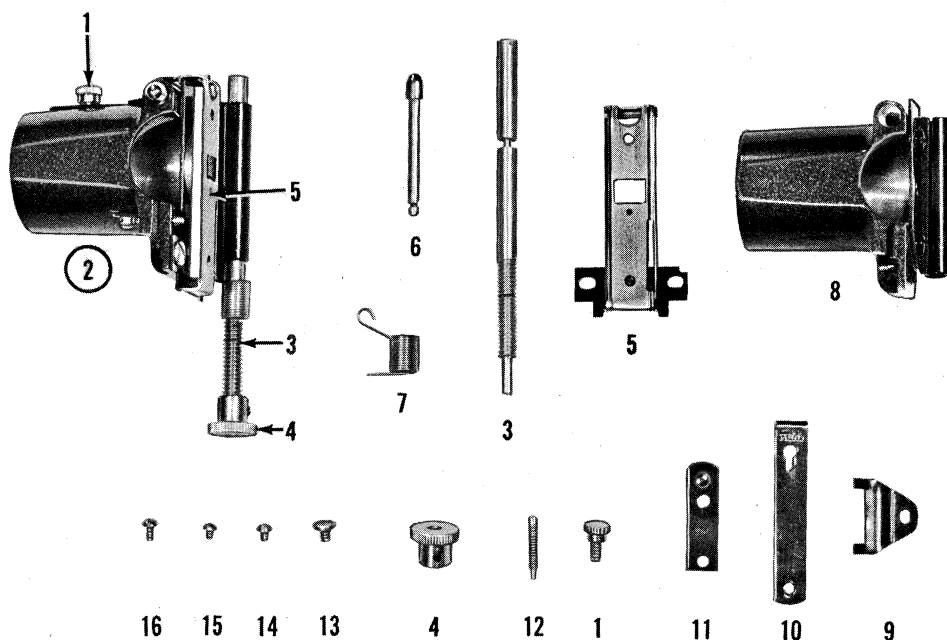
## AUTOMATIC TRIP ASSEMBLY

USED ON MODELS												
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10 60-25
1	19326	Hand trip knob*										
2	T-148	Automatic trip roll		4	4	4	4	4	4	4	4	4
3	T-149	Automatic trip roll		4	4	4	4	4	4	4	4	4
4	19491-A	Automatic trip assembly										
5		#1 "C" Washer					4	4		4	4	4
6	26739	Hand trip knob*										
7	T-148	Automatic trip roll			4	4	4	4	4	4	4	4
8	T-149	Automatic trip roll			4	4	4	4	4	4	4	4
9	26644-AR	Automatic trip assembly†										
10		5/40 x 3/16 Fil. H. screw										
11		#6 Flat washer										
12	20215	Automatic trip plunger										
13		#3 "C" Washer					2	2		2	2	2
14	20215	Automatic trip plunger										
15		4/48 x 1/4 Fil. H. screw										
16		#6 Shakeproof washer										
17		#6 Flat washer										
18	19252	Automatic trip spring										
19		#2 "C" Washer					2	2	2	2	2	2
20		#6 Flat washer										
21	19252	Automatic trip spring										
22		2/56 x 3/16 R.H. screw										

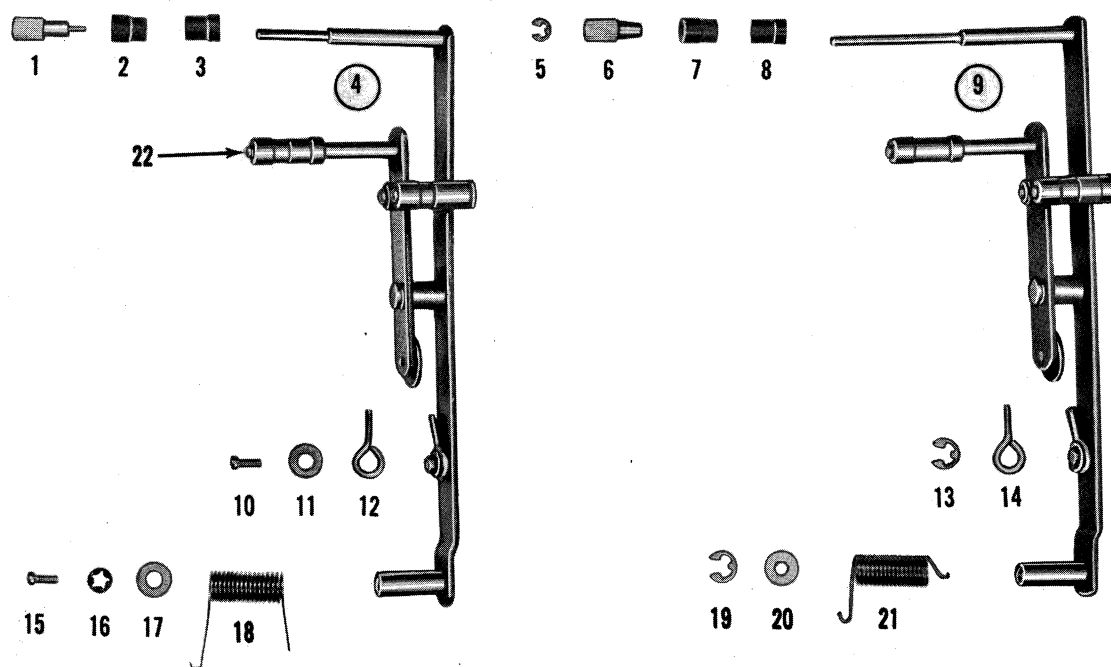
\*No. 1, 19326, is not interchangeable with No. 6, 26739, because of method of assembly.

†No. 9, 26644-AR, is interchangeable on all models.

Film rolls, plunger and spring in 26644-AR assembly require "C" washers.



## LENS MOUNT ASSEMBLY



## AUTOMATIC TRIP ASSEMBLY

USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1		10/32 Hex cap nut			1								
2		6/32 Hex nut				1	1	1	1	1	1	1	1
3	20230	Pilot lamp cap				1	1	1	1	1	1	1	1
4	19543	Pilot lamp cap			1								
5	19245-A	Cam shaft support and oiler assy.*			1	1							
6	19245-50A	Cam shaft support and oiler assy.*			1	1	1	1	1	1	1	1	1
7	20231	Pilot cap spring		1		1	1	1	1	1	1	1	1
8	19243-A	Cam shaft			1								
9	20751-A	Cam shaft				1	1	1	1	1	1	1	1
	19113	Cam shaft washer (not shown)			1	1	1	1	1	1	1	1	1
10	19105	Tension roll spring hook		1	1	1	1	1	1	1	1	1	1
11	19302	Lens lock plate		1	1	1	1	1	1	1	1	1	1
12	19104	Tension roll spring		1	1	1	1	1	1	1	1	1	1
13	19303	Lens lock plate spacer		2	2	2	2	2	2	2	2	2	2
14		5/40 x 3/8 B.H. screw			1	1							
15		#5 Shakeproof washer			1	1							
16	19087	Film support roll shaft			1	1							
17	19086	Film support roll		1	1	1	1	1	1	1	1	1	1
18		#2 Flat washer			1	1							
19		2/56 x 1/8 R.H. screw			1	1							
20		5/40 x 3/4 Fil. H. screw			2	2	2	2	2	2	2	2	2
21		6/32 x 3/8 F.H. screw					1	1	1	1	1	1	1
22		#6 Flat washer (plain)					1	1	1	1	1	1	1
23	26734	Support roll shaft			1	1	1	1	1	1	1	1	1
24	19086	Support roll		1	1	1	1	1	1	1	1	1	1
25		#5 Flat washer					1	1	1	1	1	1	1
26		#1 "C" Washer					1	1	1	1	1	1	1

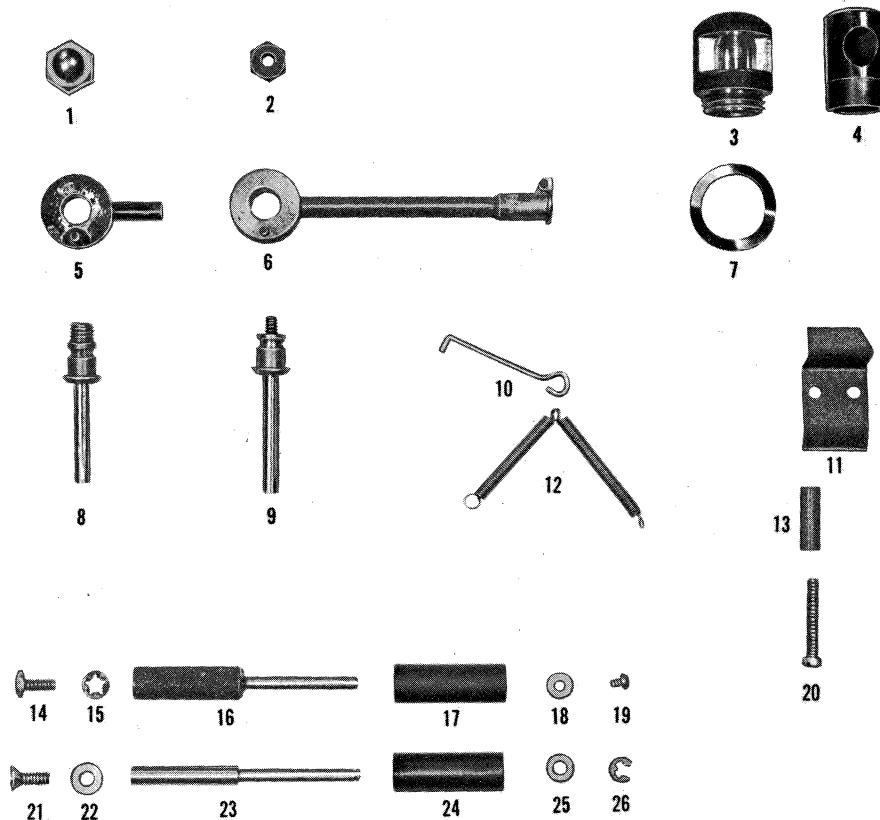
\*No. 5, 19245-A is interchangeable with No. 6, 19245-50A.  
Other parts shown are not interchangeable.

## SOUND UNIT CASTINGS

					USED ON MODELS									
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25	
1	19258-A	Sound unit casting*			1	1	1	1	1	1				
2		8/32 x 3/8 Fil. H. sound unit casting retainer screw			2	2	2	2	2	2	2	2	2	
3	30538-AR	Sound unit casting*									1	1	1	
4		5/40 x 3/4 Fil. H. sound unit casting retainer screw				BX 2								
5	20598-A	Model 40-BX (only) sound unit casting*				BX 1								
6	787	Sound core lock screw			1	1	1	1	1	1	1	1	1	
7	19262	Sound unit casting oiler			2	2	2	2	2	2				

\*These assemblies complete are not interchangeable.

30368-A (see operator's view) Sound sprocket and 30369-A (see operator's view) loop roll assemblies with these units are interchangeable.



**CAM SHAFT**

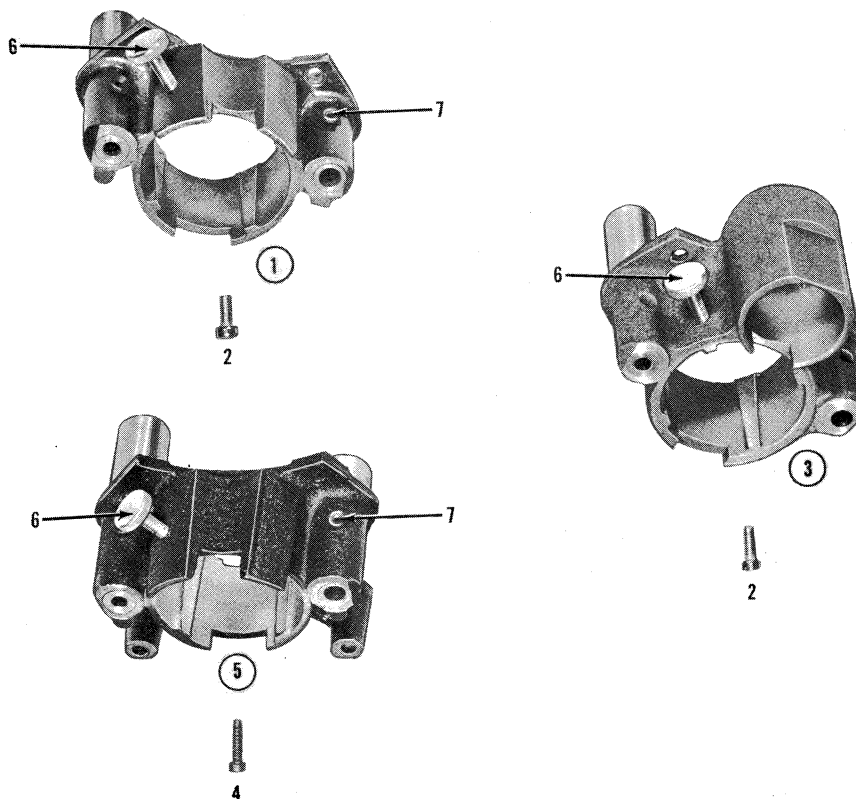
**OILER**

**PILOT LAMP  
CAP & SPRING**

**LENS MOUNT  
LOCK PLATE**

**SUPPORT ROLL**

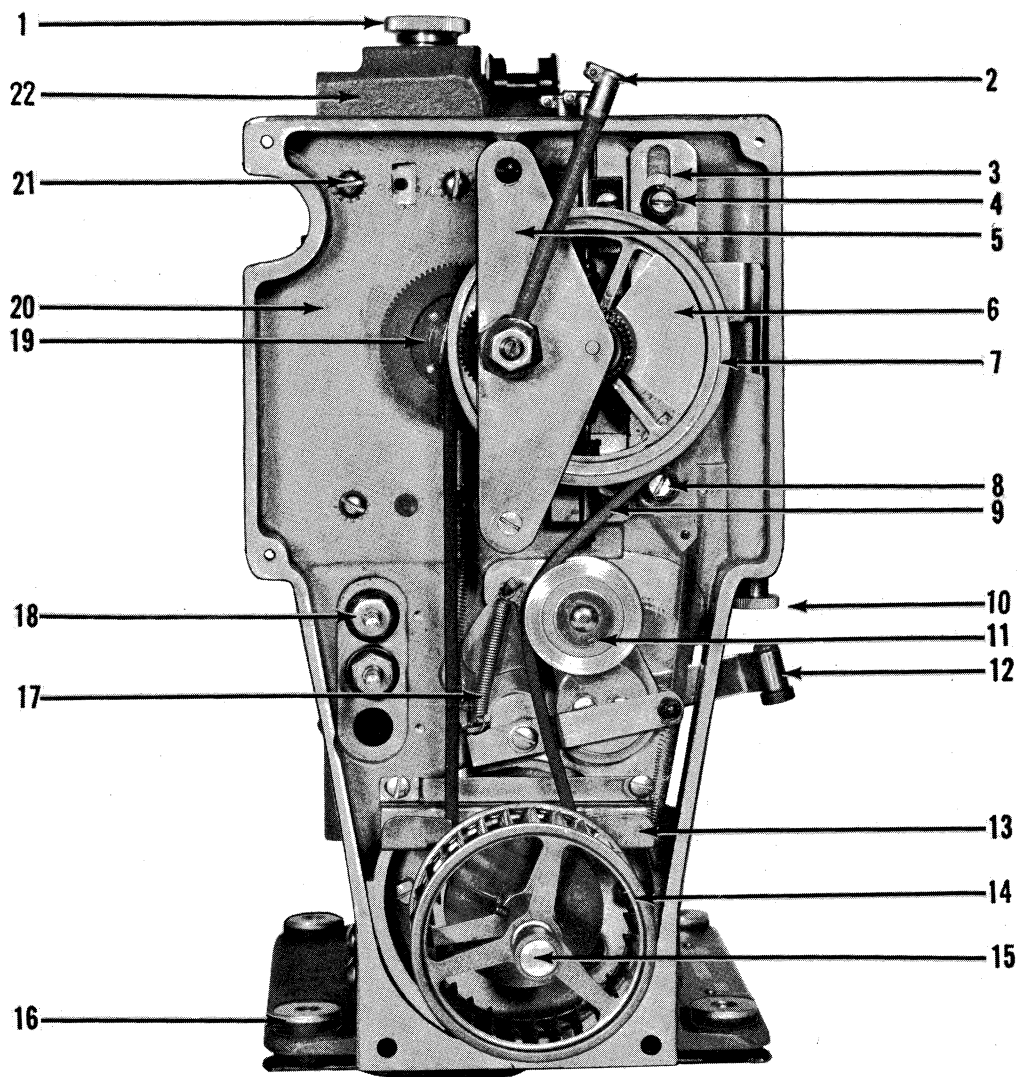
**TENSION ARM  
SPRINGS**



**SOUND  
UNIT  
CASTINGS**

**REAR VIEW  
MODELS  
60-4,  
60-10, 60-25  
  
(USE AS  
REFERENCE  
FOR MODELS  
60-2, 55)**

USED ON MODELS												
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10 60-25
1	30254-A	Reel arm lock screw assembly	13									
2	23135-AR	Support bar oil tube	35									
3	19460-A	Safety shutter	33									
4	19457	Safety shutter guide (upper)	33									
5	26210-A	Shutter support bar assembly	35									
6	20580-A	Light shutter assembly	37									
7	20565-A	Cam pulley assembly	37									
8	19471	Safety shutter guide (lower)	33									
9	19128	Motor drive belt	73									
10	19833	Framing screw knob	21									
11	26829-A	Starting lever plate assembly	33									
12	23384-A	Starting lever	33									
13	20235	Drive belt guard										
14	26610	Fan	79									
15	26885-A	Rewind drive pulley	79									
16	30366-A	Base support sleeve	73	4	4	4	4	4	4	4	4	4
17	23381	Starting lever spring	33									
18	23354	Body terminal	73				2			2	2	2
19	19479-A6	Oscillating gear assembly	35									
20	19130	Shutter housing										
21		8/32 x 3/8 R.H. screw			4	4	4	4	4	4	4	4
22	26902-AR	Body casting										



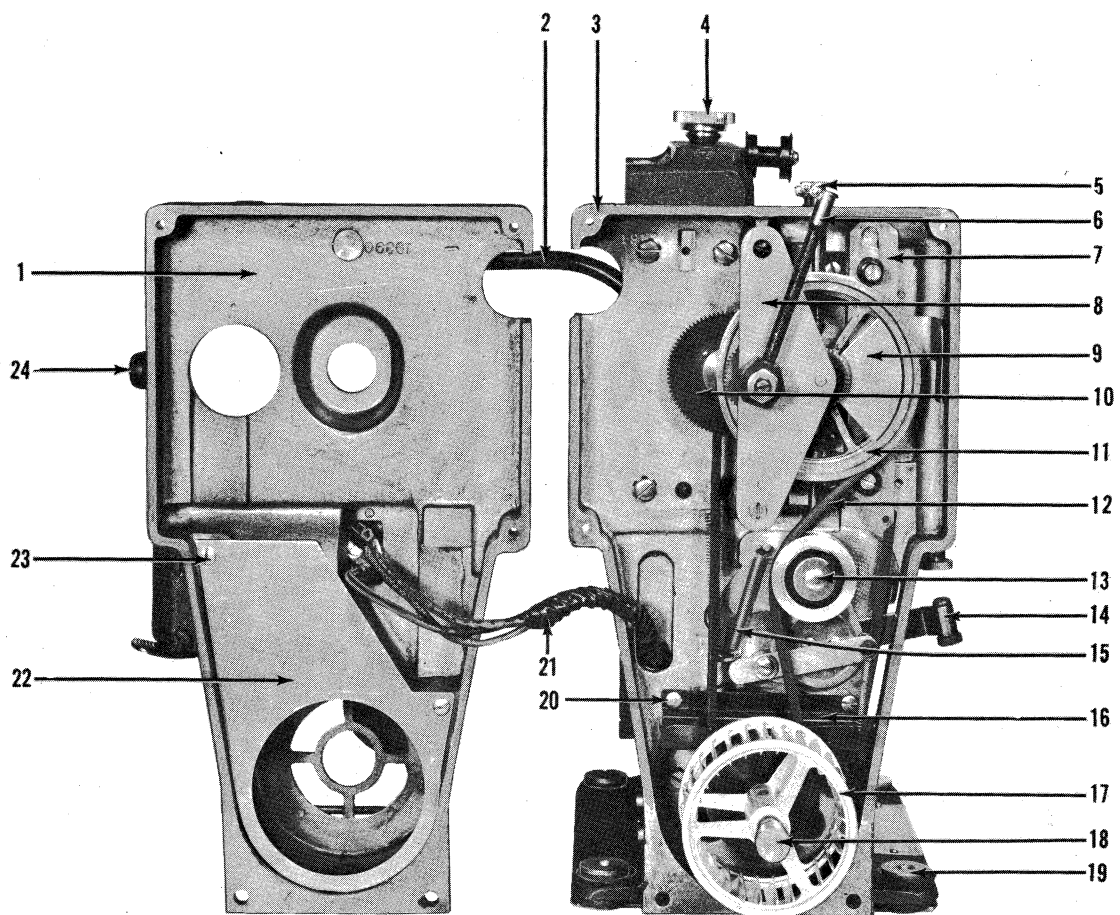
**REAR VIEW  
MODELS  
60-4,  
60-10, 60-25**

**(USE AS  
REFERENCE  
FOR MODELS  
60-2, 55)**

# **REAR VIEW MODEL 56**

USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	26654-A	Lamp house casting											
2	26577-A	P.E. Cell cord assembly	67										
3	26506	Shutter housing											
4	30254-A	Reel arm lock screw assembly	13										
5	20224-50	Shuttle oiler											
6	23135-A	Support bar oil tube	35										
7	26616-A	Safety shutter assembly	33										
8	26210-A	Shutter support plate assembly	35										
9	20580-A	Shutter assembly	37										
10	26615-A	Oscillating assembly	35										
11	20565-A	Cam pulley assembly	37										
12	19128	Drive belt	73										
13	26829-A	Starting lever plate assembly	33										
14	23384-A	Starting lever	33										
15	19469	Safety shutter spring	33										
16	20235	Belt guard											
17	26610	Fan	81										
18	23350	Rewind pulley	81										
19	30366-A	Base support sleeve	73	4	4	4	4	4	4	4	4	4	4
20		5/40 x 3/16 B.H. belt guard screw					4	4	4	4	4	4	4
21	26536-A	Motor wiring harness	69										
22	26941	Fan baffle	45										
23		5/40 x 3/16 B.H. fan baffle screw	45				4	4	4	4	4	4	4
24	20714	Lens mount stop											



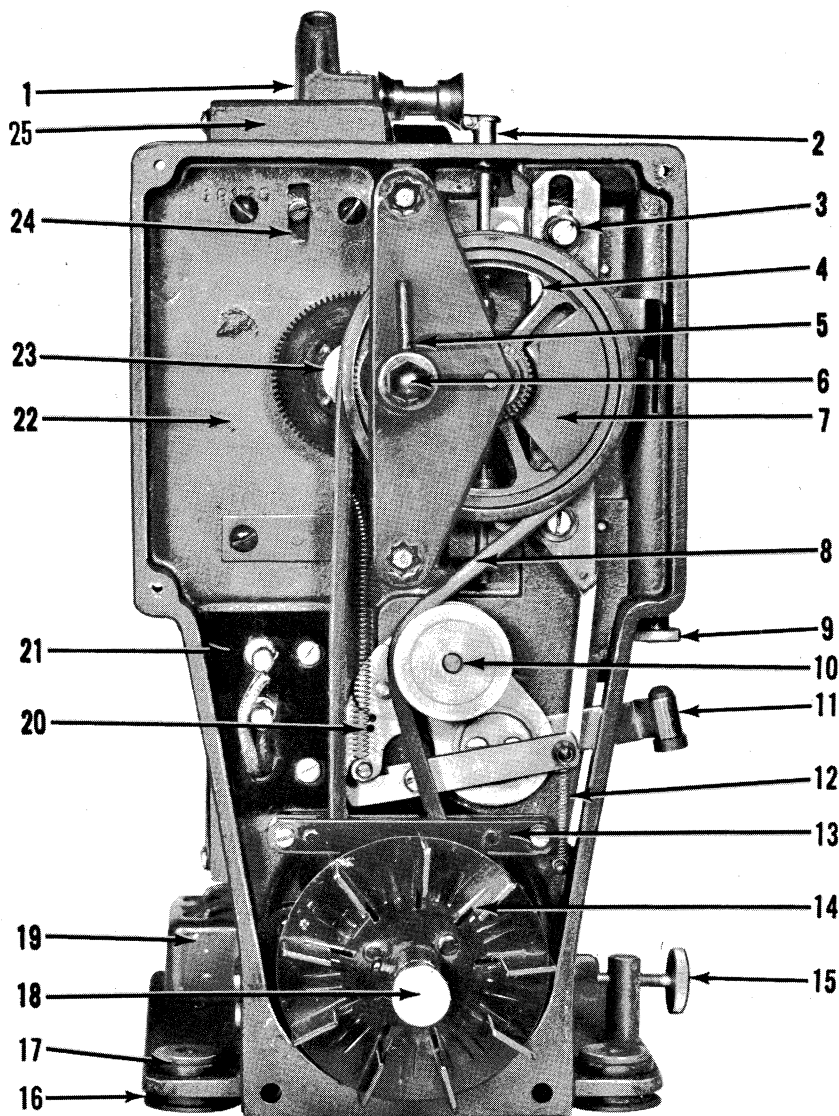


**REAR VIEW  
MODEL 56**

# **REAR VIEW MODEL 40-B**

**(USE AS  
REFERENCE  
FOR MODEL  
60-B)**

USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	19850-A	Reel arm holder assembly	13										
2	20224	Shuttle oiler											
3	19460-A40	Safety shutter	33										
4	20565-A	Cam pulley assembly	37										
5	20568-A	Shutter support oil tube	35										
6	20572-A	Shutter support plate assembly	35										
7	20580-A	Light shutter assembly	37										
8	19128-40	Drive belt	73										
9	19833	Framing screw knob	21										
10	20085-A	Starting lever plate	33										
11	20086-A	Starting lever assembly	33										
12	19469	Safety shutter spring	33										
13	19163-A	Drive belt guard											
14	20274-A	Motor fan	87										
15	19598	Reel arm holder screw											
16	22091	Base support rubber washer	73		8	8	8	8	8	8	8	8	8
17	30366-A	Base support sleeve	73		4	4	4	4	4	4	4	4	4
18	20273	Rewind pulley	87										
19	19869	.5 Mfd. condenser	69										
20	19201	Starting lever spring	33										
21	19250-A	Terminal block	73										
22	19130	Shutter housing											
23	19479-A	Oscillating assembly	35										
24	19593	Adjusting eccentric screw											
25	20790-A	Body casting											

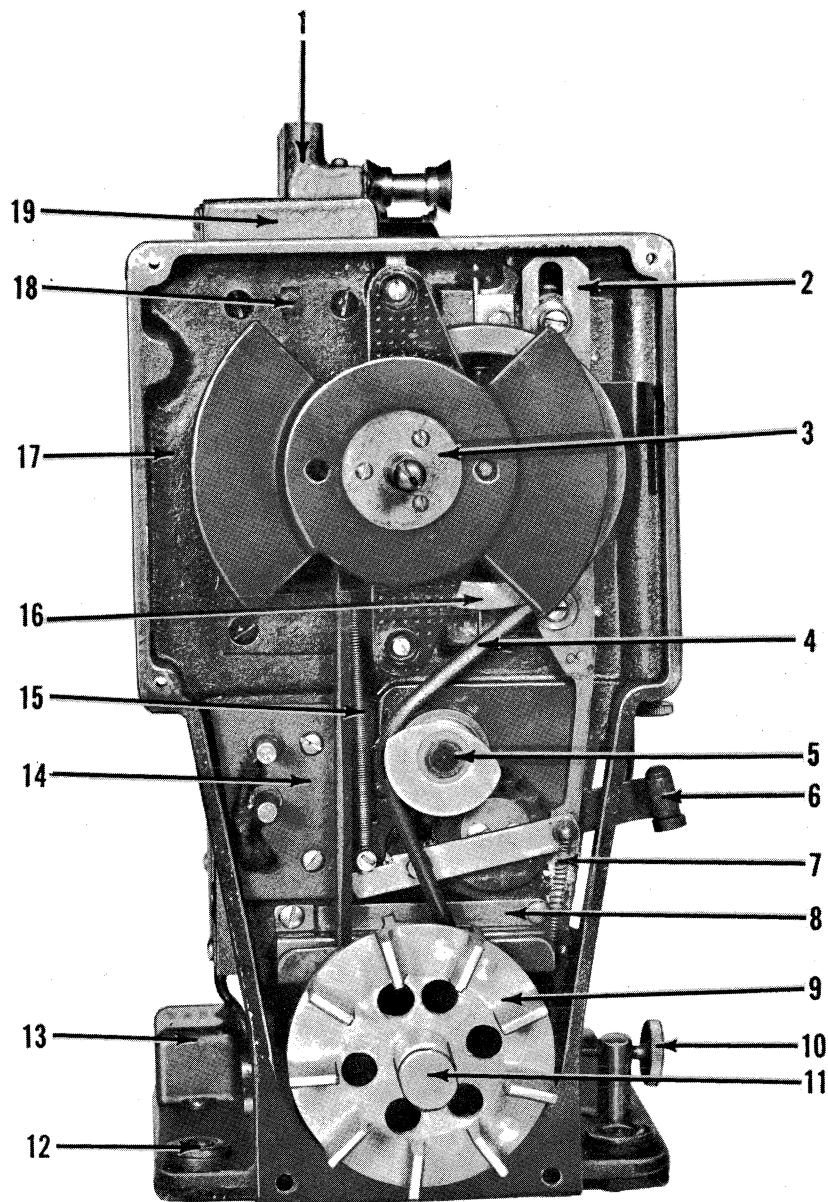


**REAR VIEW  
MODEL 40-B**

**(USE AS  
REFERENCE  
FOR MODEL  
60-B)**

# **REAR VIEW MODEL 40-A**

USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	19850-A	Reel arm holder assembly	13	I	I	I							
2	19460-A40	Safety shutter	33	I	I	I			I				
3	19120-A	Light shutter assembly	37		I								
4	19128-40	Motor drive belt	73	I	I	I			I				
5	20085-A	Starting lever plate	33	I	I	I			I				
6	20086-A	Starting lever	33	I	I	I			I				
7	19469	Safety shutter spring	33	I	I	I	I	I	I	I	I	I	I
8	19163-A	Belt guard			I	I							
9	20274-A	Fan	85		I								
10	19598	Reel arm holder screw			I	I			I				
11	19518	Rewind pulley 1/4"	85		I								
12	30366-A	Base support sleeve	73		4	4	4	4	4	4	4	4	4
13	19869	.5 Mfd. condenser	69		I	I			I				
14	19250-A	Terminal post assembly		I	I	I	I		I				
15	19201	Starting lever spring	33	I	I	I			I				
16	19056-A	Cam pulley assembly	37		I								
17	19130	Shutter housing			I	I	I		I	I			
18	19593	Eccentric screw		I	I	I	I		I				
19	20790-A	Body casting			I	I	I	I	I	I			



**REAR VIEW  
MODEL 40-A**



## SAFETY SHUTTER ASSEMBLY

USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	19463	Safety shutter bearing											
2	19471	Safety shutter guide (lower)											
3	19457	Safety shutter guide (upper)											
4	19469	Shutter spring											
5		#5 Shakeproof washer (lock washer for guides)			2	2	2	2	2	2	2	2	2
6		5/40 x 5/8 F.H. guide retaining screw (upper)											
7		5/40 x 5/16 F.H. guide retaining screw (lower)											
8		5/40 x 3/8 F.H. shutter bearing screw											
9	19460-A40	Safety shutter*											
10	20084	Shutter eccentric											
11	19471	Shutter guide (lower)											
12	19457	Shutter guide (upper)											
13	19469	Safety shutter spring											
14		#5 Shakeproof washer (guide lock washer)			2	2	2	2	2	2	2	2	2
15		5/40 x 5/16 F.H. guide retaining screw (upper)											
16		5/40 x 7/8 F.H. guide retaining screw (lower)											
17		5/40 x 5/16 B.H. eccentric retainer screw											
18		9/64 x 3/8 Flat washer											
19	19460-A	Safety shutter*											

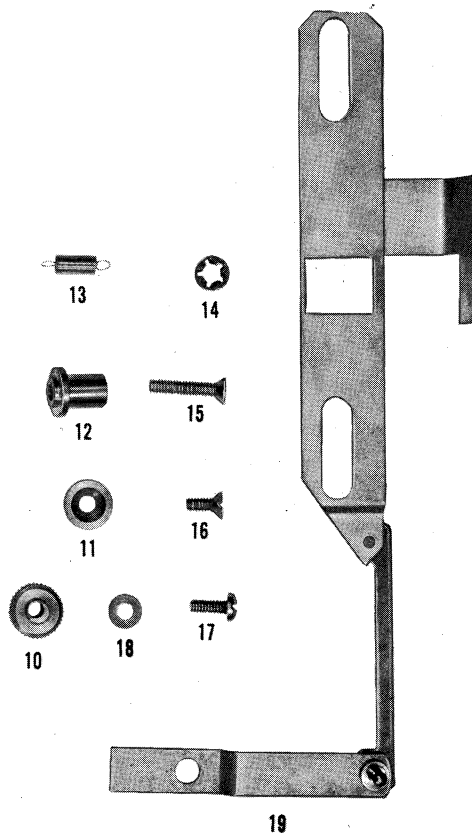
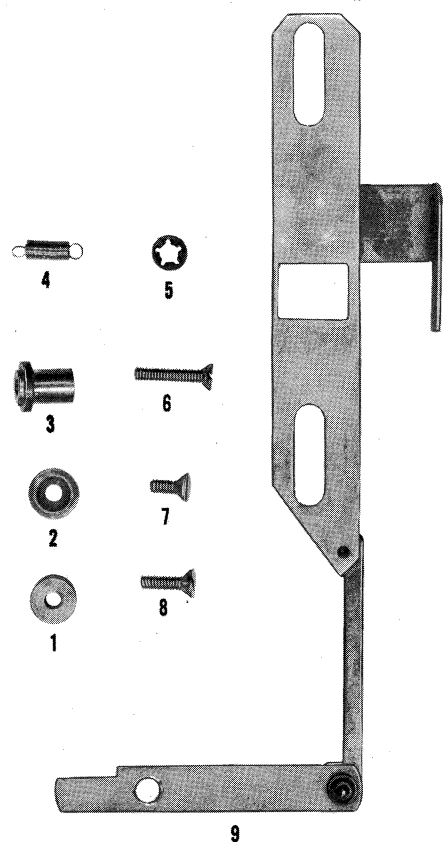
\*No. 9, 19460-A40, is not interchangeable with No. 19, 19460-A.

## STARTING LEVER PLATE ASSEMBLY

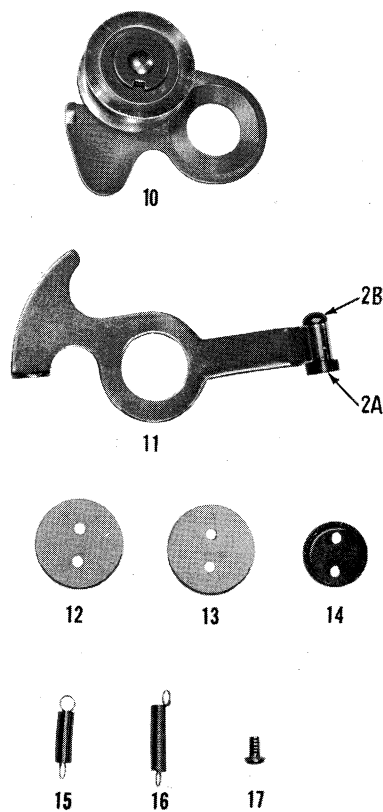
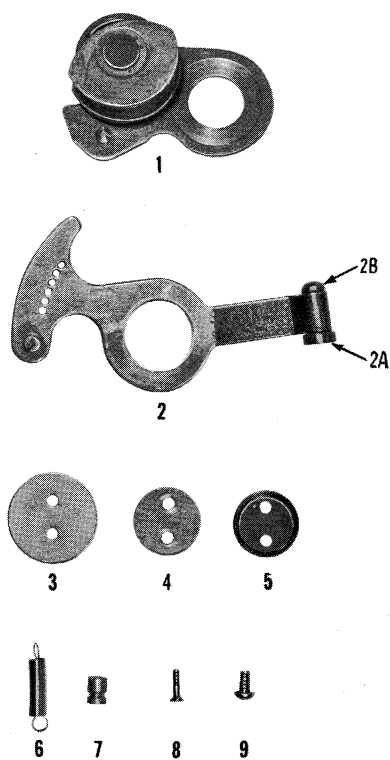
USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	20085-A	Starting lever plate*											
2	20086-A	Starting lever											
2-A	19406	Starting lever knob (lower)											
2-B	19404	Starting lever knob (upper)											
3	19172	Pivot washer					2	2		2	2	2	2
4	20125	Starting lever pivot washer											
5	19171	Starting lever pivot											
6	19201	Spring											
7	20088	Spring hook eccentric											
8	20089	Spring hook screw											
9		5/40 x 3/8 B.H. screw			2	2	2	2	2	2	2	2	2
10	26829-A	Starting lever plate assembly*											
11	23384-A	Starting lever											
12	19172	Pivot washer					2	2		2	2	2	2
13	19172	Pivot washer					2	2		2	2	2	2
14	19171	Pivot											
15	19201	Starting lever plate spring											
16	23381	Starting lever spring											
17		5/40 x 3/8 B.H. screw			2	2	2	2	2	2	2	2	2

\*No. 1, 20085-A, is not interchangeable with No. 10, 26829-A.

# SAFETY SHUTTER ASSEMBLY



# STARTING LEVER PLATE ASSEMBLY



## SHUTTER SUPPORT PLATE ASSEMBLY

USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	26210-A	Shutter support plate assembly*											
2	20572-A	Shutter support plate assembly*											
3	20573	Jack shaft											
4	20573-40	Jack shaft											
5	20561-A	Intermediate drive gear†											
6	20561-A	Intermediate drive gear†											
7	23382	Shutter support spacer (lower)											
8	20582	Jack shaft collar											
9	26211	Shutter support spacer (upper)											
10	20582	Jack shaft collar											
11	26210	Shutter support plate (only)											
12	20572-2	Shutter support plate											
13		5/40 x 3/4 F.H. screw											
14	23365	Fibre washer											
15	23137	Jack shaft support washer											
16		5/40 x 3/4 T.H. screw											
17	20568-A	Jack shaft collar and oiler											
18		1/4 x 28 Hex nut											
19	23135-A	Support bar oil tube											
20		10/32 Hex nut											

\*No. 1, 26210-A, replaces No. 2, 20572-A. Retaining screws for No. 2, 20572-A, are 5/40 x 3/4 Fil. head.

†Nos. 5, 6, 20561-A Intermediate gears used on both assemblies.

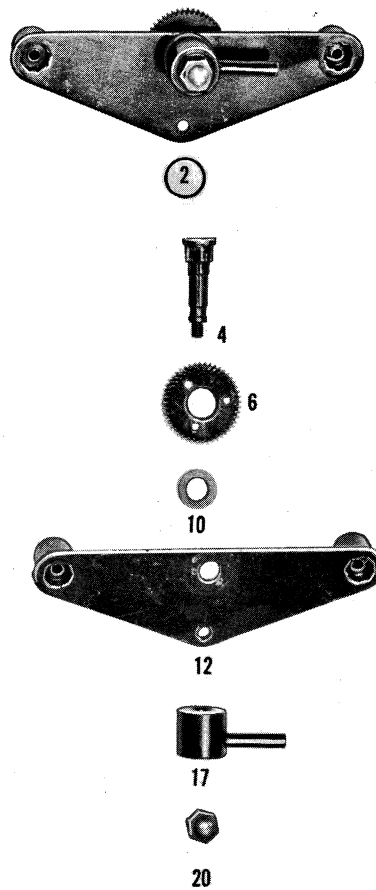
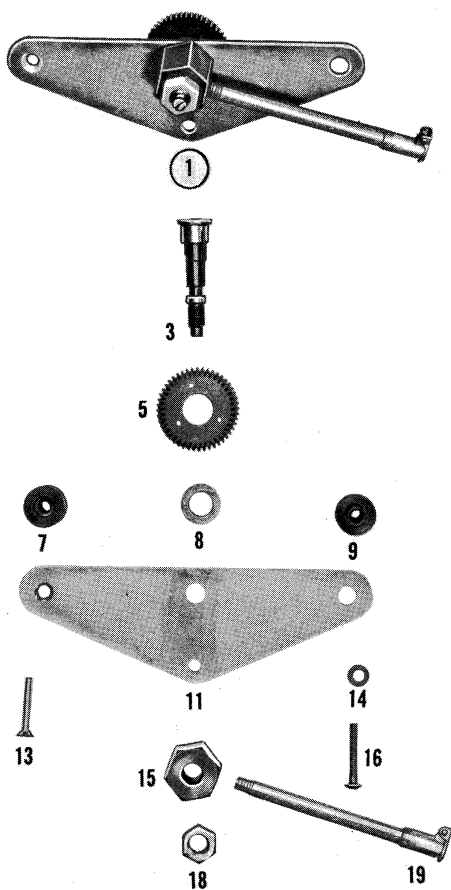
## OSCILLATING GEAR ASSEMBLY

USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	26615-A	Oscillating assembly*											
1-A	19479-2	Oscillating sleeve and bushing only											
2	19479-A40	Oscillating assembly*											
2-A	19479-2	Oscillating sleeve and bushing only											
3	19479-A6	Oscillating assembly*											
3-A	19479-2	Oscillating sleeve and bushing only											
4	19323	Oscillating washer											
5	26615-2	Oscillating gear and shaft											
6		#18 1/2" Pin			4	4	4	4	4	4	4	4	4
7	U-79	1/16 x 1/4 Pin											
8	U-178	1/16 x 3/8 Pin											
9	19472	Oscillating gear											
10	19477	Spiral gear											
11	19324-A	Oscillating gear and shaft assy.											
12	19481	Spacer washer		2	2	2	2	2	2	2	2	2	2
13	19481	Spacer washer		2	2	2	2	2	2	2	2	2	2

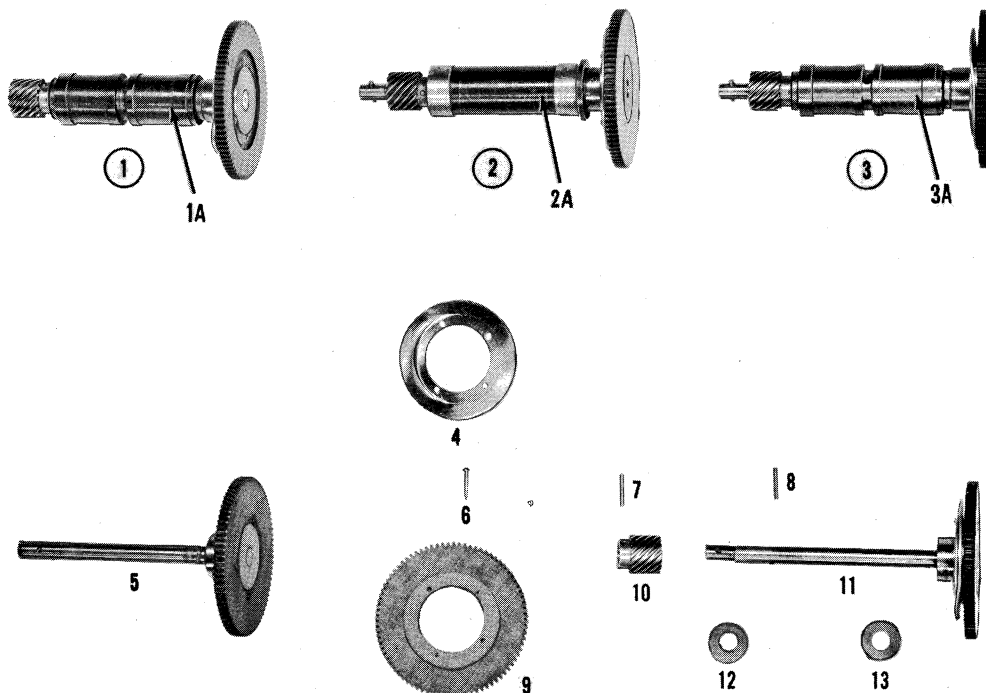
\*No. 3, 19479-A6, is not interchangeable with No. 1, 26615-A.

\*No. 3, 19479-A6, replaces No. 2, 19479-A40.





## SHUTTER SUPPORT PLATE ASSEMBLY



## OSCILLATING GEAR ASSEMBLY

# **LIGHT SHUTTER ASSEMBLY MODEL 40-A**

USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-15
1	19826	Shutter retainer shaft (long)			1								
2		10/32 x 3/16 R.H. screw			1								
3	19826	Shutter retainer shaft (short)			1								
4	19829	Retainer flange washer			1								
5		3/48 x 3/8 T.H. screw			3								
6	19120	Light shutter			1								
7	19825-A	Gear and hub assembly			1								
8		5/40 x 5/8 Fil. H. screw			2								
9		5/40 x 5/8 Fil. H. screw			2								
10	19364-A	Support plate			1								
11	19120-A	Light shutter assembly			1								

# **CAM PULLEY ASSEMBLY**

USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-15
1		2/56 x 5/8 Fil. H. Shutter gear retaining screw			3								
2	19117	Cam rivet†		1	1								
3	19365	Shutter drive gear			1								
4	19110	Cam			1								
5	19505-A	Cam and gear assembly**			1								
6	19056	Cam pulley only			1								
7	19056-A	Cam pulley assembly*			1								
8	30579-A	Cam and gear assembly** †				1	1	1	1	1	1	1	1
9	30578	Cam rivet (long) ††									1	1	1
10	30182	Cam rivet (short) † ††								1			
11		2/56 x 3/8 F.H. Shuttle drive gear retaining screw				3	3	3	3	3	3	3	3
12	30579	Cam gear†††								1	1	1	1
13	30180	Cam††								1	1	1	1
14	20580-A	Shutter assembly		1		1	1	1	1	1	1	1	1
15	20563	Cam bearing		1		1	1	1	1	1	1	1	1
16	20577-A	Intermediate drive gear		1		1	1	1	1	1	1	1	1
17	20565	Cam pulley		1		1	1	1	1	1	1	1	1
18	20565-A	Cam pulley assembly*		1		1	1	1	1	1	1	1	1
19	20564-A	Cam and gear assembly** †		1		1	1	1	1	1	1	1	1
20	20210	Cam††		1		1	1	1	1				
21	20564	Cam gear†††		1		1	1	1	1				
22	30180-A	Cam and gear assembly†				1	1	1	1	1	1	1	1
23	20715	Cam gear spacing washer			1	1	1	1	1	1	1	1	1

Cam assembly

†No. 2, 19117 is not interchangeable with No. 10, 30182.

\*\*No. 5, 19505-A is not interchangeable with No. 19, 20564-A or No. 8, 30579-A.

Cam pulley assembly

\*No. 7, 19056-A is not interchangeable with No. 18, 20565-A.

19056-A was used on Model 40 projectors up to and through serial No. 73105. Starting with serial No. 73106, 20565-A replaced 19056-A and is used on all models including Model 60 series.

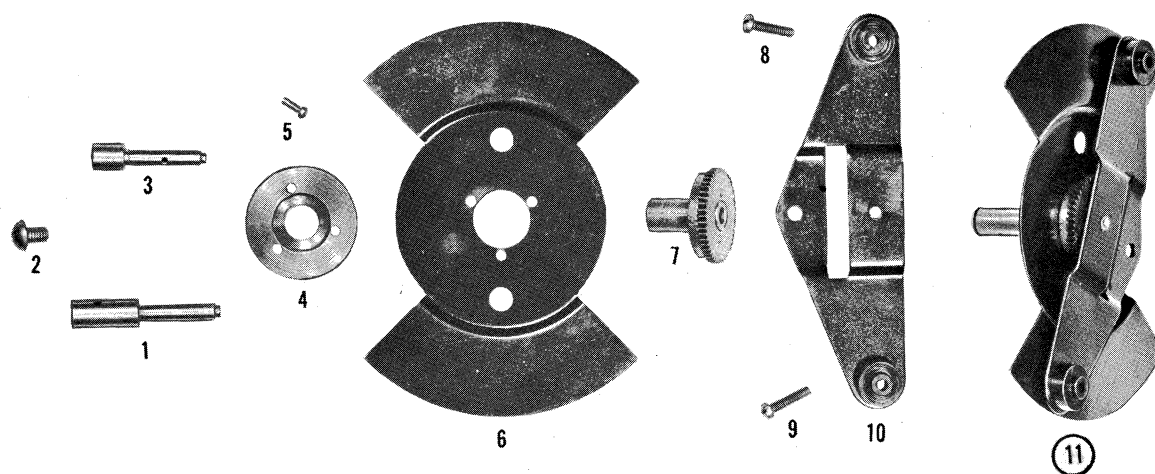
†No. 8, 30579-A replaces No. 19, 20564-A and No. 22, 30182.

††No. 9, 30578 is not interchangeable with No. 10, 30182.

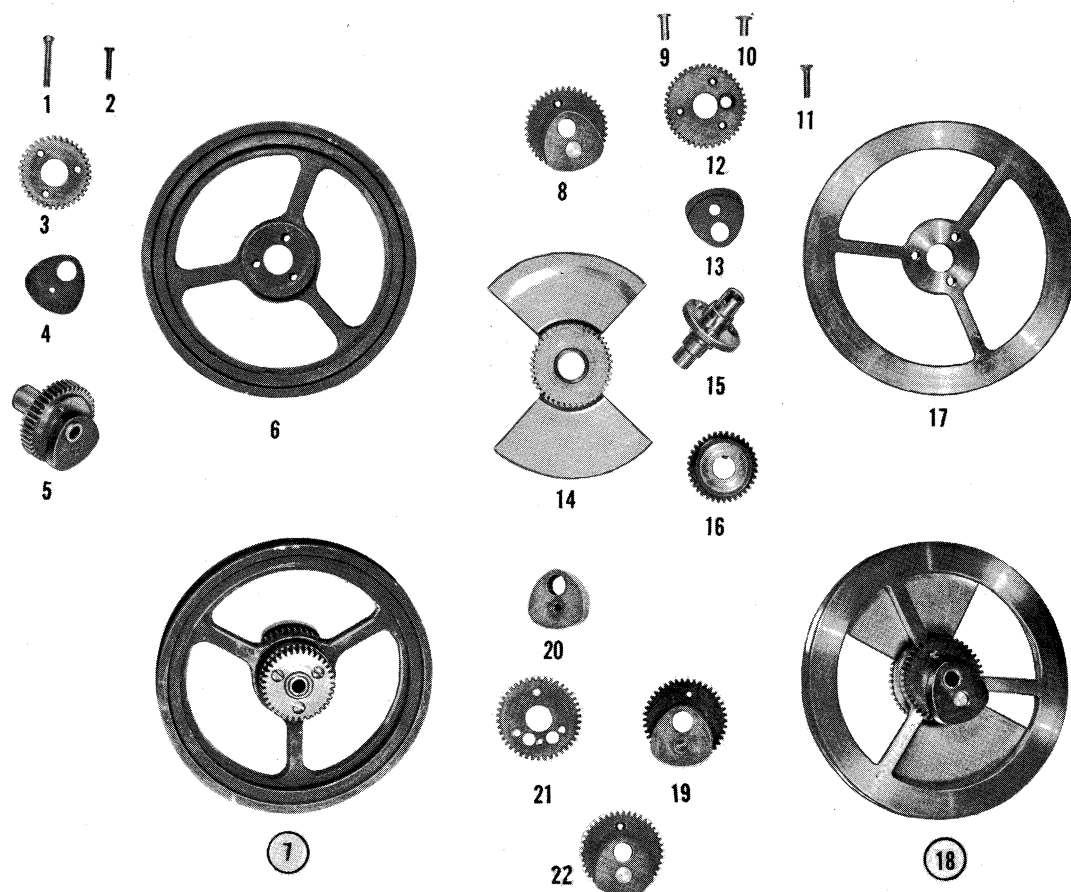
†††No. 12, 30579 is not interchangeable with No. 21, 20564.

†††No. 13, 30180 is not interchangeable with No. 20, 20210.

# **LIGHT SHUTTER ASSEMBLY MODEL 40-A**



# **CAM PULLEY ASSEMBLY**



## SHUTTLE ASSEMBLIES

USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	20222	Shuttle rod bearing		2		2	2	2	2	2	2	2	2
2	20228	Shuttle rod clamp		2		2	2	2	2	2	2	2	2
3		5/40 x 5/16 B.H. (shuttle clamp) screw				2	2	2	2	2	2	2	2
4	19589	Shutter oiler felt		1	3	1	1	1	1	1	1	1	1
5	19096	Shuttle rod (long)			1								
6	19097	Shuttle rod clamp			2								
7		5/40 x 3/8 B.H. (shuttle clamp) screw			2								
8		5/40 x 3/16 B.H. (shuttle spring) screw			1	1	1	1	1	1	1	1	1
9	19592	Shuttle spring		1	1	1	1	1	1				
10		#17 3/8 Pin (shuttle spring pin)			1	1	1	1	1				
11	19091	Shuttle rod (short)			1								
12	19580-A	Shuttle*			1								
13	20126	Shuttle spring								1	1	1	1
14	20127	Shuttle spring pin								1	1	1	1
15	20219-A	Shuttle†					1	1		1	1	1	1
15-A	26761-A	Shuttle‡		1		1	1	1	1	1	1	1	1

\*No. 12, 19580-A, used on Model 40s up to and through Serial No. 70656.

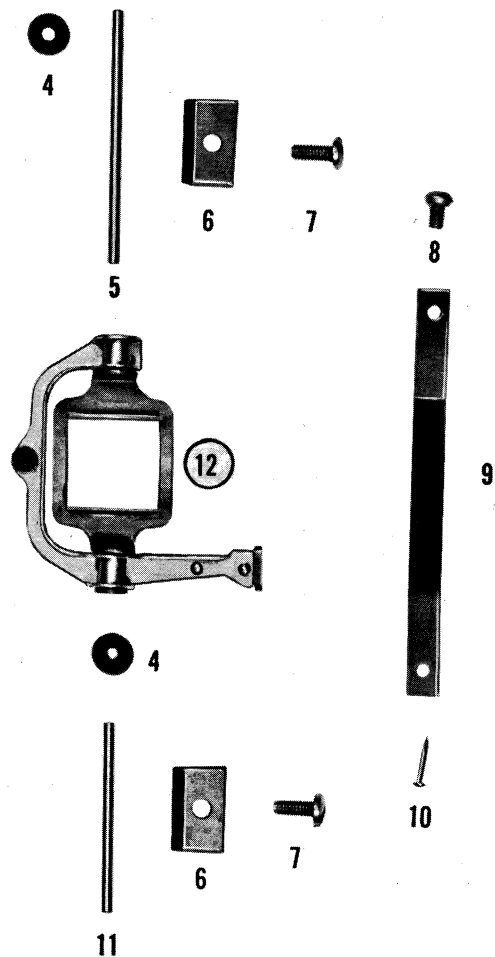
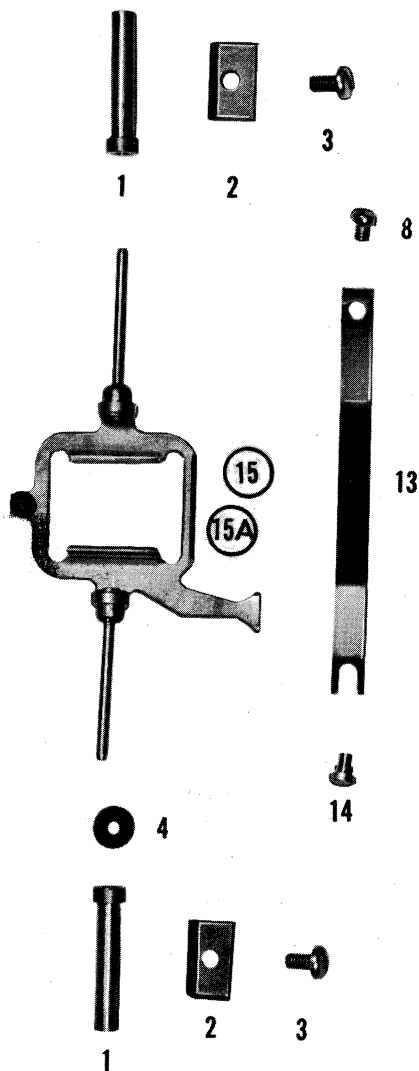
†No. 15, 20219-A, used on all Models through Model 60 series.

‡No. 15-A, 26761-A interchangeable with No. 15, 20219-A.

The difference between 20219-A and 26761-A is shuttle body 20219 is hardened.

The pawls are adjusted with oscillating assembly. The shuttle arm of 26761-A has a soft spot and pawls can be adjusted by applying pressure.

20219-A can be used in place of 26761-A if oscillating assembly 19479-A6 (Page 35) is installed.



## SHUTTLE ASSEMBLIES

# LAMP HOUSE AND BASE ASSEMBLY

60-4, 60-10,

60-25

FRONT VIEW

			USED ON MODELS										
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	26901-AR	Lamp house casting											
2	19345	Still picture pivot											
3	20169	AC socket (female)	45										
4	19034-50A	Power lead assembly	45										
5	19747	AC plug (male)	45										
6	26941	Fan baffle	45										
7	22351-50	Rewind lever	47										
8	19392	Lamp house body plate	45										
9		5/40 x 3/16 B.H. screw	45		3	3	3	3	3	3	3	3	3
10	19343-50A	Still picture shutter	45										
11	20714	Lens mount stop											

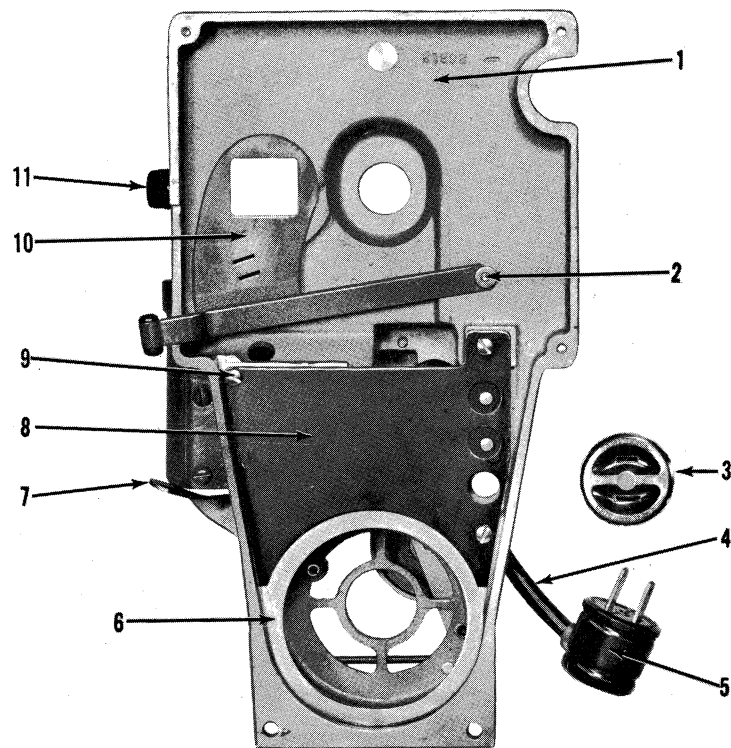
# LAMP HOUSE AND BASE ASSEMBLY

60-4, 60-10,

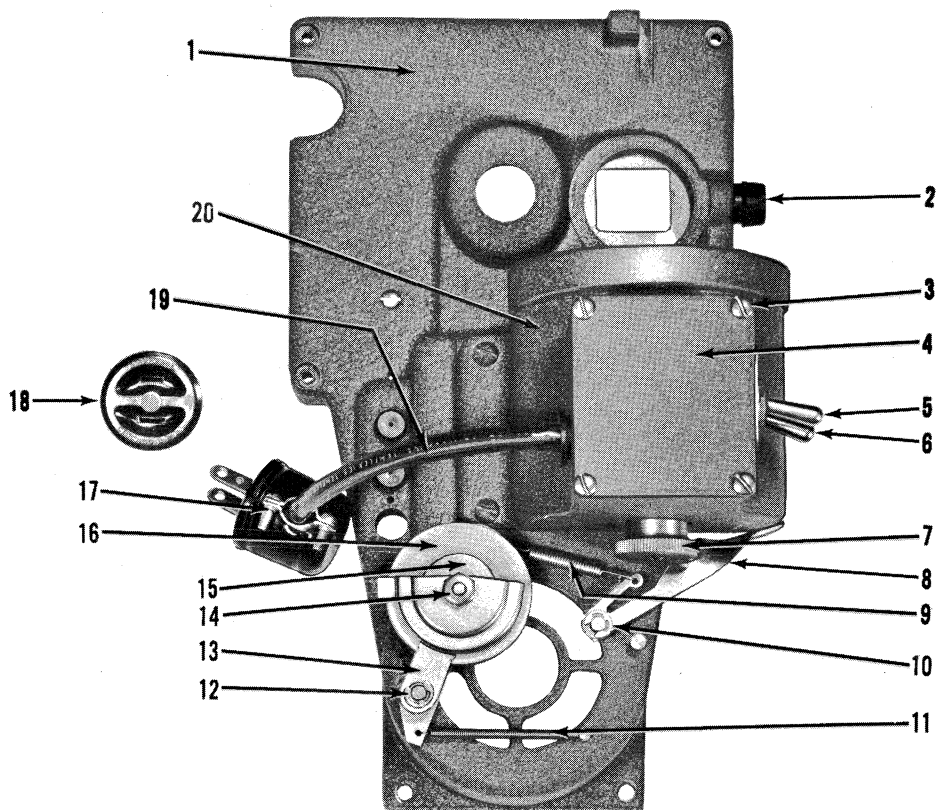
60-25

REAR VIEW

			USED ON MODELS										
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	26901-AR	Lamp house casting assy.											
2	20714	Lens mount stop											
3		5/40 x 3/16 B.H. terminal cover screw	45		4	4	4	4	4	4	4	4	4
4	19393	Terminal cover	45										
5	23340	Motor switch	45										
6	23330	Lamp switch	45										
7	20496	Lamp socket adjusting nut	45										
8	22351-50	Rewind lever	47										
9	30373	Rewind tension spring (large)	47										
10		#3 "C" Washer	47				2	2	2	2	2	2	2
11	23225	Rewind disengaging spring (small)	47										
12		#3 "C" Washer	47				2	2	2	2	2	2	2
13	26916	Rewind belt guard	47										
14		10/32 Hex nut (belt guard retainer nut)											
15	26890-A	Rewind assembly	47										
16	26883-2	Rewind pulley	47										
17	19747	AC plug (male)	45										
18	20169	AC socket (female)	45										
19	19034-50A	Power lead assembly	45										
20	19391-A	Lamp house base casting											



**LAMP HOUSE  
AND BASE  
ASSEMBLY  
60-4, 60-10  
60-25  
FRONT VIEW**



**LAMP HOUSE  
AND BASE  
ASSEMBLY  
60-4, 60-10  
60-25  
REAR VIEW**



# **LAMP HOUSE AND BASE ASSEMBLY 55, 60-B, 60-2**

USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	19390-55A	Lamp house casting											
2	20714	Lens mount pad											
3		5/40 x 3/16 B.H. screw			4	4	4	4	4	4	4	4	
4	19393	Terminal cover	45										
5	18641	Motor switch*	45										
6	20496	Lamp socket adjusting nut	45										
7	22351-50	Rewind lever	47										
8		5/40 x 3/16 B.H. screw											
9	23225	Rewind disengaging spring	47										
10		5/40 x 1/4 B.H. screw											
11	22349-50A	Rewind assembly	47										
12	23257	Rewind belt guard	47										
13		5/40 x 1/4 Rewind belt guard retainer B.H. screw											
14	23345-A	Rewind disc & pulley assy.	47										
15	23348	Rewind tension spring	47										
16	19747	AC plug (male)	45										
17	19034-50A	Power lead assembly	45										
18	20169	AC socket (female)	45										
19	19391-A	Lamp house base casting											

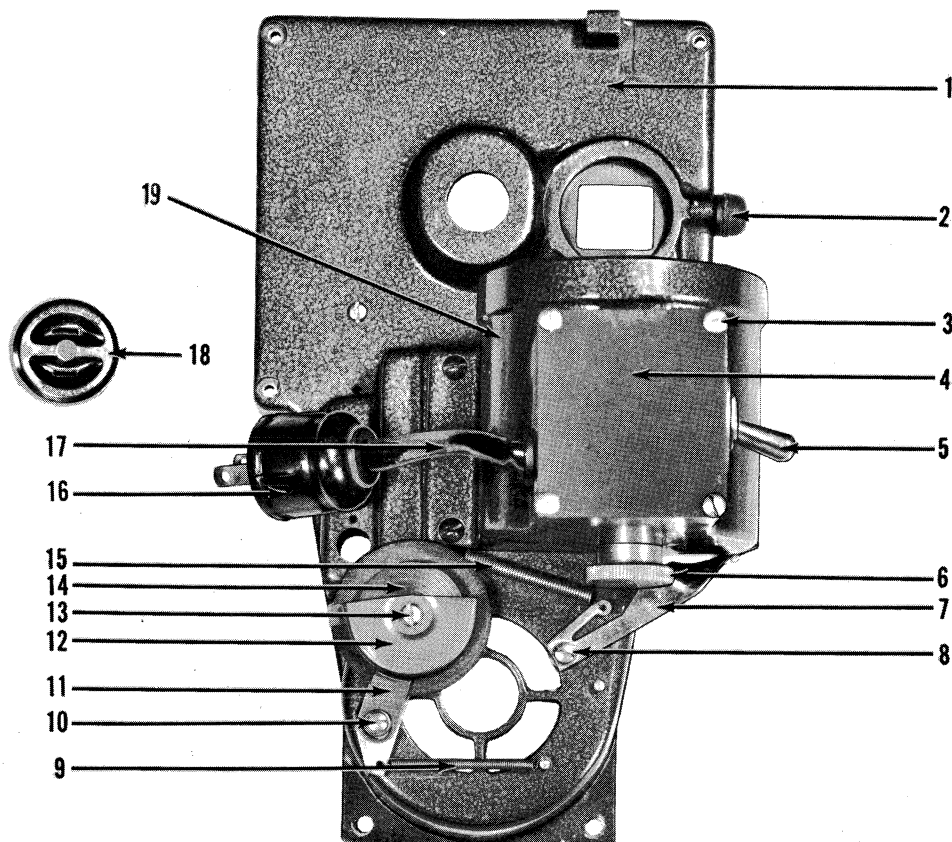
\*No. 5, 18641, is interchangeable with 23340 (Page 5).  
18641 and 23340 are also used for exciter switches.

# **LAMP HOUSE AND BASE ASSEMBLY 40-A, 40-B**

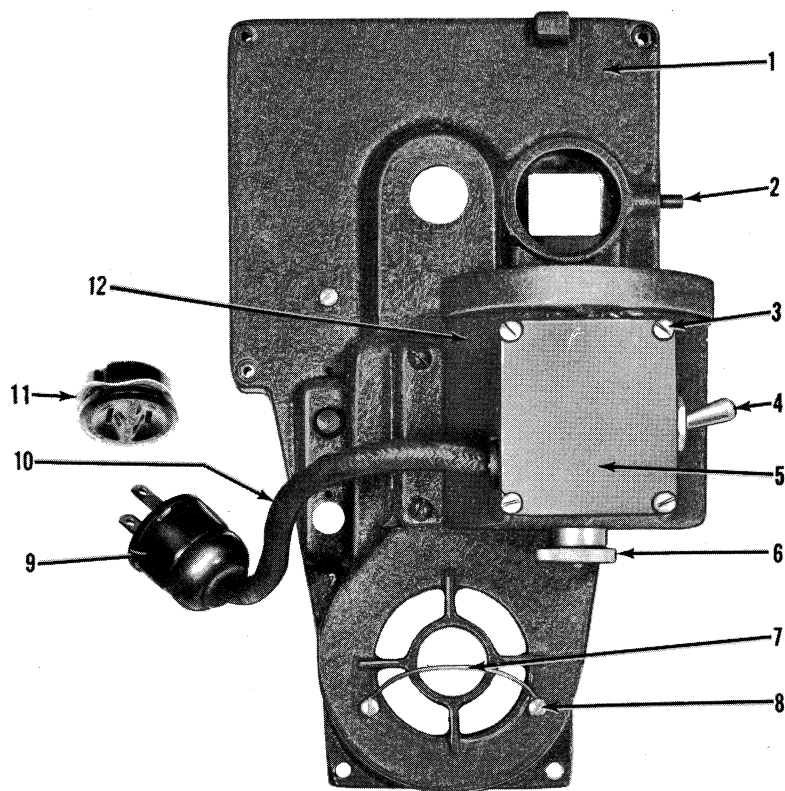
USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	19390-A	Lamp house casting assy.											
2	20110	Lens mount stop screw											
3		5/40 x 3/16 B.H. retainer screw	45		6	6	4	4	4	4	4	4	4
4	18641	Motor switch*	45	2	2	2			2	2			2
5	19393	Terminal cover plate	45										
6	20496	Lamp socket adjusting nut	45										
7	19519	Rewind belt guard											
8		5/40 x 3/16 B.H. retainer screw			6	6	4	4	4	4	4	4	4
9	19747	AC plug (male)	45										
10	19034-50A	Power lead assembly	45										
11	20169	AC socket (female)	45										
12	19391-A	Lamp house base casting											

\*No. 4, 18641 Motor switch is also used as exciter switch.





**LAMP HOUSE  
AND BASE  
ASSEMBLY  
55, 60-B,  
60-2**



**LAMP HOUSE  
AND BASE  
ASSEMBLY  
40-A, 40-B**

**LAMP SOCKET  
ASSEMBLY  
STILL PICTURE  
ASSEMBLY  
BAFFLE  
ASSEMBLY**

			USED ON MODELS										
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	20491-A	Lamp adjusting plate*											
2	23376-A	Lamp adjusting plate*											
3	20492	Lamp socket insulator											
4	20496	Lamp socket adjusting nut											
5	19747	AC line plug											
6	19747	AC line plug											
7	20169	AC socket (female)											
8	19036	Insulator bushing											
9	19034-50A	Power lead assembly											
10	20490	Lamp socket											
11	19158	Nameplate (off-project) †											
12	19429	Nameplate (off-rewind) †											
13	26724	Nameplate (lamp-motor-off) †											
14	19311	Terminal plunger			2	2	2		2	2	3	2	2
15		5/40 x 3/16 B.H. retainer screw			6	6	4	4	4	4	4	4	4
16	19393	Terminal cover											
17	23292	Terminal insulator											
18	19519	Rewind belt guard											
19		5/40 x 3/16 B.H. retainer screw											
20	19345	Still picture pivot											
21		5/40 x 3/8 B.H. retainer screw			3	3	3		3	3	3	3	3
22	1014	Switch nut		4	4	4	4	3	4	4	4	4	4
23	18690	Switch washer		4	4	4	4	3	4	4	4	4	4
24	18641	Motor switch ‡											
25	19343-50A	Still picture shutter											
26	19404	Lever knob			3	3	3		3	3	3	3	3
27	19404	Lever knob			3	3	3		3	3	3	3	3
28	26941	Motor fan baffle											
29		5/40 x 3/8 B.H. retainer screw			2	2	2		2	2	2	2	2
30	19310	Terminal post sleeve insulator			2	2	2		2	2	3	2	2
31	19307	Terminal post washer			2	2	2		2	2	3	2	2
32	19312	Terminal post spring			2	2	2		2	2	3	2	2
33	23330	Lamp switch**											
34		5/40 x 1/4 B.H. retainer screw			3	3	3		3	3	3	3	3
35	19392	Lamp house body plate											
36		4/36 x 7/16 F.H. retainer screw			2	2	2		2	2	2	2	2
37	19311	Terminal plunger			2	2	2		2	2	3	2	2

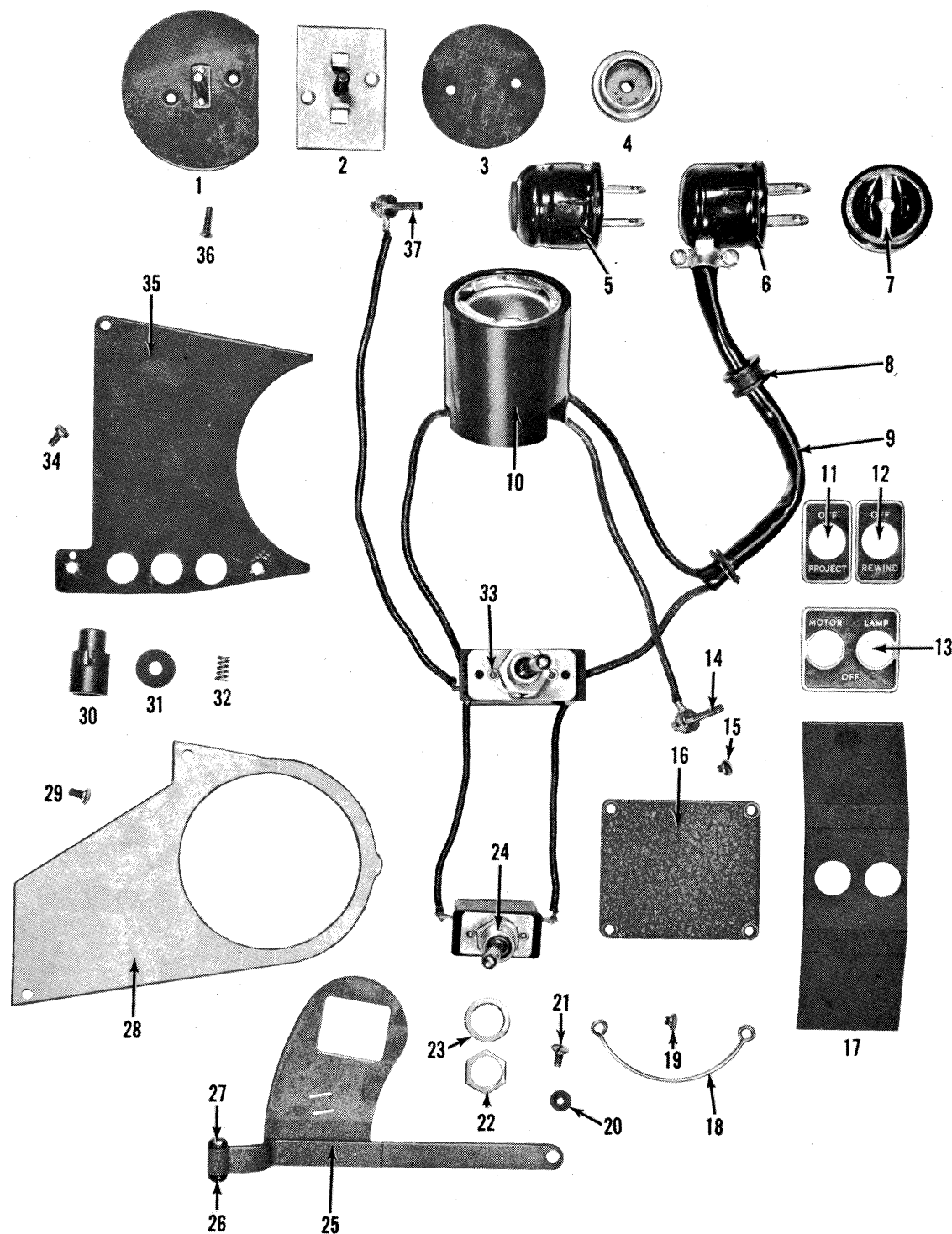
\*No. 2, 23376-A, replaces No. 1, 20491-A.

†No. 13, 26724, replaces No. 11, 19158, and No. 12, 19429.

‡No. 24, 18641, is also used for exciter switch.

\*\*No. 33, 23330, replaces 20445 (Model 40 Parts Book).

**LAMP SOCKET  
ASSEMBLY  
STILL PICTURE  
ASSEMBLY  
BAFFLE  
ASSEMBLY**



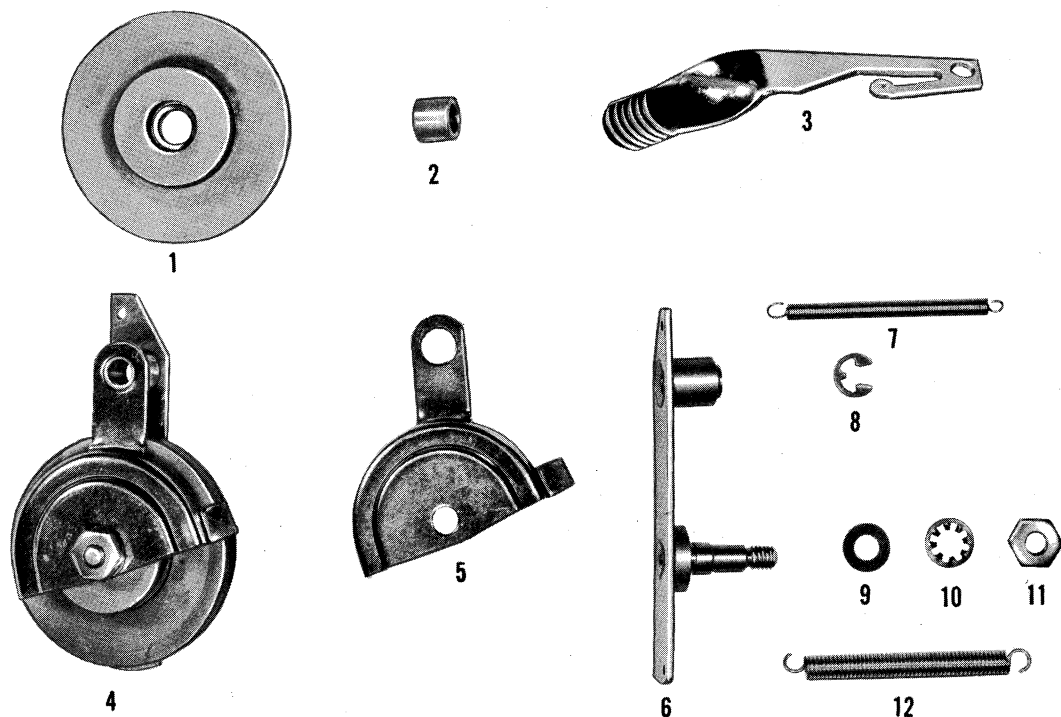
**REWIND  
ASSEMBLY  
MODELS 60-4,  
60-10, 60-25**

USED ON MODELS												
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10 60-25
1	26883-2	Rewind pulley										
2	26909	Rewind pulley spacer										
3	22351-50	Rewind lever										
4	26890-A	Rewind assembly										
5	26916	Rewind belt guard										
6	26890-2	Rewind pivot bar assembly										
7	23225	Rewind disengaging spring										
8		#3 Rewind assembly retainer "C" washer										
9		#10 Rewind assembly plain flat spacer washer										
10		#10 Rewind assembly retainer shakeproof lock washer										
11		10/32 Rewind assembly retainer hex nut										
12	30373	Rewind tension spring										

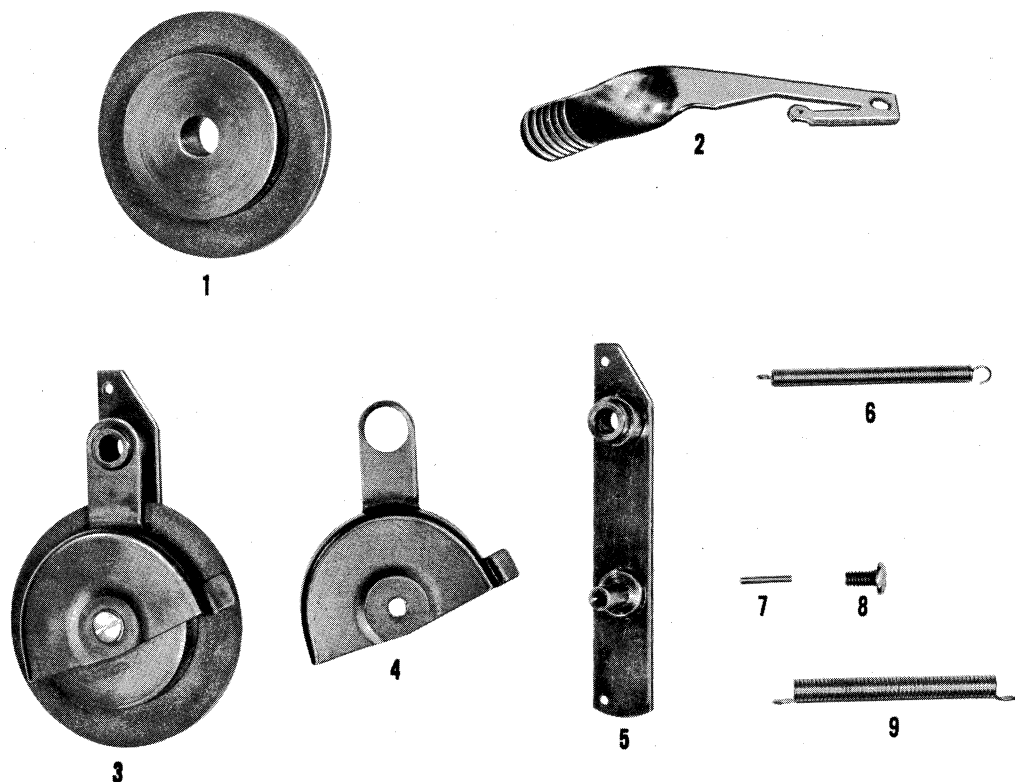
**REWIND  
ASSEMBLY  
MODELS 55,  
56, 60-B,  
60-2**

USED ON MODELS												
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10 60-25
1	23345-A	Rewind disc and pulley assembly										
2	22351-50	Rewind lever										
3	22349-50A	Rewind assembly*										
4	23257	Rewind belt guard										
5	22349-50-2	Rewind pivot bar										
6	23225	Rewind disengaging spring										
7	23213	Rewind needle bearing					12	12	12	12		
8		5/40 x 1/4 T.H. rewind pulley and disc retainer screw										
9	23348	Rewind tension spring										

\*No. 3, 22349-50A, is not interchangeable with 26890-A (above).



**REWIND  
ASSEMBLY  
MODELS 60-4,  
60-10, 60-25**



**REWIND  
ASSEMBLY  
MODELS 55,  
56, 60-B,  
60-2**

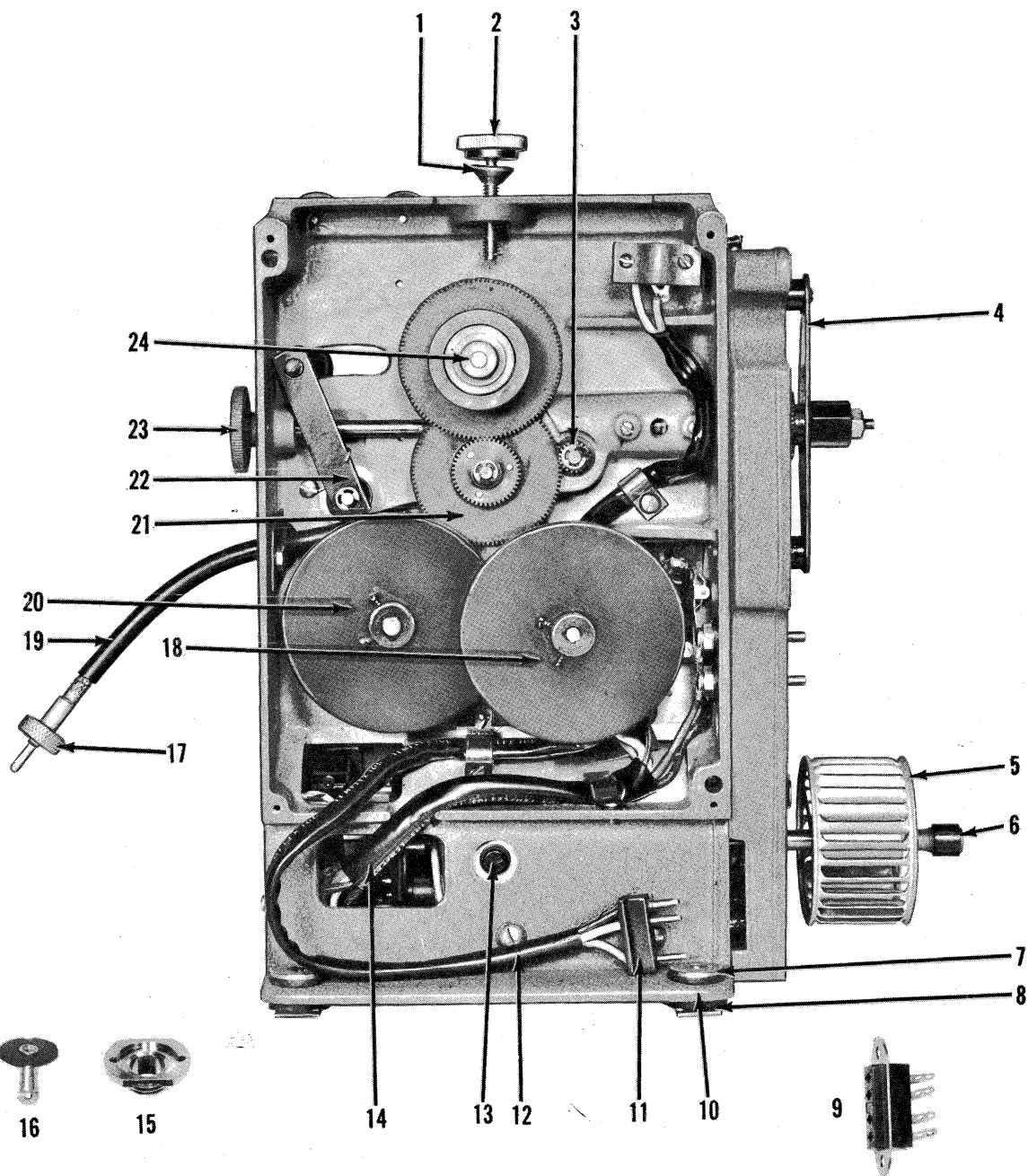
# **BACK VIEW MODEL 60-25**

**(USE AS  
REFERENCE  
FOR MODELS  
60-2, 60-B)**

USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	26767	Reel arm lock wedge	13										
2	30254	Reel arm lock screw	13										
3	30190-A	Spiral intermediate & shaft assy.	61										
4	26210-A	Shutter support plate assembly	35										
5	26610	Motor fan	79										
6	26885-A	Rewind drive pulley	79										
7	30366-A	Base support sleeve	73	4	4	4	4	4	4	4	4	4	4
8	26907-A	Base support bar (rear)											
9	20629	Exciter socket (female)	63										
10	26902-AR	Body casting											
11	20628	Exciter plug (male)	63										
12	26904-A	Exciter cord and socket assembly	63										
13	20264	Motor brush plug	81			2	2	2	2	2	2	2	2
14	30461-AR	Wiring harness	65										
15	26918	P.E. Cell connector base	67										
16	26917	P.E. Cell connector (contact)	67										
17	26561-A	P.E. Cell connector (male)	67										
18	30370-A	Impedance flywheel											
19	30523-A	P.E. Cell cord assembly	67										
20	30367-A	Sound sprocket filter flywheel assembly*											
21	19180-A	Sound sprocket drive gear assy.	61										
22	26722-A	Take-up lever assembly	75										
23	20739-AR	Hand shaft and knob assy.	75										
24	26836-A	Take-up clutch assembly	71										
	19188	Feed sprocket shaft bearings (not shown)			2	2	2	2	2	2	2	2	2

\*No. 20, 30367-A, Filter flywheel assembly is interchangeable and replaces 19200-A (Page 59).





# **BACK VIEW MODEL 60-2**

(USE AS  
REFERENCE  
FOR MODELS  
60-2, 60-B)

**BACK VIEW  
MODELS 60-4  
AND 60-10**

**(USE AS  
REFERENCE  
FOR MODEL 55)**

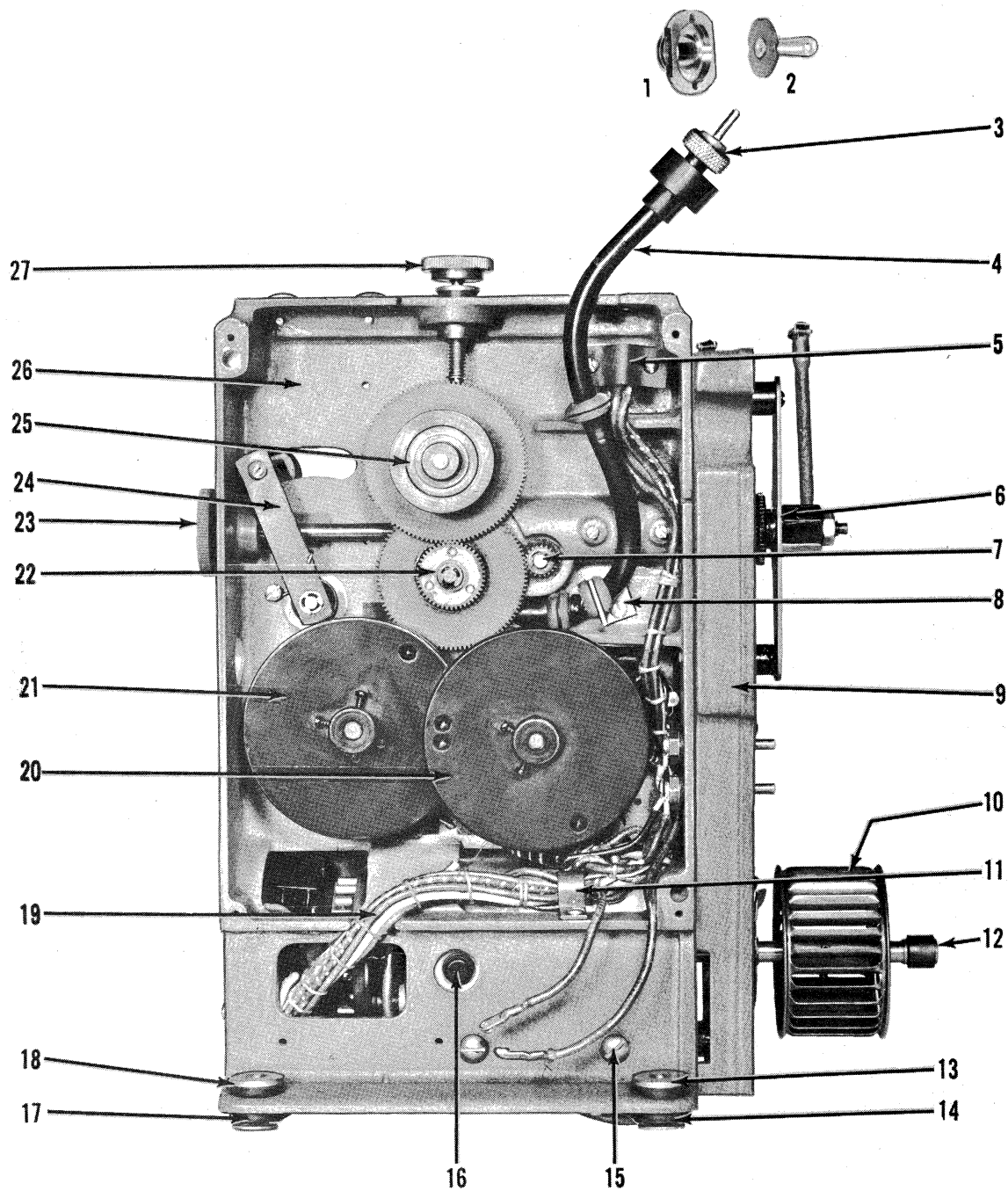
				USED ON MODELS										
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25	
1	26918	P.E. Cell connector base	67											
2	26917	P.E. Cell contact (female)	67											
3	26561-A	P.E. Cell connector (male)	67											
4	26759-A	P.E. Cell cord assembly	67											
5	19296	Pilot lamp socket	63											
6	26210-A	Shutter support plate assy.	35											
7	30190-A	Spiral intermediate pinion & shaft assy.	61											
8	30548	P.E. Cell cord clamp	67											
9	19130	Shutter housing												
10	26610	Motor fan	79											
11	20063	Cord clamp												
12	26885-A	Rewind drive pulley	79											
13	30366-A	Base support sleeve	73		4	4	4	4	4	4	4	4	4	
14	26907-A	Base support bar (rear)												
15		8/32 x 1/2 T.H. motor mounting screw									4	4	4	
16	20264	Motor brush plug	81			2	2	2	2	2	2	2	2	
17	26908-A	Base support bar (front)												
18	22091	Base support washer	73		8	8	8	8	8	8	8	8	8	
19	30556-AR	Wiring harness, Model 60-10*	65											
20	30370-A	Impedance flywheel†												
21	30367-A	Sound sprocket filter flywheel assembly**												
22	19180-A	Sound sprocket drive gear assy.	61											
23	20739-AR	Hand control knob & shaft assy.	75											
24	26722-A	Take-up lever assembly	75											
25	26836-A	Take-up clutch assembly	71											
26	26902-AR	Body casting												
27	30254-A	Reel arm lock screw assembly	13											

\*Wiring harness for 60-4 is Part No. 30464-AR (Page 65).

†No. 20, 30370-A is interchangeable and replaces 19062-A (Page 59).

\*\*No. 21, 30367-A is interchangeable and replaces 19200-A (Page 59).



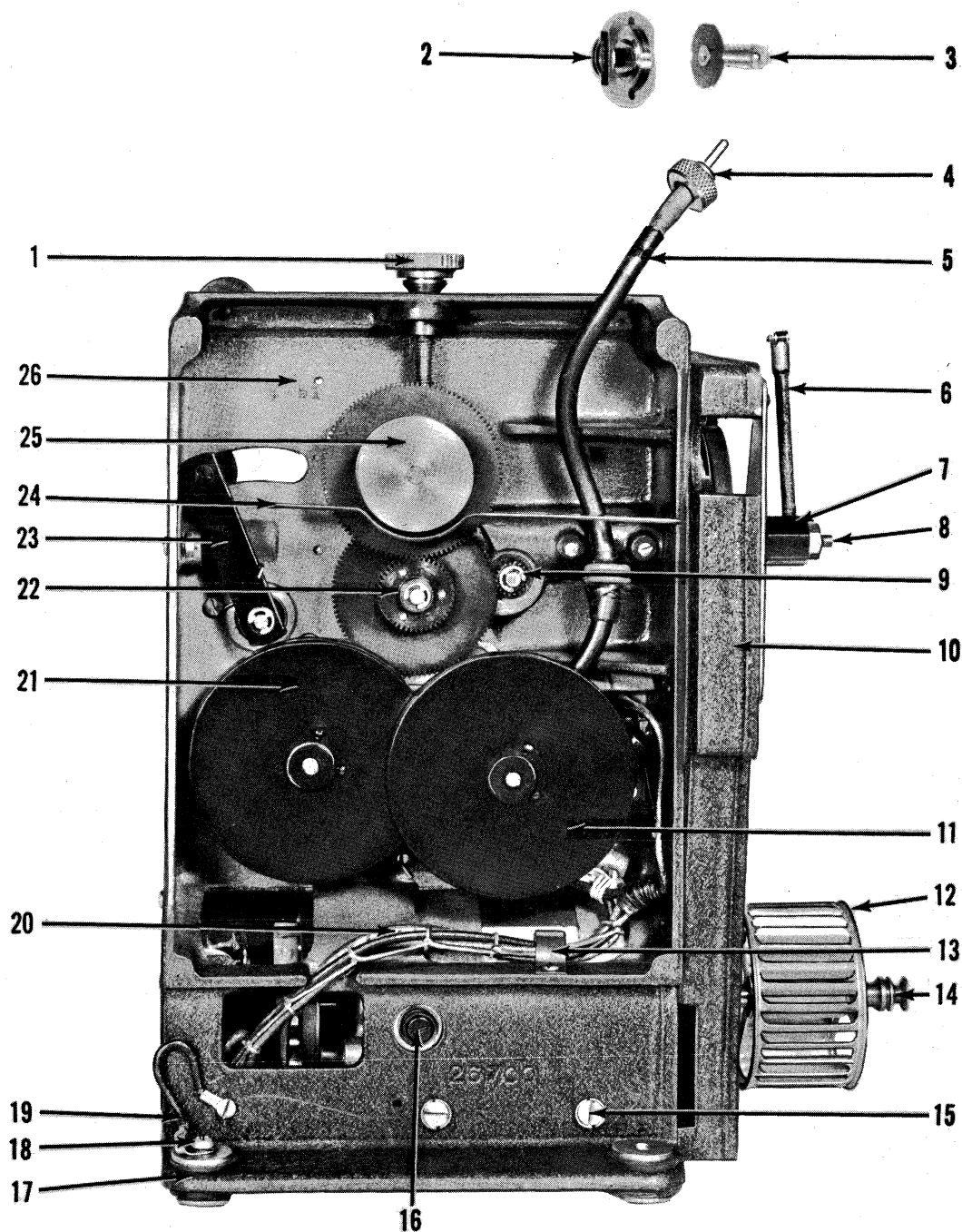


**BACK VIEW  
MODELS 60-4  
AND 60-10**

**(USE AS  
REFERENCE  
FOR MODEL 55)**

**BACK VIEW  
MODEL 56**

				USED ON MODELS									
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	30254-A	Reel arm lock screw assy.	13										
2	26918	P.E. Cell connector (base)	67										
3	26917	P.E. Cell contact (female)	67										
4	26561-A	P.E. Cell connector (male)	67										
5	26577-A	P.E. Cell socket assembly											
6	23135-A	Shutter support bar oil tube	35										
7	26210-A	Shutter support bar assembly	35										
8	20573	Shutter support jack shaft	35										
9	30190-A	Spiral intermediate & shaft assy.	61										
10	19130	Shutter housing casting											
11	30370-A	Impedance flywheel											
12	26610	Motor fan	81										
13	20063	Cord clamp											
14	23350	Rewind pulley	81										
15		8/32 x 1/2 F.H. motor mounting screw				4	4	4	4	4			
16	20264	Motor brush plug	81			2	2	2	2	2	2	2	2
17	22091	Base support washer (rubber)	73	8	8	8	8	8	8	8	8	8	8
18		8/32 x 1/4 R.H. retainer screw											
19	26612-A	#18 x 2" ground wire											
20	26536-A	Motor wiring harness	69										
21	30367-A	Sound sprocket filter flywheel assembly											
22	19180-A	Sound sprocket drive gear assy.	61										
23	26722-A	Take-up lever assembly	75										
24	26510	Take-up belt guard											
25	26961-A	Take-up pulley assembly	61										
26	26700-A	Main body casting											



**BACK VIEW  
MODEL 56**

# **BACK VIEW MODEL 40-B**

				USED ON MODELS										
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25	
1	19850-A	Reel arm holder assembly	13											
2	19296	Pilot lamp socket	63											
3	19130	Shutter housing												
4	20572-A	Shutter support plate assy.*	35											
5	20700-A	Spiral intermediate pinion & shaft assy.†	61											
6	19547-50-2	Exciter lamp socket	63											
7	20274-A	Motor fan	87											
8	20273	Rewind pulley	87											
9	20618	Four contact exciter plug (male)												
10	20619	Four contact exciter plug (female)												
11		8/32 x 1/2 F.H. motor mounting screw			4	4	4	4	4	4				
12	20264	Motor brush plug	81			2	2	2	2	2	2	2	2	
13	19547-50A	Exciter socket and cord assy.												
14	19869	.5 Mfd. motor condenser	69											
15	19818	P.E. Cell connector (female)	67											
16	22091	Base support washer (rubber)	73	8	8	8	8	8	8	8	8	8	8	
17	19052-A	Base support sleeve**	73	4	4	4	4		4	4				
18	19819	P.E. Cell plug (male)	67											
19	20063	Cord clamp					2	2		3	3	3	3	
19A	20062	Insulator bushing												
20	20717-A	P.E. Cell cord assembly	67											
21	19180-A	Sound sprocket drive gear assy.	61											
22	19501-40	Hand control shaft‡	75											
23	20739-40	Hand control knob‡	75											
24	19075-A	Take-up lever assembly	75											
25	19185-A	Take-up pulley and clutch assy.‡‡	71											
26	20790-A	Main body casting												

\*No. 4, 20572-A is replaced by 26210-A (Page 35).

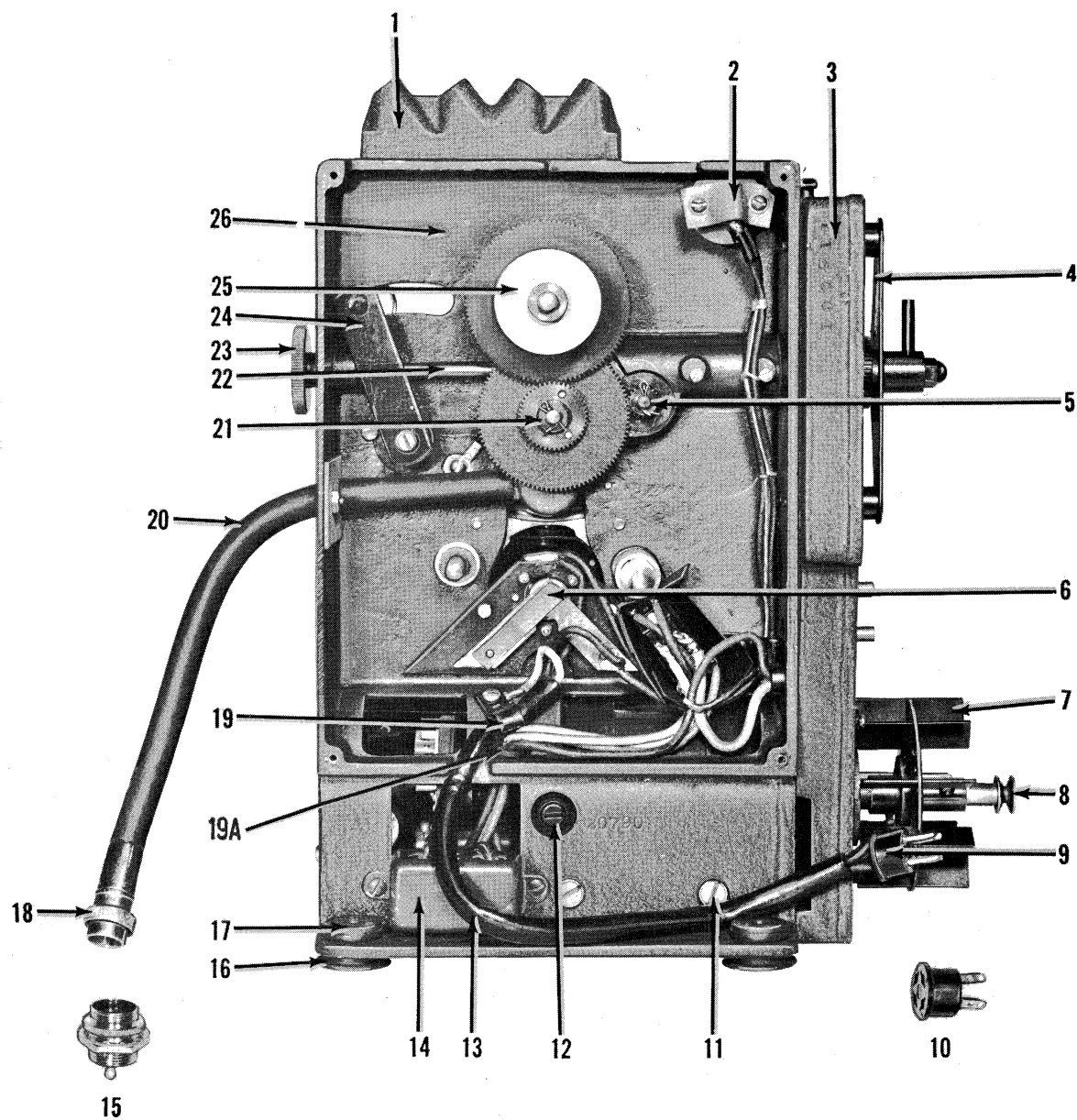
†No. 5, 20700-A is replaced by 30190-A (Page 61).

\*\*No. 17, 19052-A is replaced by 30366-A (Page 73).

‡No. 22, 19501-40 and No. 23, 20739-40 are replaced by 20739-AR (Page 75).

‡‡No. 25, 19185-A is replaced by 26836-A (Page 71).





**BACK VIEW  
MODEL 40-B**

# **BACK VIEW MODEL 40-B**

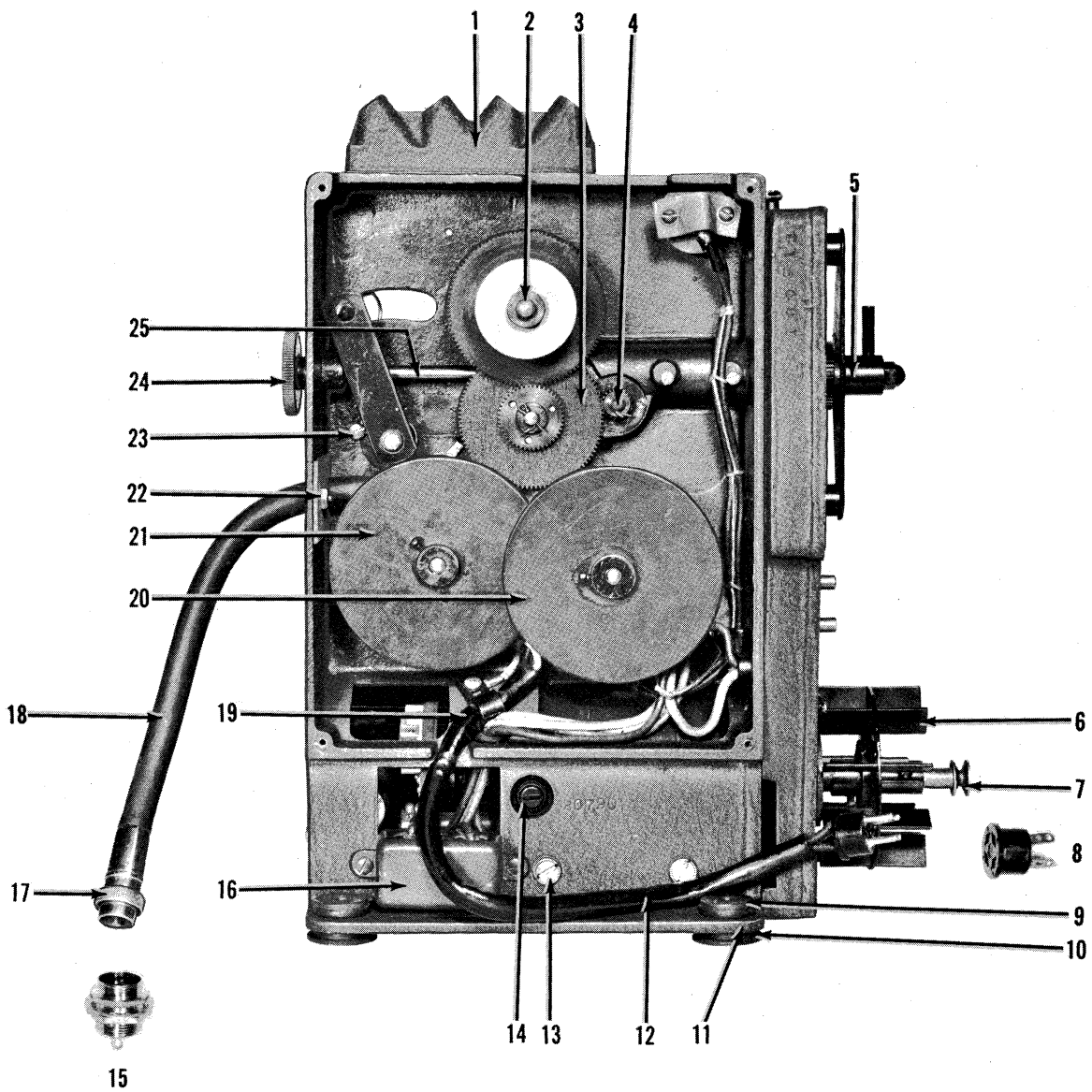
USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	19850-A	Reel arm holder assembly	13										
2	19185-A	Take-up pulley & clutch assembly*	71										
3	19180-A	Sound sprocket drive gear assy.	61										
4	20700-A	Spiral intermediate pinion & shaft assy.†	61										
5	26210-A	Shutter support plate assy.	35										
6	20274-A	Motor fan	87										
7	20273	Rewind pulley	87										
8	20619	Exciter socket (female—4 prong)											
9	19052-A	Base support sleeve assy.‡	73	4	4	4	4	4	4	4	4	4	4
10	22091	Base support washer (rubber)	73	8	8	8	8	8	8	8	8	8	8
11	20790-A	Main body casting											
12	19547-50A	Exciter cord assembly											
13		8/32 x 1/2 F.H. motor mounting screw			4	4	4	4	4	4			
14	20264	Motor brush plug	81			2	2	2	2	2	2	2	2
15	19818	P.E. Cell socket (female)	67										
16	19869	.5 Mfd. motor condenser	69										
17	19819	P.E. Cell plug (male)	67										
18	20717-A	P.E. Cell cord assembly	67										
19	20063	Wire clamp					2	2		2	2	2	2
20	30369-A	Impedance flywheel											
21	30367-A	Sound sprocket flywheel assy.											
22	20068	P.E. Cell cord clamp	67										
23	19075-A	Take-up lever assembly	75										
24	20739-40	Hand control knob**	75										
25	19501-40	Hand control shaft**	75										

\*No. 2, 19185-A is replaced by 26836-A (Page 71).

†No. 4, 20700-A is replaced by 30190-A (Page 61).

‡No. 9, 19052-A is replaced by 30366-A (Page 73).

\*\*No. 24, 20739-40 and No. 25, 19501-40 are replaced by 20739-AR (Page 75).



**BACK VIEW  
MODEL 40-B**

# **BACK VIEW MODEL 40-A**

USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	19850-A	Reel arm holder assembly	13										
2	19296	Pilot light socket	63										
3	19130-40A	Shutter housing											
4	19477	Spiral drive pinion	61										
5	19476-A	Spiral gear assembly											
6	19062-A	Impedance flywheel*											
7	19135	Motor fan	85										
8	19518	Rewind pulley	85										
9	19644	Exciter socket											
10	19643	Exciter plug (male)											
11	19818	P.E. Cell socket (female)	67										
12	19053	Base support washer (metal)		4	4	4	4	4	4				
13	22091	Base support washer (rubber)	73	8	8	8	8	8	8	8	8	8	
14	19869	.5 Mfd. motor condenser	69										
15	19819	P.E. Cell plug (male)	67										
16	19547-A	Exciter lamp socket assembly	63										
17	20063	Cord clamp											
18	20717-A	P.E. Cell cord assembly	67										
19	19200-A	Sound sprocket filter flywheel†											
20	19075-A	Take-up lever assembly											
21	19180-A	Sound sprocket drive gear assy.	61										
22	19501-40	Hand control shaft**	75										
23	20739-40	Hand control knob**	75										
24	19185-A	Take-up clutch assembly‡	71										
25	20790-A	Body casting											

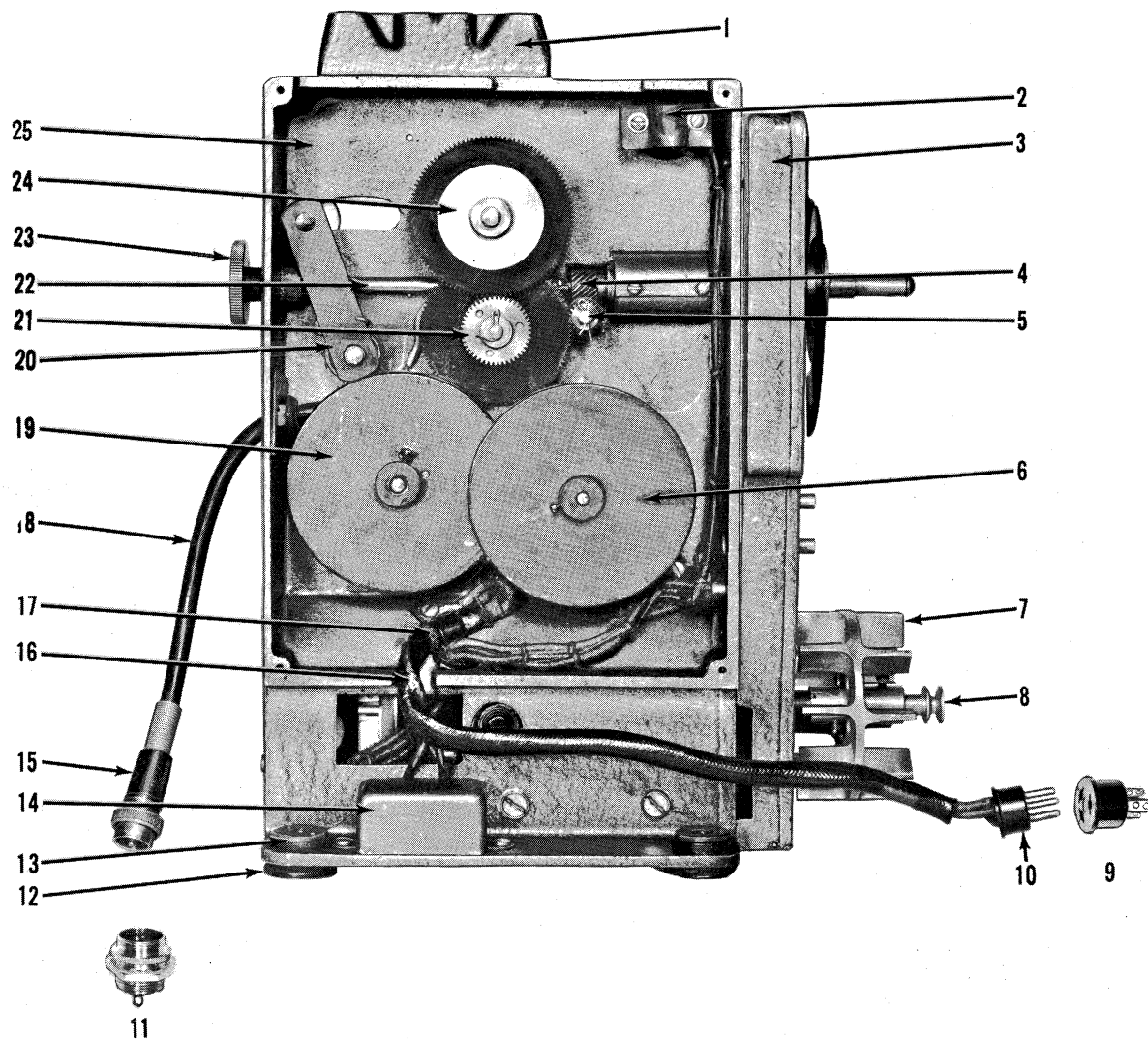
\*No. 6, 19062-A, is replaced with 30370-A (Page 51).

†No. 19, 19200-A, Assembly is replaced with 30367-A (Page 51).

\*\*No. 22, 19501-40 and No. 23, 20739-40 are replaced by 20739-AR (Page 75).

‡No. 24, 19185-A is replaced by 26836-A (Page 71).





**BACK VIEW  
MODEL 40-A**

# **SPIRAL INTERMEDIATE PINION AND SHAFT ASSEMBLY**

USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1		#3 "C" Washer											
2		1/16 x 1/2 cotter key											
3		4/48 x 1/4 F.H. retainer screw				2							
4	20733	Grease retainer washer											
5	19482	Spiral and sound sprocket drive gear retainer washer			3	3	3	3	3	3	3	3	3
6	30190-A	Spiral intermediate pinion and shaft assembly*											
7	30189-A	Spiral intermediate pinion											
8	20700-A	Spiral intermediate pinion and shaft assembly*											
9	19476-A	Spiral intermediate pinion											
10	19443-A	Spiral intermediate pinion											
11	30190-2	Spiral intermediate pinion shaft											
12	20700-2	Spiral intermediate pinion shaft											
13	20130-A	Spiral intermediate pinion shaft											
14	20129	Spiral intermediate pinion ball bearing			12	12	12	12	12				
15	20132	Spiral retainer nut											

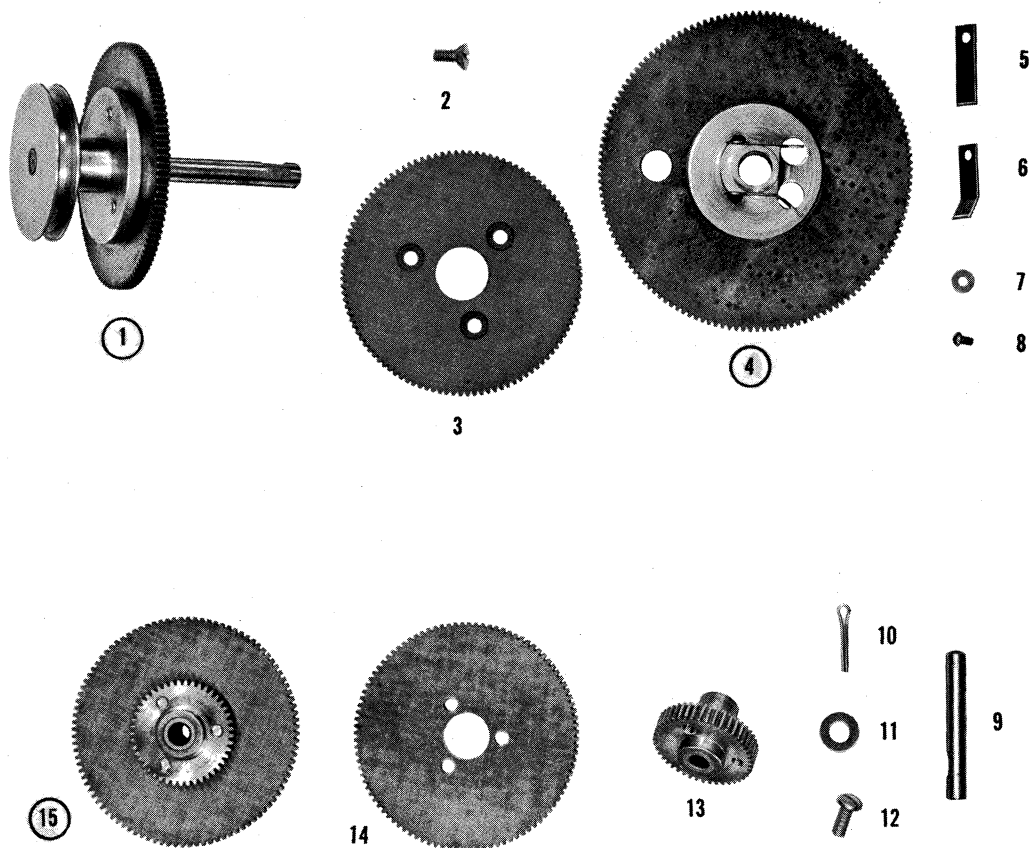
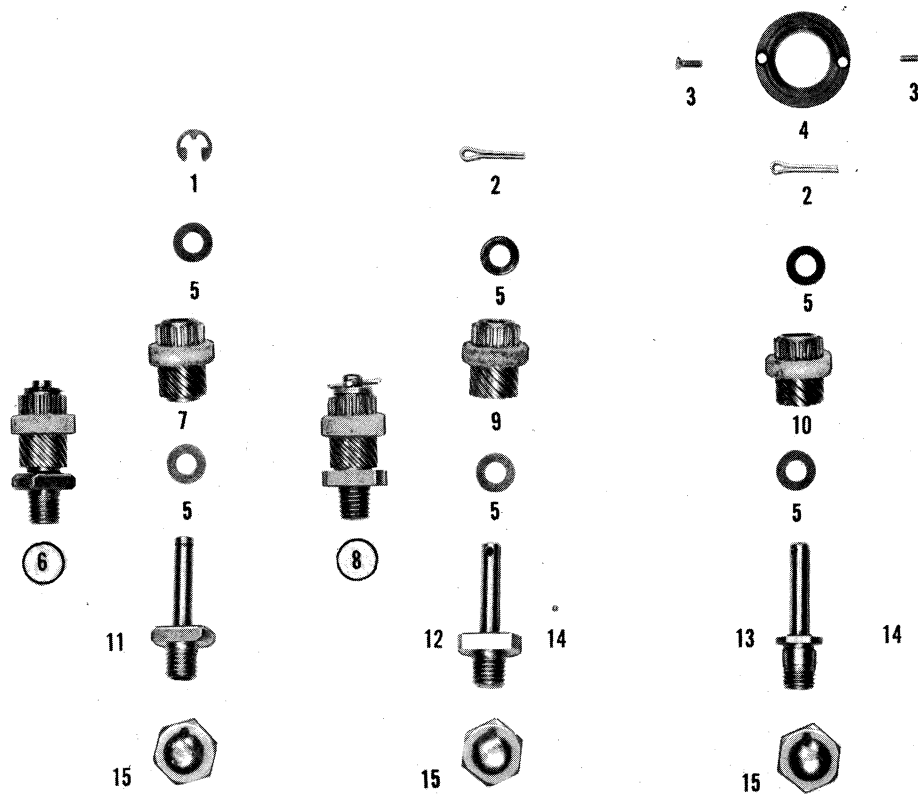
\*No. 6, 30190-A, replaces No. 8, 20700-A.

Parts making up these two assemblies are not interchangeable.

# **TAKE-UP ASSEMBLY FILTER GEAR ASSEMBLY SOUND SPROCKET DRIVE GEAR ASSEMBLY MODEL 56**

USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	26961-A	Take-up pulley and feed sprocket gear assembly						1					
2		5/40 x 1/4 F.H. retainer screw for feed sprocket gear						3					
3	26573	Feed sprocket gear						1					
4	19270-A	Filter gear assembly		1	1	1	1	1	1	1	1	1	1
5	19248	Sound filter spring			1	1	1	1	1	1	1	1	1
6	19248-50	Sound filter spring			1	1	1	1	1	1	1	1	1
7		#2 Flat plain sound filter spring washer		2	2	2	2	2	2	2	2	2	2
8		2/56 x 1/8 Sound filter spring retainer screw			2	2	2	2	2	2	2	2	2
9	30192	Sound sprocket drive gear shaft				1	1	1	1	1	1	1	1
10		1/8 x 1/2 cotter key for spiral intermediate and sound drive gear			1	1	1	1	1				
11	19482	Thrust washer			3	3	3	3	3	3	3	3	3
12		5/40 x 5/16 B.H. sound sprocket drive gear retainer screw			3	3	3	3	3	3	3	3	3
13	19496-A	Feed sprocket drive pinion gear		1	1	1	1	1	1	1	1	1	1
14	19180	Sound sprocket drive gear		1	1	1	1	1	1	1	1	1	1
15	19180-A	Sound sprocket drive gear assy.		1	1	1	1	1	1	1	1	1	1

# **SPIRAL INTERMEDIATE PINION AND SHAFT ASSEMBLY**

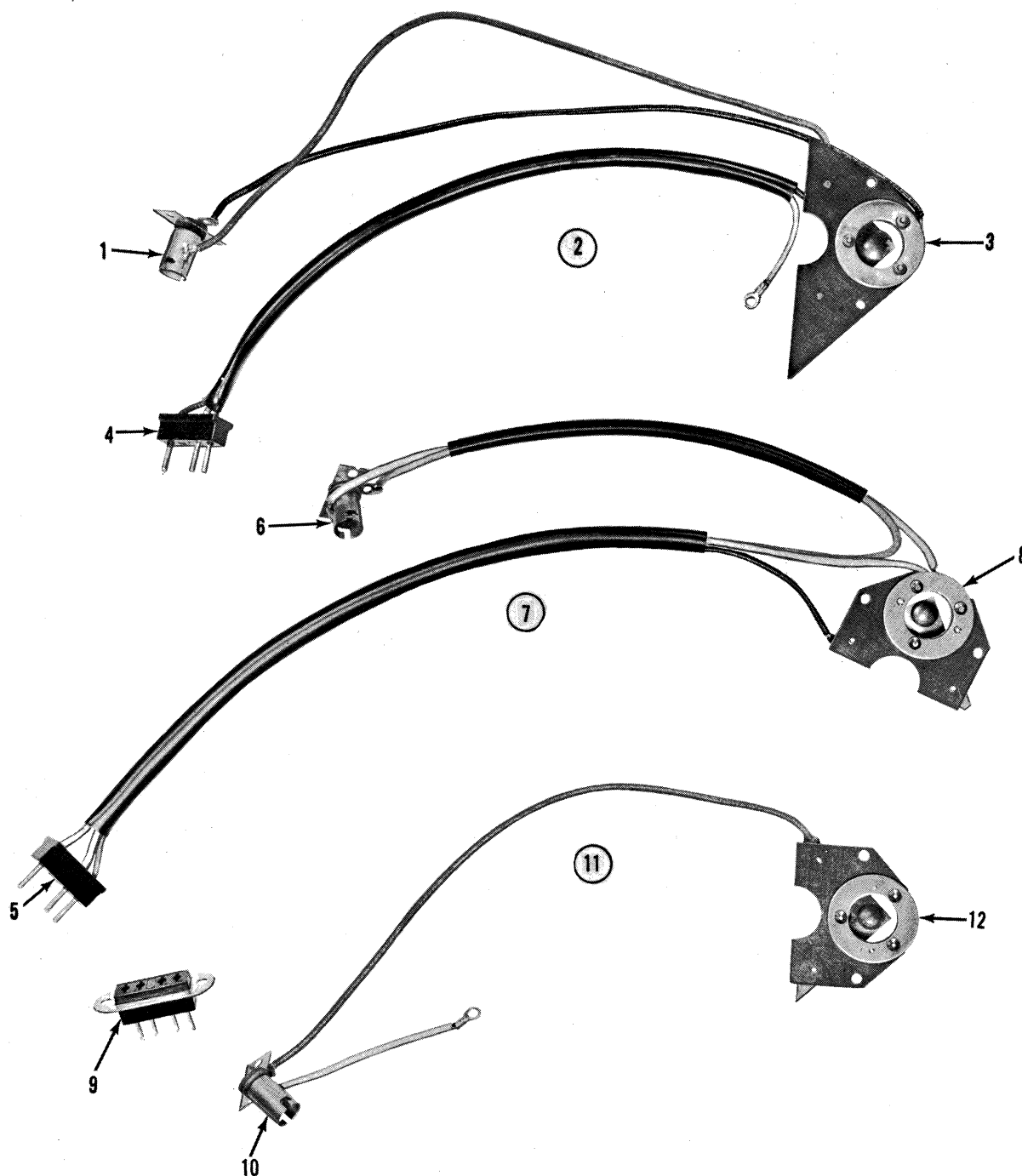


# **TAKE-UP ASSEMBLY** **FILTER GEAR ASSEMBLY** **SOUND SPROCKET DRIVE GEAR ASSEMBLY** **MODEL 56**

# **EXCITER SOCKET ASSEMBLY**

					USED ON MODELS									
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25	
1	19296	Pilot lamp socket												
2	19547-A	Exciter socket assembly												
3	19547-51-2	Exciter lamp socket												
4	20628	Exciter plug (male)												
5	20628	Exciter plug (male)												
6	19296	Pilot lamp socket												
7	26904-A	Exciter socket assembly												
8	19547-51-2	Exciter socket												
9	20629	Exciter socket (female)												
10	19296	Pilot lamp socket												
11	19547-56A	Exciter socket assembly												
12	19547-50-2	Exciter lamp socket												

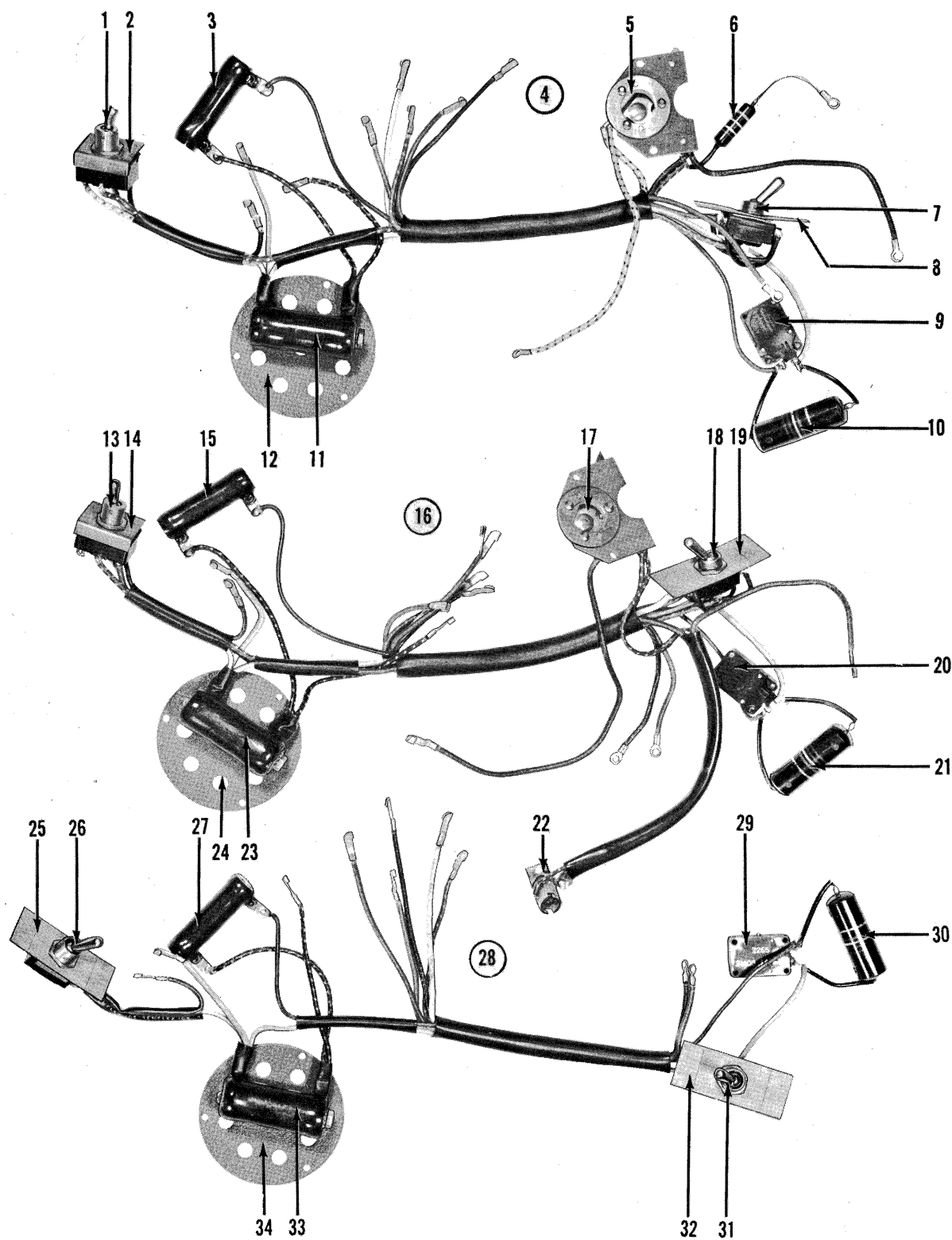
# EXCITER SOCKET ASSEMBLY



**MOTOR  
WIRING  
HARNESSES  
MODELS 60-4,  
60-10, 60-25**

			USED ON MODELS										
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	26587	Silent-sound switch											
2	30531	Switch lock plate											
3	26930	90 ohm resistor											
4	30464-AR	Wiring harness, Model 60-4											
5	19547-51-2	Exciter lamp socket assembly											
6	26617-A	.0039 Mfd. 600 VDC condenser											
7	11026	Reverse switch											
8	19223	Switch insulator											
9	26949	Snap action switch											
10	25021	.22 Mfd. 400 DC condenser											
11	26931	110 ohm 30 watt resistor											
12	19019-2R	Front body plate assembly											
13	26587	Silent-sound switch											
14	30531	Switch lock plate											
15	26930	90 ohm 20 watt resistor											
16	30556-AR	Wiring harness, Model 60-10											
17	19547-50-2	Exciter lamp socket assembly											
18	11026	Reverse switch											
19	19223	Switch insulator											
20	26949	Snap action switch											
21	25021	.22 Mfd. 400 VDC condenser											
22	19296	Pilot lamp socket											
23	26931	110 ohm 30 watt resistor											
24	19019-2R	Front body plate assembly											
25	19223	Switch insulator											
26	18640	Silent-sound switch											
27	26930	90 ohm 20 watt resistor											
28	30461-AR	Wiring harness, Model 60-25											
29	26949	Snap action switch											
30	25021	.22 Mfd. 400 VDC condenser											
31	11026	Reverse switch											
32	19223	Switch insulator											
33	26931	110 ohm 30 watt resistor											
34	19019-2R	Front body plate assembly											





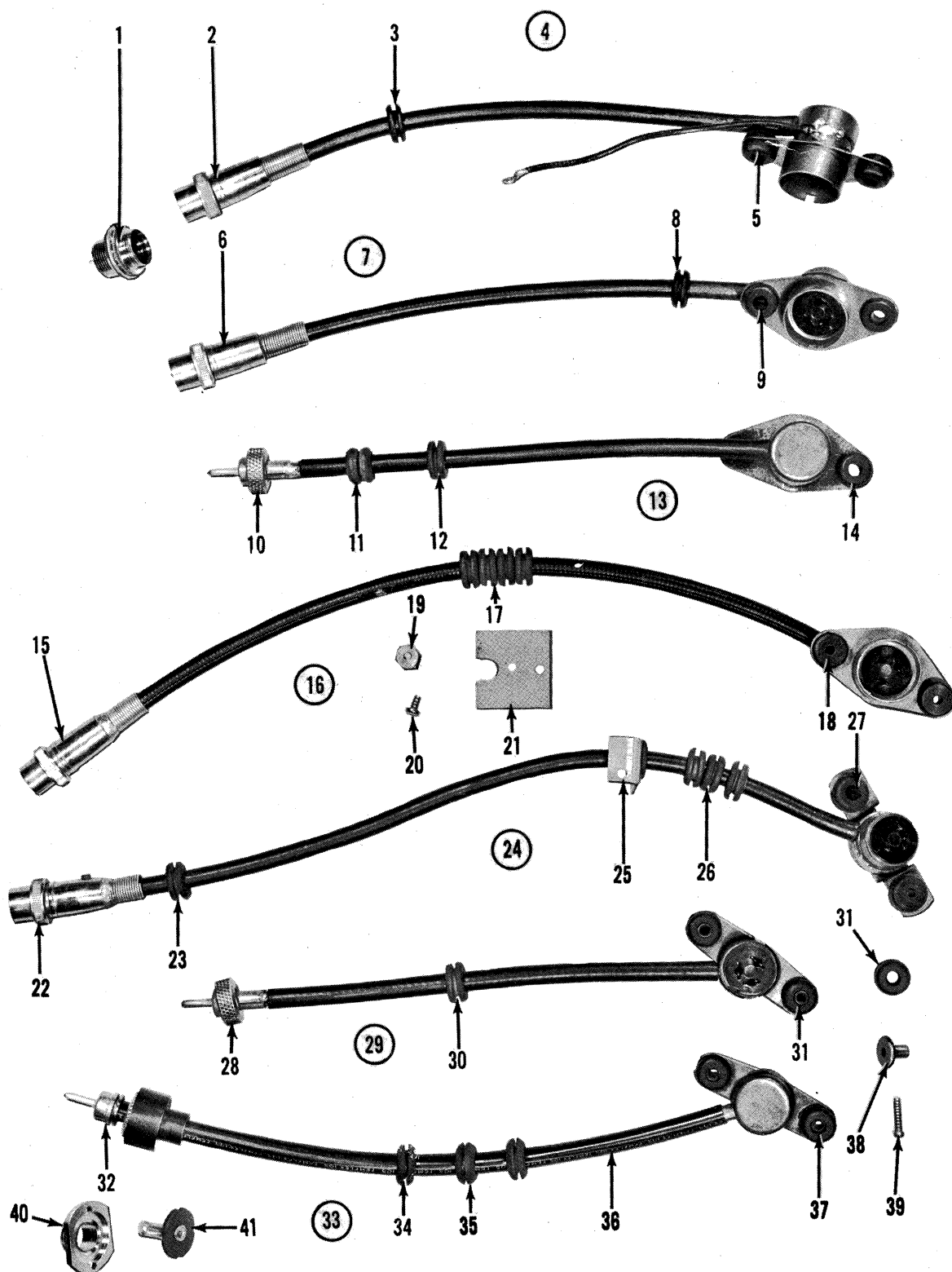
**MOTOR  
WIRING  
HARNESSES  
MODELS 60-4  
60-10, 60-25**

**P. E. CELL  
CORD  
ASSEMBLY  
ALL MODELS**

			USED ON MODELS										
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	19818	P.E. Cell socket (female)			1	1	1		1				
2	19819	P.E. Cell plug (male)			1	1	1		1				
3	1009	P.E. Cell cord grommet			1	1	4	1	2	2	3	3	1
4	20717-A	P.E. Cell cord assembly			1	1			1				
5	19143	P.E. Cell socket grommet			2	2	2	2	2	2	2	2	2
6	19819	P.E. Cell plug (male)			1	1	1		1				
7	20717-50A	P.E. Cell cord assembly			1	1			1				
8	1009	P.E. Cell cord grommet			1	1	4	1	2	2	3	3	1
9	19143	P.E. Cell socket grommet			2	2	2	2	2	2	2	2	2
10	26561-A	P.E. Cell connector (male)						1		1	1	1	1
11	1009	P.E. Cell cord grommet			1	1	4	1	2	2	3	3	1
12	1009	P.E. Cell cord grommet			1	1	4	1	2	2	3	3	1
13	26905-A	P.E. Cell cord assembly								1			
14	19143	P.E. Cell socket grommet			2	2	2	2	2	2	2	2	2
15	19819	P.E. Cell plug (male)			1	1	1		1				
16	20717-56A	P.E. Cell cord assembly					1						
17	1009	P.E. Cell cord grommet			1	1	4	1	2	2	3	3	1
18	19139	P.E. Cell socket sleeve			2	2	2	2	2	2			
19		5/40 Hex nut retainer nut						2			2	2	2
20		5/40 x 1/2 B.H. retainer screw						2			2	2	2
21	20068	P.E. Cell cord clamp			1	1			1	1			
22	19819	P.E. Cell plug (male)			1	1	1		1				
23	1009	P.E. Cell cord grommet			1	1	4	1	2	2	3	3	1
24	23072-A	P.E. Cell cord 55 AC DC assy.					1						
25	30548	P.E. Cell cord clamp					1						
26	1009	P.E. Cell cord grommet			1	1	4	1	2	2	3	3	1
27	19143	P.E. Cell socket grommet			2	2	2	2	2	2	2	2	2
28	26561-A	P.E. Cell connector (male)						1		1	1	1	1
29	30523-A	P.E. Cell cord assembly											1
30	1009	P.E. Cell cord grommet			1	1	4	1	2	2	3	3	1
31	19143	P.E. Cell socket grommet			2	2	2	2	2	2	2	2	2
32	26561-A	P.E. Cell connector (male)						1		1	1	1	1
33	26759-A	P.E. Cell cord assembly									1	1	
34	1009	P.E. Cell cord grommet			1	1	4	1	2	2	3	3	1
35	1009	P.E. Cell cord grommet			1	1	4	1	2	2	3	3	1
36	26927	P.E. Cell wire lead									1	1	
37	19143	P.E. Cell socket grommet			2	2	2	2	2	2	2	2	2
38	19139	P.E. Cell socket sleeve			2	2	2	2	2	2			
39		5/40 x 1/2 Fil. H. retainer screw			2	2	2	2	2				
40	26918	P.E. Cell connector base						1		1	1	1	1
41	26917	P.E. Cell contact (female)						1		1	1	1	1

P.E. Cell cord assembly for Model 56 is Part No. 26577-A. (not shown)



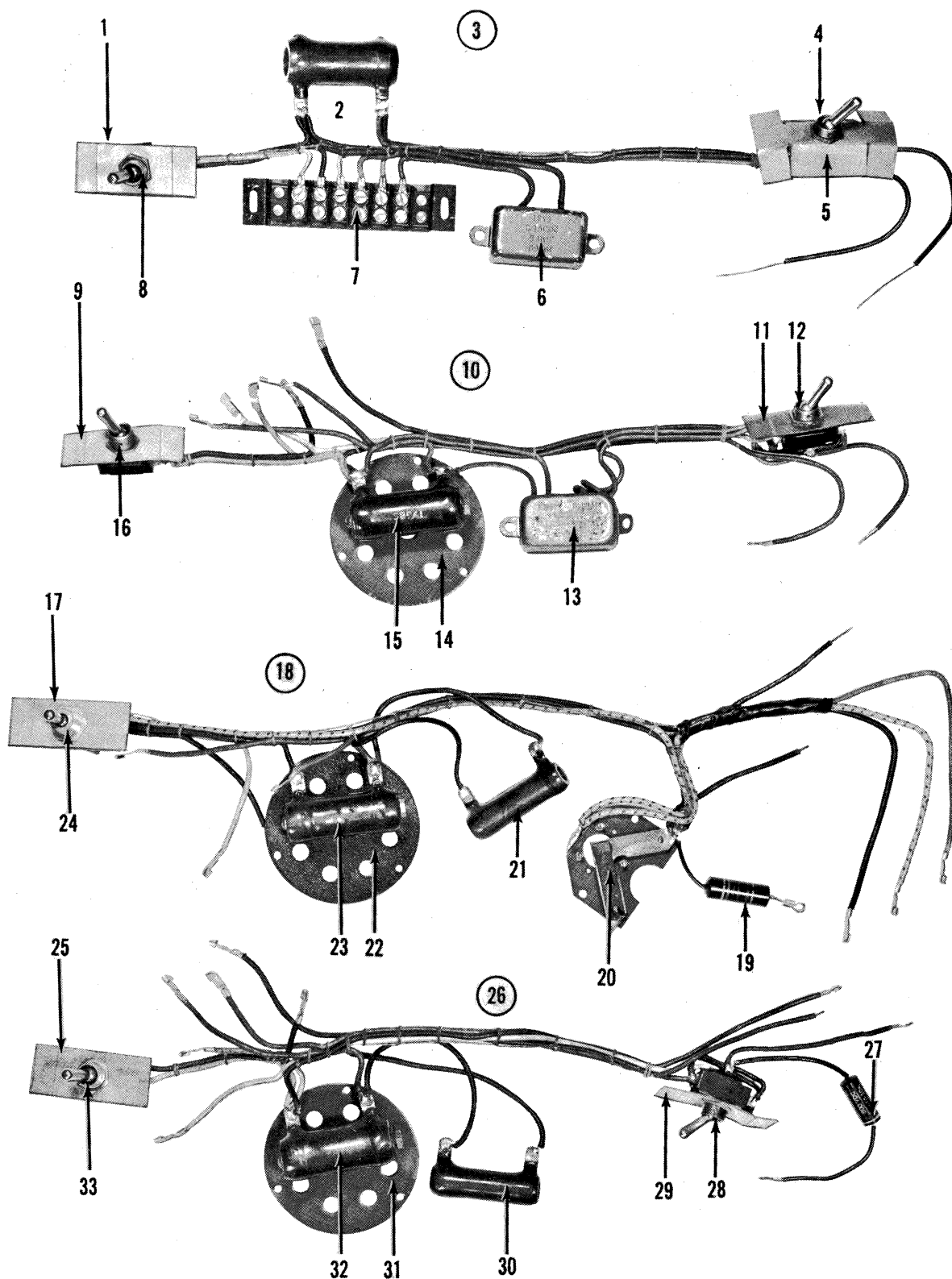


**P. E. CELL  
CORD  
ASSEMBLY  
ALL MODELS**

**WIRING  
HARNESSES**

**MODELS 40-A,  
40-B, 40-BX,  
55, 56, 60-B,  
60-2**

USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	19223	Reverse and silent-sound switch insulator		2	2	2	2	1	2	2	2	2	2
2	19685	70 ohm resistor, 30 watts		1	1	1	1		1				
3	26151-2	Wiring harness			1	1	1		1				
4	11026	Reverse switch		1	1	1	1		1	1	1	1	1
5	19223	Reverse and silent-sound switch insulator		2	2	2	2	1	2	2	2	2	2
6	19869	Motor condenser .5 Mfd.		1	1	1							
7	19866-A	Terminal block		1	1	1	1		1				
8	18640	Silent-sound speed switch		1	1	1	1		1	1			1
9	19223	Reverse and silent-sound switch insulator		2	2	2	2	1	2	2	2	2	2
10	26151-A	Wiring harness			1	1	1		1				
11	19223	Reverse and silent-sound switch insulator		2	2	2	2	1	2	2	2	2	2
12	11026	Reverse switch		1	1	1	1		1	1	1	1	1
13	25127	Motor condenser dual .5-.1 Mfd.			1	1	1	1	1	1			
14	19019-A	Body front plate cover assembly		1	1	1	1	1	1	1	1	1	1
15	19685	70 ohm resistor, 30 watts		1	1	1	1		1				
16	18640	Silent-sound speed switch		1	1	1	1		1	1			1
17	19223	Reverse and silent-sound switch insulator		2	2	2	2	1	2	2	2	2	2
18	26536-A	Wiring harness						1					
19	18631	Motor condenser .004 Mfd. 400 V. DC					1	1					
20	19547-51-2	Exciter socket						1					
21	26930	Resistor 90 ohm 20 watt wire wound					1	1		1	1	1	1
22	19019-A	Body front plate cover assembly		1	1	1	1	1	1	1	1	1	1
23	19685	70 ohm resistor, 30 watts		1	1	1	1		1				
24	26587	Silent-sound speed switch						1			1	1	
25	19223	Reverse and silent-sound switch insulator		2	2	2	2	1	2	2	2	2	2
26	26990-A	Wiring harness					1			1			
27	18631	Motor condenser .004 Mfd. 400 V. DC					1	1					
28	11026	Reverse switch		1	1	1	1		1	1	1	1	1
29	19223	Reverse and silent-sound switch insulator		2	2	2	2	1	2	2	2	2	2
30	26930	Resistor 90 ohm 20 watt wire wound					1	1		1	1	1	1
31	19019-A	Body front plate cover assembly		1	1	1	1	1	1	1	1	1	1
32	19685	70 ohm resistor, 30 watts		1	1	1	1		1				
33	18640	Silent-sound speed switch		1	1	1	1		1	1			1



## WIRING HARNESSES

MODELS 40-A  
40-B, 40-BX  
55, 56, 60-B  
60-2

## TAKE-UP CLUTCH ASSEMBLY

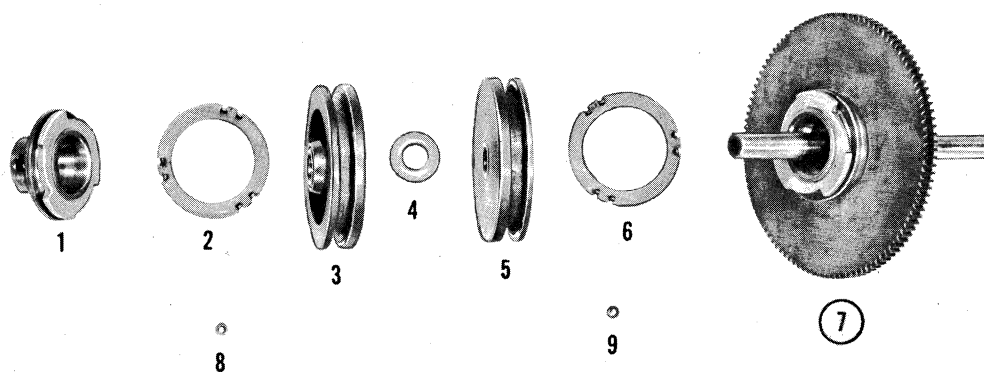
			USED ON MODELS										
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	26860-A	Cam and hub assembly								1	1	1	1
2	26825	Clutch roll retainer								2	2	2	2
3	26859-A	Take-up pulley								2	2	2	2
4	23063	Thrust washer								1	1	1	1
5	26859-A	Take-up pulley								2	2	2	2
6	26825	Clutch roll retainer								2	2	2	2
7	26836-2	Gear and hub assembly								1	1	1	1
8	26826	Clutch roll								6	6	6	6
9	26826	Clutch roll								6	6	6	6
10	26836-A	Take-up clutch assembly*		1	1	1	1		1	1	1	1	1
11	19494	Washer spacing		2	2	2	2	2	2	2	2	2	2
12	19494	Washer spacing		2	2	2	2	2	2	2	2	2	2
13	21184-A	Feed sprocket		1	1	1	1	1	1	1	1	1	1
14	20205	Set screw feed sprocket			2	2	2	2	2	2	2	2	2
15	20205	Set screw feed sprocket			2	2	2	2	2	2	2	2	2

\*No. 10, 26836-A, is interchangeable and replaces 19185-A (Page 71). Parts that make up these assemblies are not interchangeable.

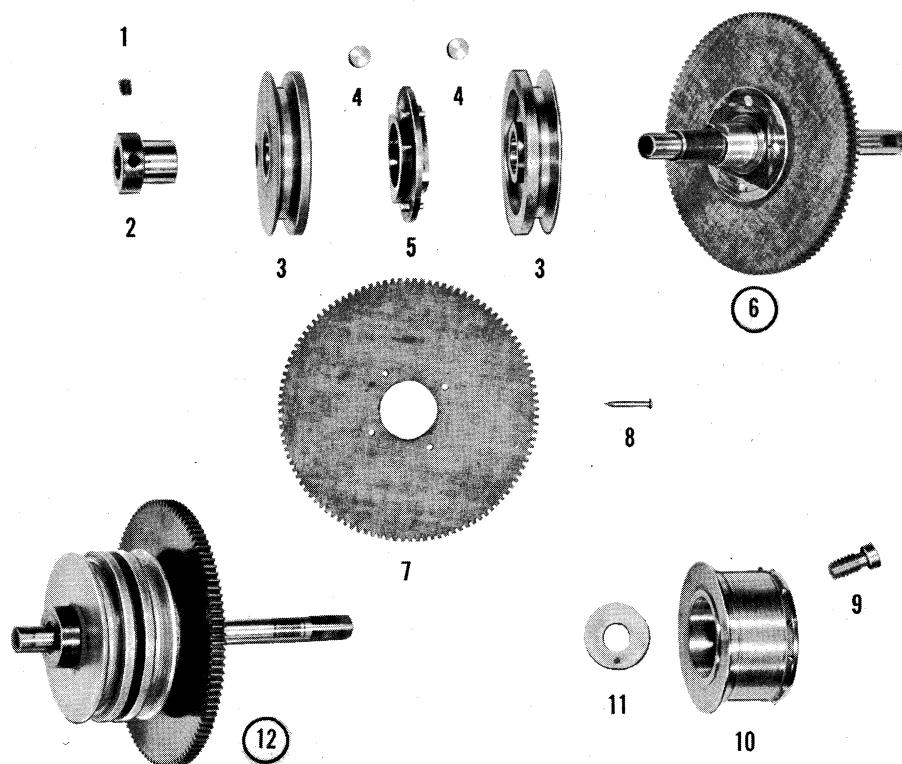
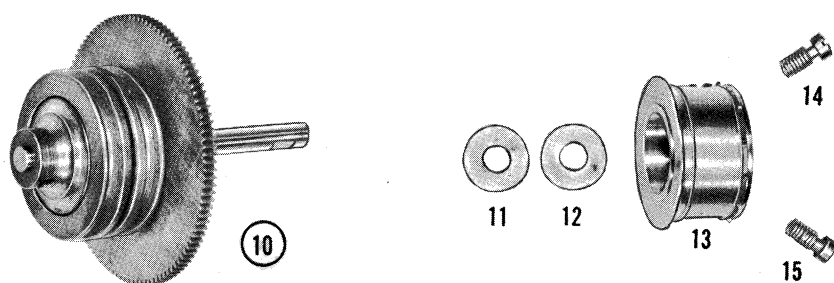
## TAKE-UP CLUTCH ASSEMBLY

			USED ON MODELS										
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1		5/40 x 1/8 Take-up pulley retainer set screw			1	1	1		1				
2	19576	Take-up pulley retainer bearing			1	1	1		1				
3	19575-A	Take-up pulley		2	2	2	2		2				
4	22149	Take-up pulley cam rollers		6	6	6	6		6				
5	19775-A	Take-up cam		1	1	1	1		1				
6	19185-3	Feed sprocket gear and shaft assy.		1	1	1	1		1				
7	19186	Feed sprocket gear		1	1	1	1		1				
8		#18 x 3/8 Feed sprocket gear and retainer escutcheon pin		4	4	4	4		4				
9	20205	Feed sprocket retainer screw			2	2	2	2	2	2	2	2	2
10	21184-A	Feed sprocket		1	1	1	1	1	1	1	1	1	1
11	19494	Feed sprocket spacer washer		2	2	2	2	2	2	2	2	2	2
12	19185-A	Take-up pulley and clutch assy.*		1	1	1	1	1	1	1	1	1	1

\*No. 12, 19185-A, is replaced and interchangeable with 26836-A (above). Parts are not interchangeable.



## TAKE-UP CLUTCH ASSEMBLY



## TAKE-UP CLUTCH ASSEMBLY

# PROJECTOR BODY PARTS

## TERMINAL ASSEMBLY

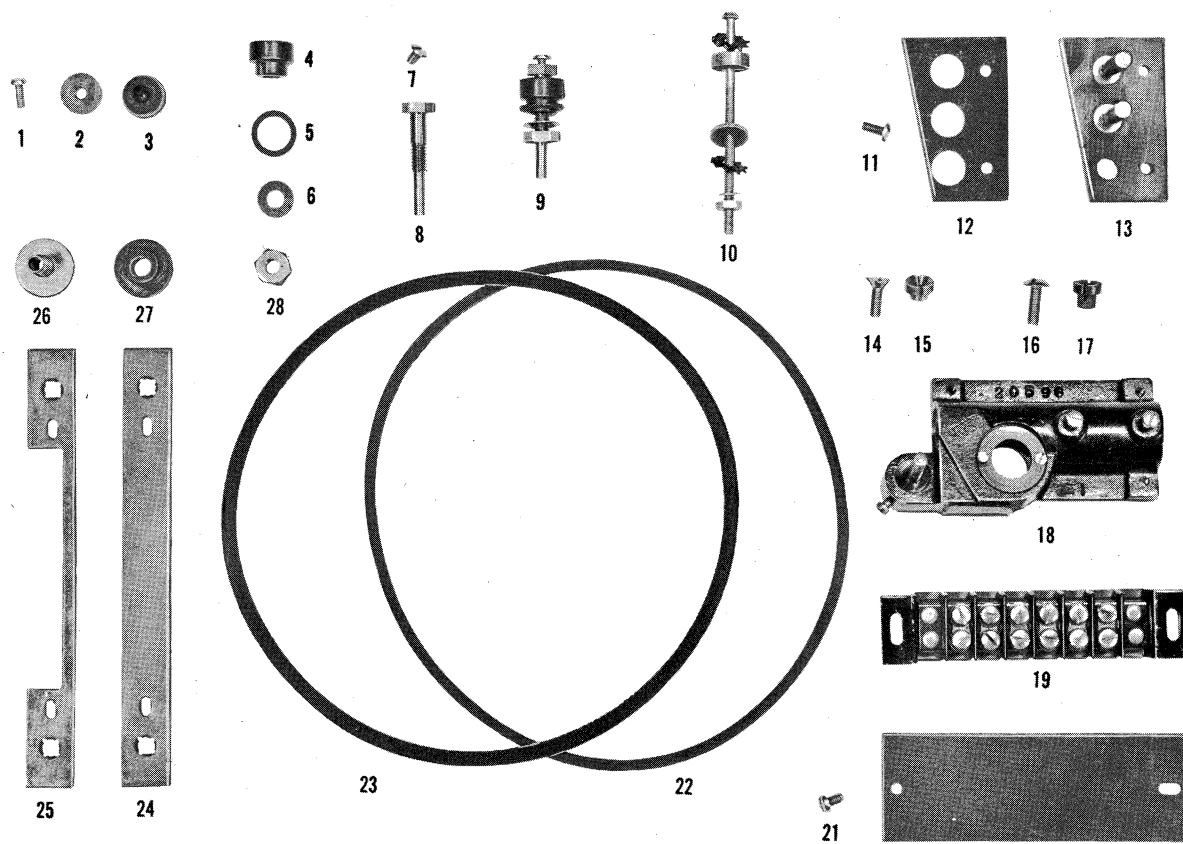
## BASE SUPPORT BAR ASSEMBLY

## MOTOR DRIVE BELTS

## GEAR BOX FOR 40-BX

			USED ON MODELS										
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1		5/40 x 3/8 B.H. screw (lens mount pad)					1	1		1	1	1	1
2	20111	Lens mount pad spacer					1	1		1	1	1	1
3	20714	Lens mount pad					1	1		1	1	1	1
4	23353	Body terminal insulator					2			2	2	2	2
5	23352	Insulator washer					2			2	2	2	2
6	19841	Thrust washer					2			2	2	2	2
7		6/32 x 3/16 B.H. (body terminal) screw					2			2	2	2	2
8	23354	Body terminal					2			2	2	2	2
9	23354-A	Terminal assembly					2			2	2	2	2
10	26953-A	Resistor retainer assembly					1	1		1	1	1	1
11		5/40 x 3/8 B.H. (lens mount pad retainer) screw			2	2	1	1	2	1	1	1	1
12	19250	Terminal plate insulator		1	1	1			1				
13	19250-A	Terminal plate assembly		1	1	1			1				
14		8/32 x 1/4 F.H. motor mounting screw			4	4	4	4	4				
15	19015	Motor support sleeve		4	4	4	4	4	4				
16	1004	Motor mounting screw									4	4	4
17	30520	Motor support sleeve									4	4	4
18	20596-A	Spiral gear housing				40-BX 1							
19	19866-A	Motor terminal block		1	1	1	1		1				
20	19862	Motor terminal block insulator		1	1	1	1		1				
21		5/40 x 3/8 B.H. (lens mount pad retainer) screw			2	2	1	1	2	1	1	1	1
22	19128	Motor drive belt					1	1		1	1	1	1
23	19128-40	Motor drive belt		1	1	1			1				
24	23112	Base support bar (rear)								1	1	1	1
25	23110	Base support bar (front)								1	1	1	1
26	30366-A	Base support sleeve		4	4	4	4	4	4	4	4	4	4
27	22091	Base support washer (rubber)		8	8	8	8	8	8	8	8	8	8
28		12/24 Hex nut (body terminal retainer nut)					2			2	2	2	2





**PROJECTOR  
BODY PARTS**

**TERMINAL  
ASSEMBLY**

**BASE SUPPORT  
BAR ASSEMBLY**

**MOTOR DRIVE  
BELTS**

**GEAR BOX  
FOR 40-BX**



# **TAKE-UP LEVER ASSEMBLY HAND OPERATING SHAFT ASSEMBLY**

USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	26722-A	Take-up lever assembly*											
2	19075-A	Take-up lever assembly*											
3	26722-2	Take-up lever arm											
4	19075-2	Take-up lever arm											
5	20739-AR	Hand control knob and shaft assy.†											
6	19501-40	Hand control shaft†											
7	20739-40	Hand control knob†											
8	19506	Snubber arm spring											
9	19482	Washer											
10	26208	Take-off feed roll						2		2	2	2	2
11	19506	Snubber arm spring											
12	19847	Take-off feed roll											
13	26208	Take-off feed roll						2		2	2	2	2
14		#3 "C" Washer											
15		5/40 x 3/16 B.H. screw											
16		Hand control knob set screw											
17	20044	Hand shaft lock screw											

\*No. 1, 26722-A, is interchangeable with No. 2, 19075-A.

Parts for these assemblies are not interchangeable.

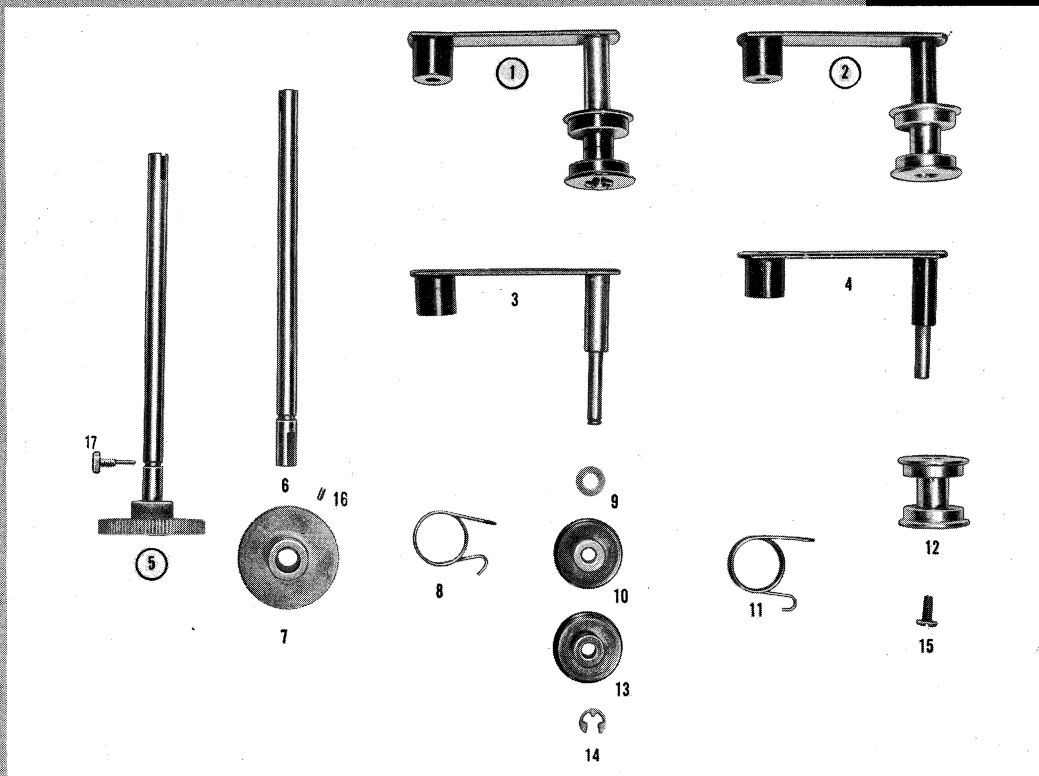
†No. 5, 20739-AR Hand operating shaft and knob assembly replaces No. 6, 19501-40 shaft and No. 7, 20739-40 knob.

# **PROJECTOR BODY SIDE PLATE, ALL MODELS**

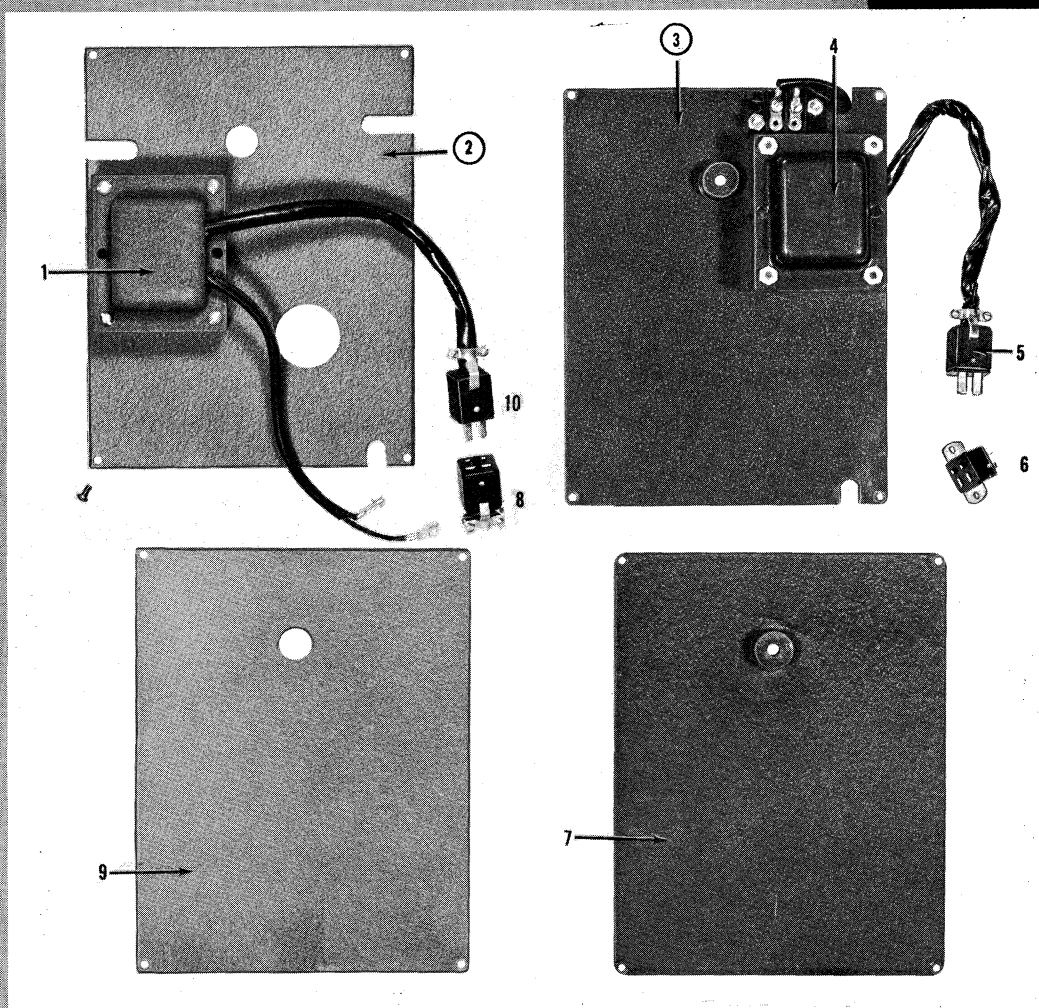
USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	23299	Exciter power transformer											
2	30585-AR	Body plate assembly*											
3	19055-56A	Body plate assembly†											
4	23299	Exciter power transformer											
5	23298	Exciter cord plug (male)											
6	23297	Exciter socket (female)											
7	19055-A	Body side plate											
8	17189	AC plug (female)											
9	19055	Body side plate											

\*No. 2, Body plate only is Part No. 30585-2.

†No. 3, Body plate only is Part No. 19055-56-2.



**TAKE-UP LEVER  
ASSEMBLY  
HAND  
OPERATING  
SHAFT  
ASSEMBLY**



**PROJECTOR  
BODY  
SIDE PLATE,  
ALL MODELS**

# **REEL ARMS MODELS 60-4, 60-10 AND 60-25**

USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	30379-AR	Reel arm assembly (rear) **											
2	30383-R	Rewind reel arm pulley											
3		6/32 x 3/8 B.H. retaining screw for reel arm pulleys			4	4	4	4	4	4	4	4	
4		#5 Everlock retaining lockwasher for reel arm pulleys			4	4	4	4	4	4	4	4	4
5	U-178	Reel arm pulley retaining pin	2	2	2	2	2	2	2	2	2	2	2
6	19595	Reel arm friction spring	2	2	2								
7	27307	Reel arm friction washer	2	2	2								
8	30382-R	Reel take-up pulley*					2						
9	30381-R	Reel arm auxiliary pulley†											
10	22143-A	Reel arm shaft	2	2	2	2	2	2	2	2	2	2	2
11	30380-A	Reel arm assembly (front) ‡											
12	23216	Rewind belt											
13	23217	Take-up belt				2		2	2	2	2	2	2
14	22088	Reel arm bearing		4	4	4	4	4	4	4	4	4	4

\*No. 8, 30382-R, is interchangeable and replaces 19512-50 (below).      \*\*Reel Arm only, 30379-2.  
†No. 9, 30381-R, is interchangeable and replaces 22042-50 (below).      ‡Reel Arm only, 30380-2R.

# **REEL ARMS MODELS 55 AND 60-B**

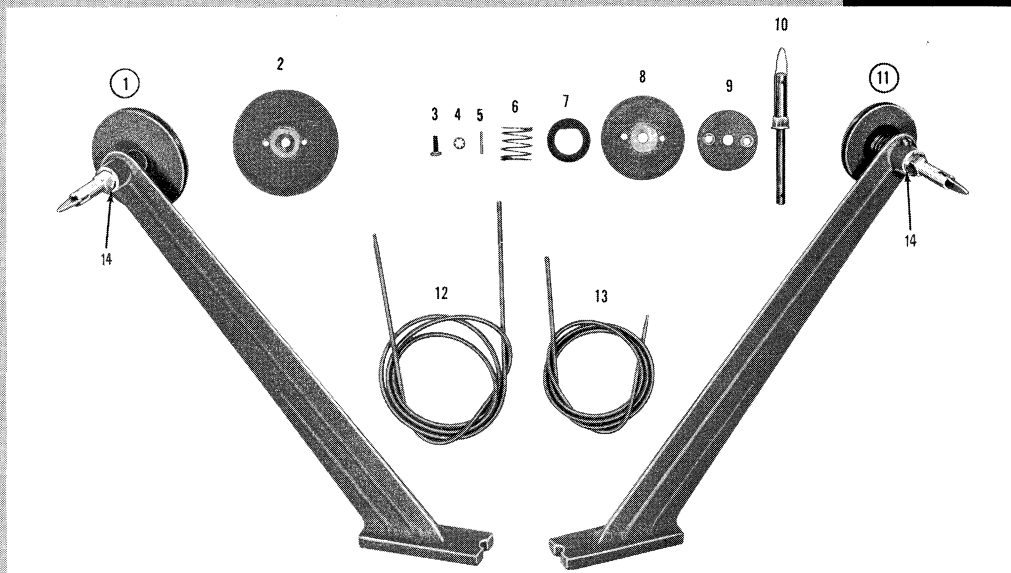
USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1		6/32 x 3/8 B.H. reel arm pulley retainer screw			4	4	4	4	4	4	4	4	4
2		#6 Reel arm pulley retainer shakeproof lock washer			4	4	4	4	4	4	4	4	4
3	U-178	Reel arm pulley retainer pin	2	2	2	2	2	2	2	2	2	2	2
4	19595	Reel arm friction spring	2	2	2								
5	27307	Reel arm friction washer	2	2	2								
6	19512-50	Reel take-up pulley*	2	2	2	2		2					
7	22042-50	Reel arm auxiliary pulley†	2	2	2	2		2					
8	22143-A	Reel arm shaft assembly	2	2	2	2	2	2	2	2	2	2	2
9	23216	Rewind belt											
10	23217	Take-up belt				2		2	2	2	2	2	2
11	23184-50A	Reel arm assembly (rear) **											
12	23184-A	Reel arm assembly (front) ‡											
13	22088	Reel arm bearing		4	4	4	4	4	4	4	4	4	4

\*No. 6, 19512-50, is replaced with 30382-R (above).      \*\*Reel Arm only, 23184-50-2.  
†No. 7, 22042-50, is replaced with 30381-R (above).      ‡Reel Arm only, 23184-2.

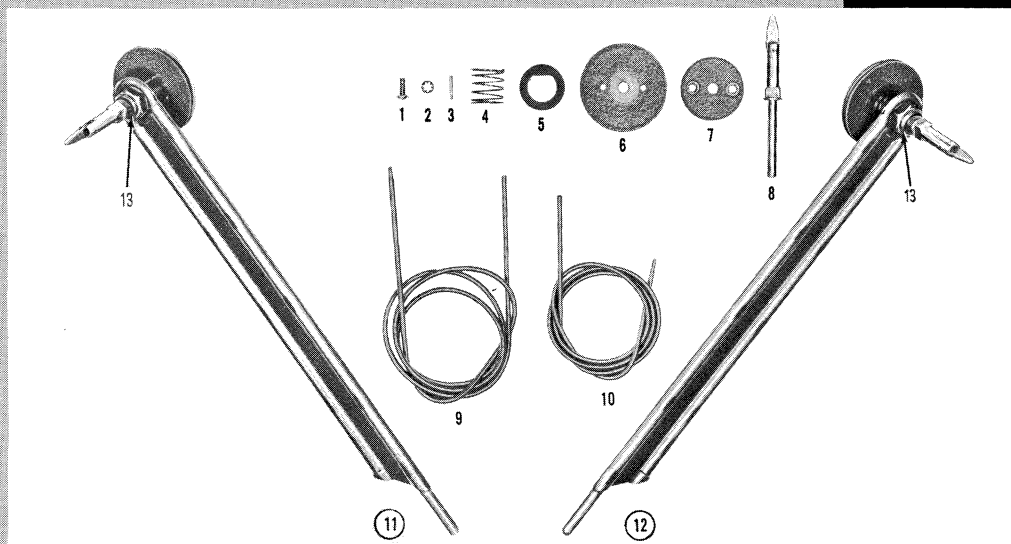
# **REEL ARMS MODELS 40-A AND 40-B**

USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	30002-AR	Reel arm assembly (rear) **											
2		6/32 x 3/8 B.H. reel arm pulley retainer screw			4	4	4	4	4	4	4	4	4
3		#6 Shakeproof washer reel arm pulley retainer lock washer			4	4	4	4	4	4	4	4	4
4	U-178	Reel arm pulley retainer pin	2	2	2	2	2	2	2	2	2	2	2
5	19595	Reel arm friction spring	2	2	2								
6	27307	Reel arm friction washer	2	2	2								
7	19512-50	Reel arm take-up pulley*	2	2	2	2		2					
8	22042-50	Reel arm auxiliary pulley†	2	2	2	2		2					
9	22143-A	Reel arm shaft assembly	2	2	2	2	2	2	2	2	2	2	2
10	30002-AF	Reel arm assembly (front) ‡											
11	16164	Take-up spring belt	2	2	2								
12	19513	Rewind belt											
13	22088	Reel arm bearing		4	4	4	4	4	4	4	4	4	4

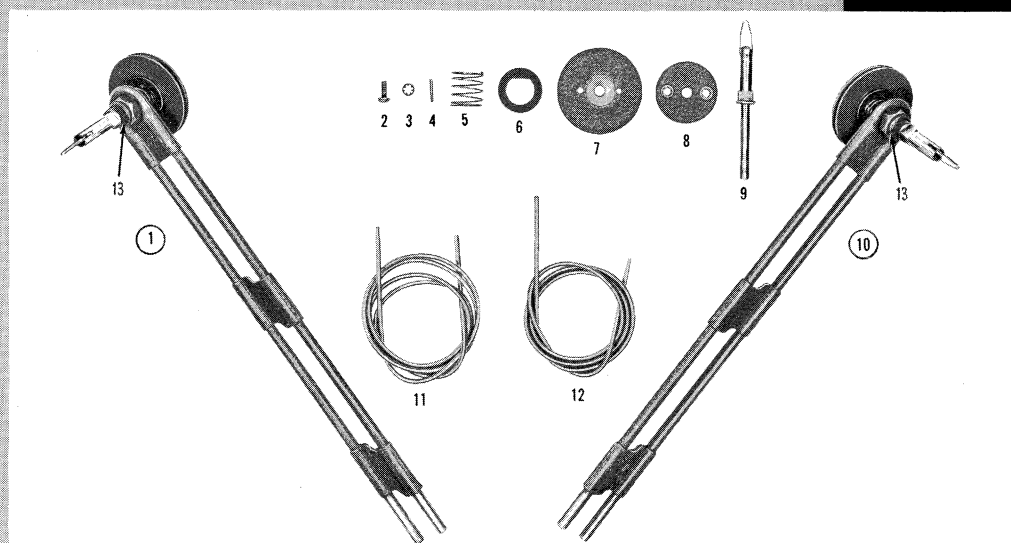
\*No. 7, 19512-50, is replaced with 30382-R (above).      \*\*Reel Arm only, 30002-2F.  
†No. 8, 22042-50, is replaced with 30381-R (above).      ‡Reel Arm only, 2000-2R.



**REEL ARMS  
MODELS 60-4,  
60-10 AND  
60-25**



**REEL ARMS  
MODELS 55  
AND 60-B**



**REEL ARMS  
MODELS 40-A  
AND 40-B**

**MOTOR  
ASSEMBLY  
MODELS 60-4,  
60-10, 60-25**

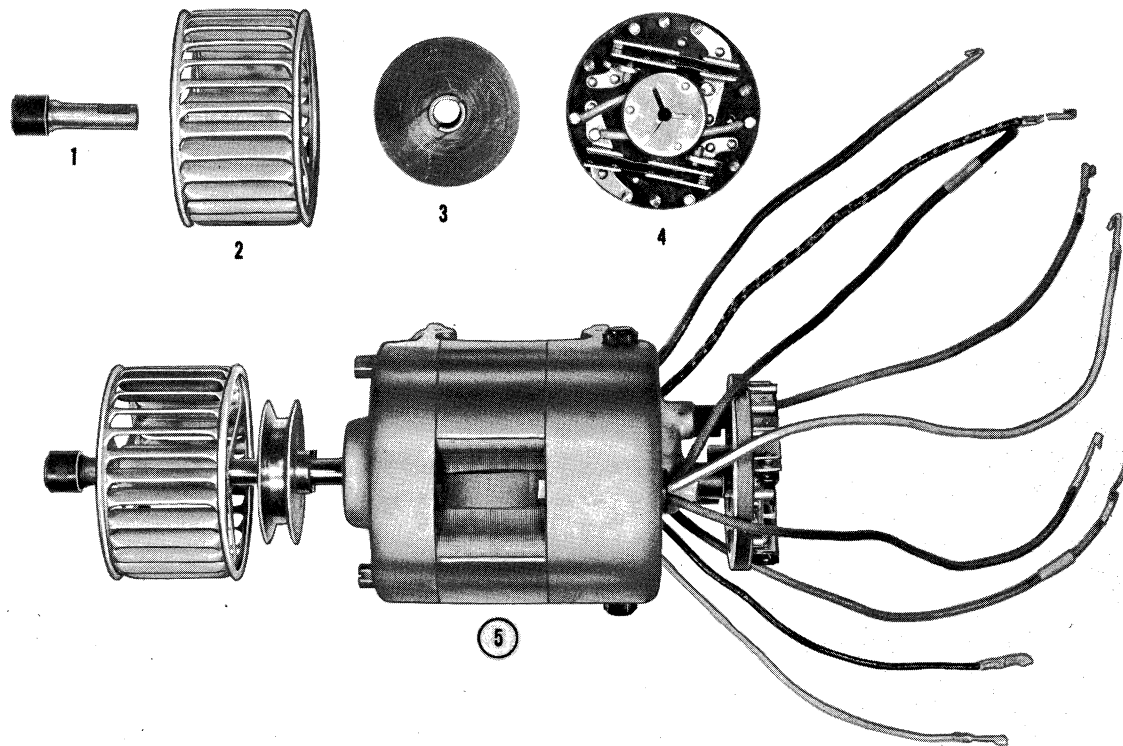
USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	26885-A	Motor rewind drive pulley											
2	26610	Motor fan											
3	26611	Motor pulley											
4	26708-A	Two speed governor with condenser											
5	30517-A	Complete motor assembly 9 wire											

**BALL BEARING  
MOTOR PARTS  
FOR MODELS  
55, 56-4,  
60-2, 60-4,  
60-10, 60-25**

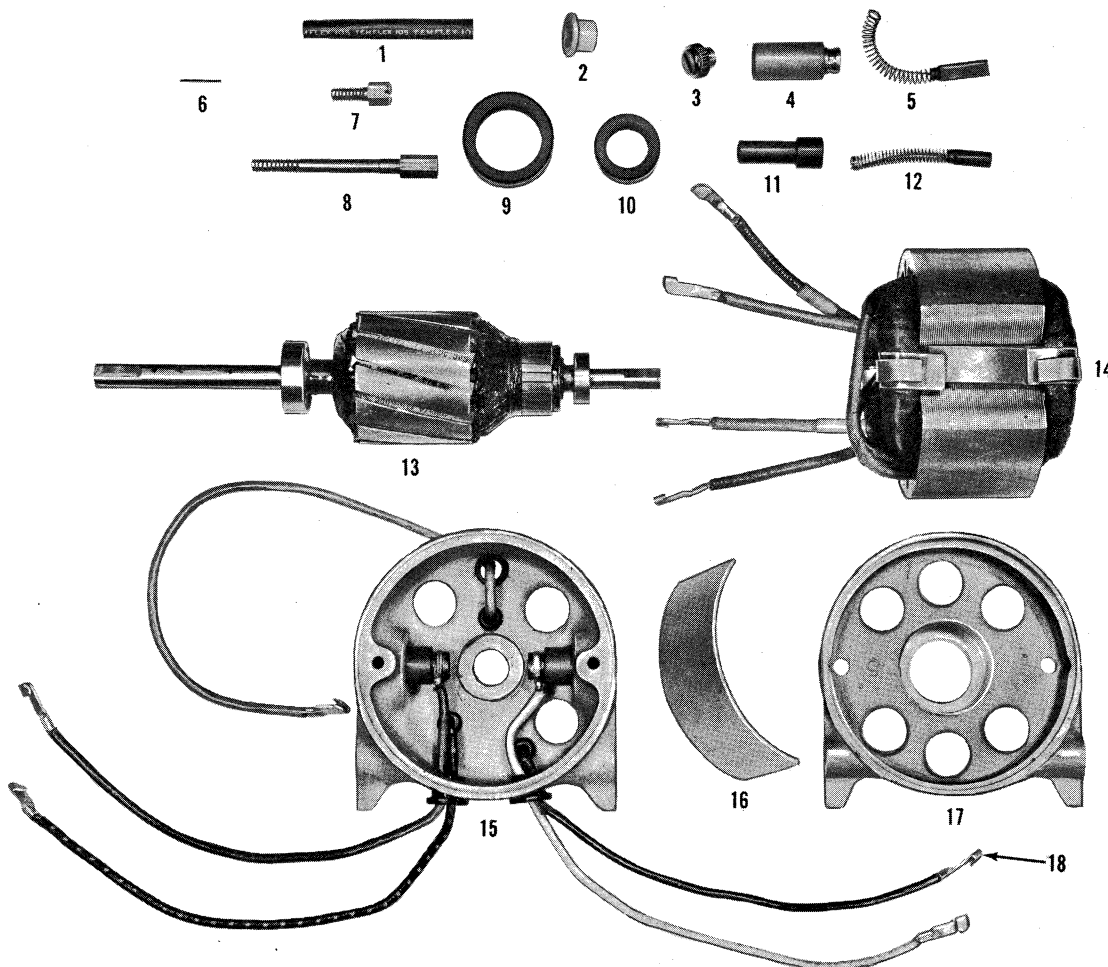
USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	36164	Knife connector insulator					6	6		6	8	8	8
2	19788	Motor cap insulator			3	3	3	3	3	3	3	3	3
3	20264	Motor brush plug				2	2	2	2	2	2	2	2
4	20262	Motor brush holder				2	2	2	2	2	2	2	2
5	20263	Motor brush				2	2	2	2	2	2	2	2
6	U-178	1/16 x 1/2 Sl. Motor pin		2	2	2	2	2	2	2	2	2	2
7	26872	Motor cap screw					2	2		2	2	2	2
8	19080	Motor field clamp stud			2	2	2	2	2	2	2	2	2
9	26863	Rubber ball bearing mounting 5/16					1	1		1	1	1	1
10	26865	Rubber ball bearing mounting 1/4					1	1		1	1	1	1
11	26839	Governor brush insulator				3	3	3	3	3	3	3	3
12	19534	Governor brush			3	3	3	3	3	3	3	3	3
13	26841-A	Ball bearing motor armature 5/16					1	1		1	1	1	1
14	30519	Split four wire motor field									1	1	1
15	30517-2	Governor end motor cap									1	1	1
16	19010	Motor field sleeve			2	2	2	2	2	2	2	2	2
17	26840	Motor cap pulley end					1	1		1	1	1	1
18	26570	Knife connector					10	10		10	16	16	16

Note: For Armature and Bearings, see Page 81.

**MOTOR  
ASSEMBLY  
MODELS 60-4,  
60-10, 60-25**



**BALL BEARING  
MOTOR PARTS  
FOR MODELS  
55, 56-4,  
60-2, 60-4,  
60-10, 60-25**



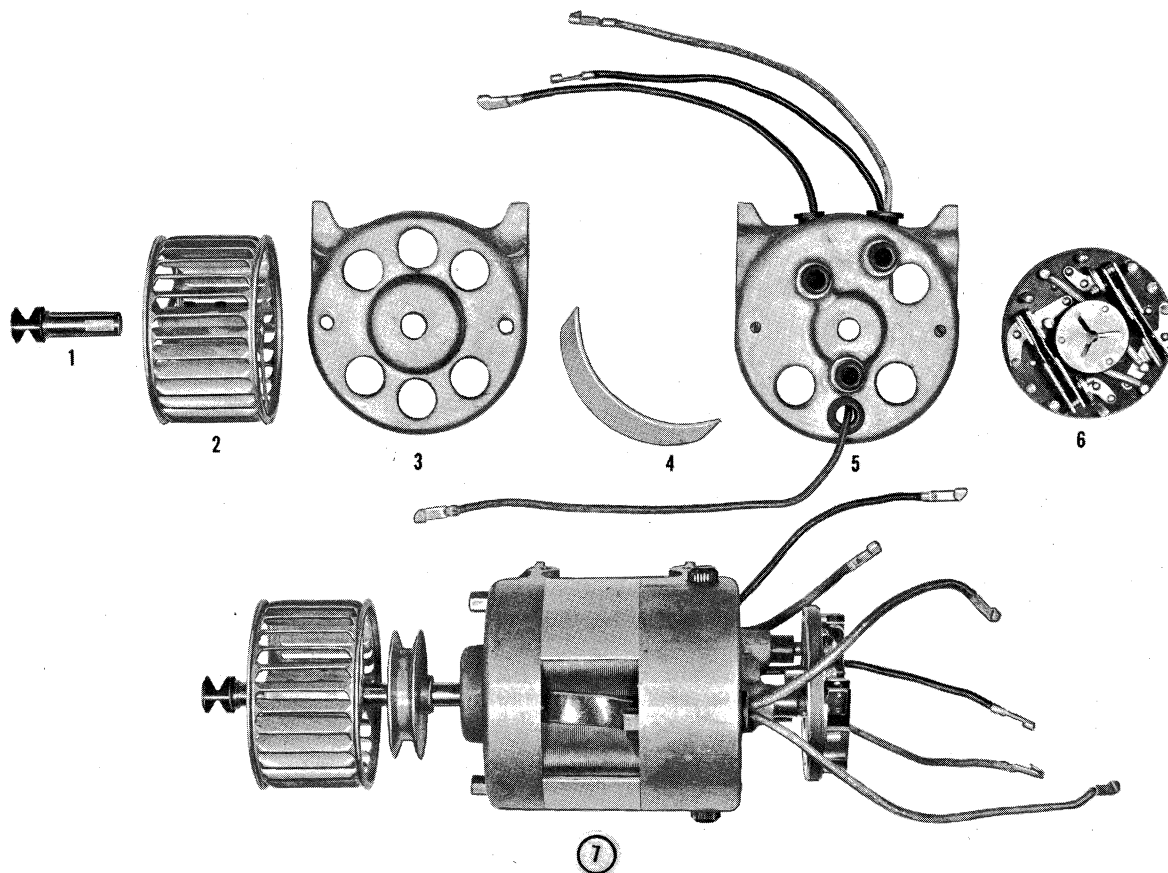
**MOTOR  
ASSEMBLY  
MODELS 55,  
56 AND 60-2**

No.	Part No.	Part Name	Page	G	40-A	USED ON MODELS							
						40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	23350	Rewind pulley											
2	26610	Fan											
3	26840	Motor cap											
4	19010	Field sleeve		2	2	2	2	2	2	2	2	2	2
5	26838-2	Motor cap											
6	26708-A	Governor											
7	26837-A	Motor complete											

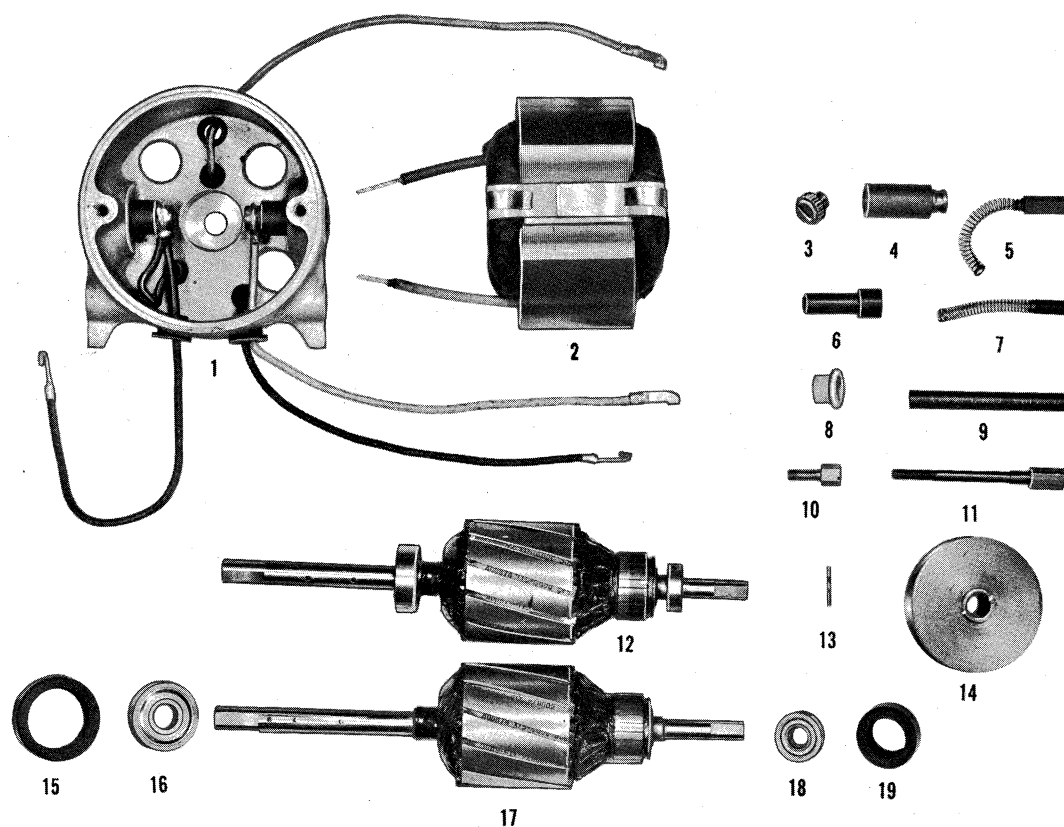
**MOTOR PARTS  
MODELS 55,  
56, 60-2**

No.	Part No.	Part Name	Page	G	40-A	USED ON MODELS							
						40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	26838-2	Motor cap											
2	20260	Motor field		1									
3	20264	Brush plug				2	2	2	2	2	2	2	2
4	20262	Motor brush holder				2	2	2	2	2	2	2	2
5	20263	Motor brush				2	2	2	2	2	2	2	2
6	26839	Governor brush insulator								3	3	3	3
7	19534	Governor brush			3	3	3	3	3	3	3	3	3
8	19788	Motor cap insulator			3	3	3	3	3	3	3	3	3
9	36164	Knife connector insulator					6	6		6	9	9	9
10	26872	Motor cap screw					2	2		2	2	2	2
11	19080	Motor field stud			2	2	2	2	2	2	2	2	2
12	26841-A	Armature with bearings											
13	U-178-50	Armature pin		2	2	2	2	2	2	2	2	2	2
14	26611	Drive pulley											
15	26863	Rubber bearing mounting 5/16											
16	26864	5/16 Bearing											
17	26841	Armature											
18	26862	1/4 Bearing											
19	26865	Rubber bearing mounting 1/4											





**MOTOR  
ASSEMBLY  
MODELS 55,  
56 AND 60-2**



**MOTOR PARTS  
MODELS 55,  
56, 60-2**

**MOTOR  
ASSEMBLY  
MODELS  
40-B, 60-B\***

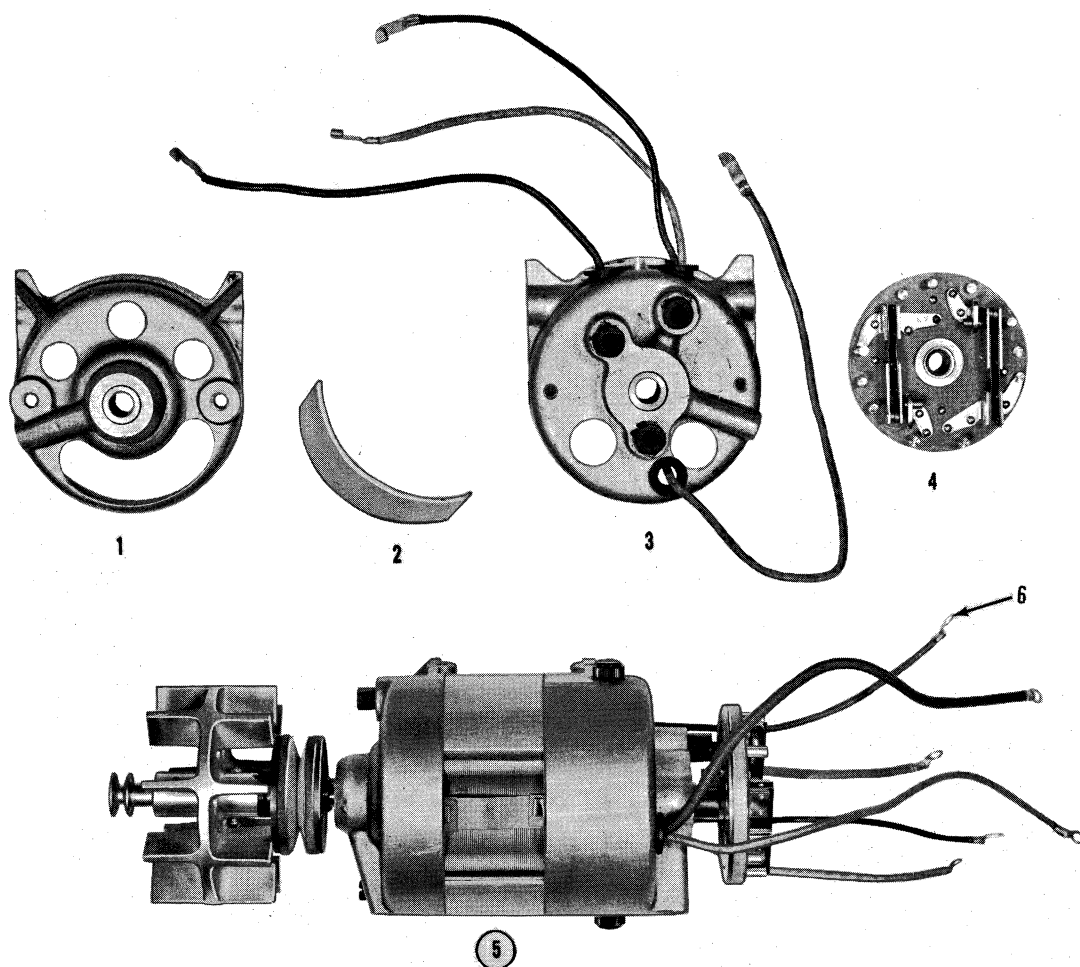
No.	Part No.	Part Name	Page	USED ON MODELS									
				G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	19033-A	Motor cap											
2	19010	Motor field sleeve		2	2	2	2	2	2	2	2	2	2
3	19532-A	Motor cap governor end											
4	19533	Governor											
5	20260-A	Motor complete											
6	18644	Soldering lugs			12	12			12				

\*Complete breakdown on Page 87.

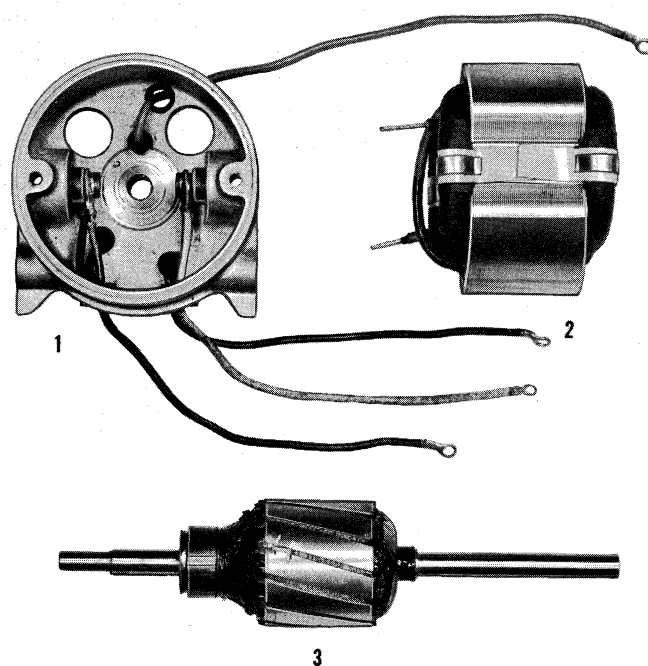
**MOTOR PARTS  
MODELS 40-B,  
60-B**

No.	Part No.	Part Name	Page	USED ON MODELS									
				G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	19532-A	5/16 Governor end motor cap assembly, 40-BX, 40-B, 60-B											
2	20260	5/16 Motor field											
3	20261	5/16 Motor armature											

**MOTOR  
ASSEMBLY  
MODELS  
40-B, 60-B**



**MOTOR PARTS  
MODELS 40-B  
60-B**



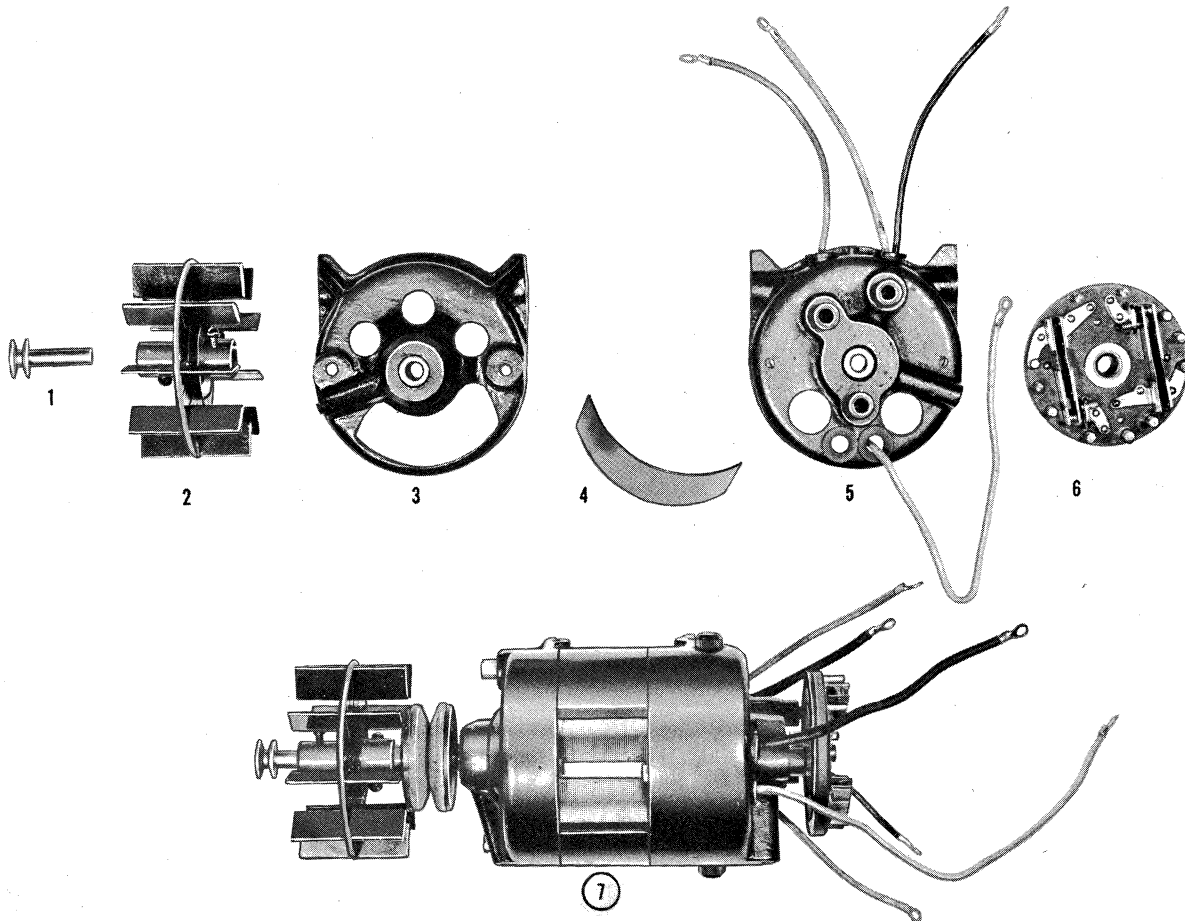
# **MOTOR ASSEMBLY MODEL 40-A\***

No.	Part No.	Part Name	Page	G	40-A	USED ON MODELS							
						40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	19518	Rewind pulley				1							
2	19135	Fan				1							
3	19033-A	Motor cap pulley end				1							
4	19010	Motor field sleeve		2	2	2	2	2	2	2	2	2	2
5	19532-A	Motor cap governor end				1							
6	19533	Governor		1	1	1			1				
7	19008-A	Motor complete				1							

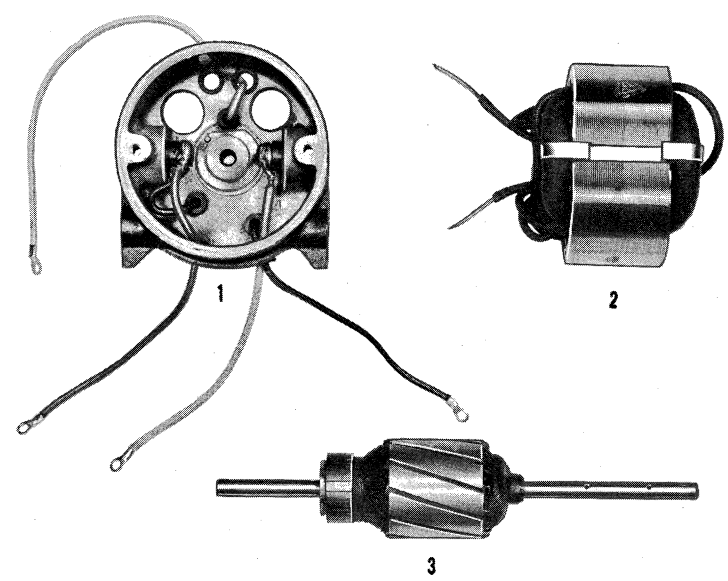
\*Complete breakdown on Page 87.

# **MOTOR PARTS MODEL 40-A**

No.	Part No.	Part Name	Page	G	40-A	USED ON MODELS							
						40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	19532-A-40A	Governor end motor cap				1							
2	19008	1/4 Motor field				1							
3	19009	1/4 Motor armature				1							



**MOTOR  
ASSEMBLY  
MODEL 40-A**



**MOTOR PART  
MODEL 40-A**

## MOTOR PARTS

USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	20268-A	Clutch flange (front)											
1-A	20269-A	Clutch flange (rear)											
2	23236	Motor drive pulley*											
3	20274-A	Fan											
4	20273	Rewind pulley											
5	20270	Clutch core 5/16											
6	19160	Friction disc											
7	20270	Clutch core 5/16											
8	19160	Friction disc											
9	26611	Drive pulley											
10	26610	Fan											
11	23350	Rewind pulley											
12	U-178	Motor pin 1/2 x 1/16		2	2	2	2	2	2	2	2	2	2
13	20263	Motor brush		2		2	2	2	2	2	2	2	2
14	20262	Motor brush holder		2		2	2	2	2	2	2	2	2
15	20264	Motor brush cap				2	2	2	2	2	2	2	2
16	19080	Field stud			2	2	2	2	2	2	2	2	2
17	20781	Bearing oil felt		2	2	2			2				
18	20782	Bearing oil wick		2	2	2			2				
19	20266	Motor bearing 5/16		2		2			2				
20	20783	Spacer washer 5/16				4			4				
21	19534	Governor brush		3	3	3	3	3	3	3	3	3	3
22	19535	Governor brush holder		3	3	3			3				
23	20762	Motor cap screw			2	2			2				
24	20266-A	Motor bearing 5/16		2		2			2				

\*No. 2, 23236 Motor drive pulley replaces friction clutch assembly. (Nos. 1, 1-A, 5, 6, 7, 8)

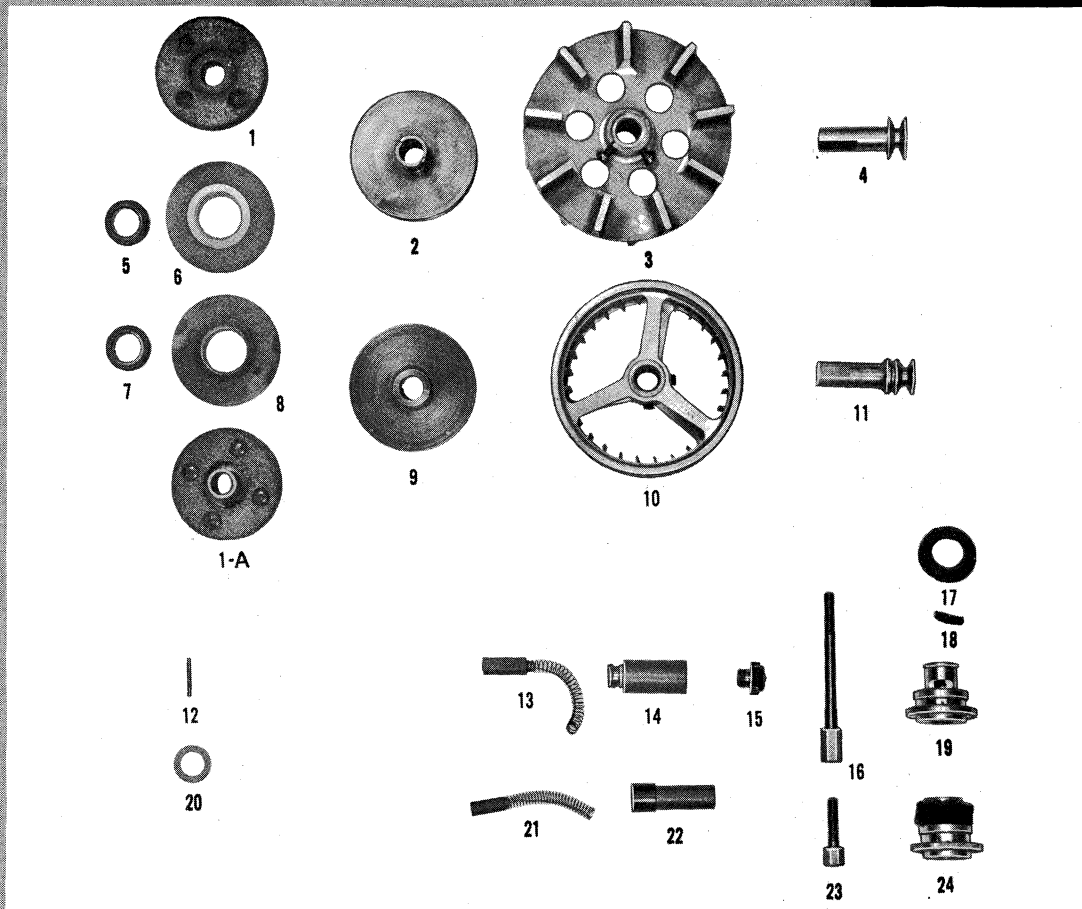
To replace friction clutch assembly, it is also necessary to replace drive belt guard with Part No. 20235 (Page 25).

## MOTOR PARTS MODEL 40-A

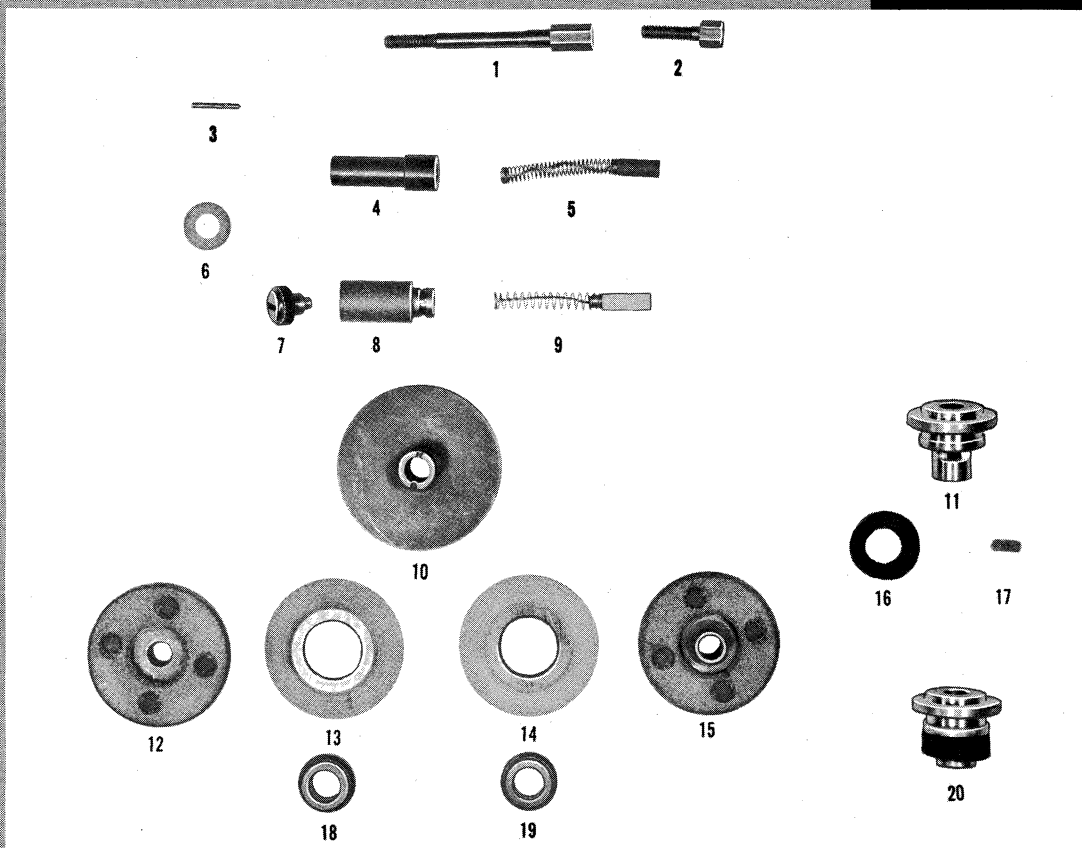
USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	19080	Field stud			2	2	2	2	2	2	2	2	2
2	20762	Motor cap screw			2	2			2				
3	U-178	1/16 x 1/2 Motor pin		2	2	2	2	2	2	2	2	2	2
4	19535	Governor brush holder		3	3	3			3				
5	19534	Governor brush		3	3	3	3	3	3	3	3	3	3
6	11120	Armature spacer 1/4			4								
7	11118	Motor brush plug			2								
8	11114	Brush holder			2								
9	11116	Motor brush			2								
10	30126	Motor drive pulley*			1								
11	19018	Motor bearing 1/4			2								
12	19161-A	Friction flange (front)			1								
13	19160	Friction disc		2	2	2							
14	19160	Friction disc		2	2	2							
15	19162-A	Friction flange (rear)			1								
16	20781	Bearing felt		2	2	2			2				
17	20782	Bearing oil wick		2	2	2			2				
18	19137	Clutch core			2								
19	19137	Clutch core			2								
20	19018-A	Motor bearing 1/4			2								

\*No. 10, 30126 Motor drive pulley replaces friction clutch assembly. (Nos. 12, 13, 14, 15, 18, 19)

To replace friction clutch assembly, it is also necessary to replace drive belt guard with Part No. 20235 (Page 25).



## MOTOR PARTS



## MOTOR PARTS MODEL 40-A



# AMPLIFIERS MODELS 40-A, 40-B, 60-B, 60-2, 60-25

USED ON MODELS												
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10 60-25
1		Model 40-A amplifier			1							
2	19745	Power transformer 50-60 cycle			1							
3	19990-A	Model 40-B amplifier				1						
4	19845	Power transformer 50-60 cycle*				1			1			
5	23250-A	Model 60-B amplifier							1			
6	19845	Power transformer 50-60 cycle				1			1			
7	26925	Power transformer 50-60 cycle										1
8	26855-A	Model 60-2 and 60-25 amplifiers†								1		1
9	19608	Control knob		2	2				3	2		2
10	19608	Control knob		2	2				3	2		2
11	26876	Dial light socket								1		1
12	18641	Exciter switch			1	1			1			1
13	19747	Main line AC plug				1	1	1	1		1	1
14	26874	Dial light cap								1		1
15	19947	Pilot lamp								1		1
16	26787	Speaker socket (female)								1		1
17	19608	Control knob		2	2				3	2		2
18	19608	Control knob		2	2				3	2		2
19	18641	Exciter switch		1	1				1	1		1
20	25030	Speaker socket (female)		1	1					1		1
21	19747	Main line AC plug			1	1	1	1	1	1	1	1
22	25096	Speaker plug (male)		2	2	1	1	2	2	1	1	2
	25055	Speaker plug (female) (not shown)		1	1	1	1	1	1	1	1	1
23	19978	2 Amp. fuse		1	1	1	1	1	1	1	1	1
24	23128	Fuse holder				1	1	1	1	1	1	1
25	19608	Control knob		2	2				3	2		2
26	18641	Exciter switch		1	1				1	1		1
27	17189	AC plug (female)		1	1	1	1	1	1	1	1	1
28	25030	Speaker socket (female)		1	1					1		1
29	18688-A	Fuse cover		1	1				1	1	1	1
30	19747	Main line AC plug		1	1	1	1	1	1	1	1	1
31	19608	Control knob		2	2				3	2		2
32	19608	Control knob		2	2				3	2		2
33	25030	Speaker socket (female)		1	1					1		1
34		6/32 x 3/16 R.H. screw (fuse cover)		2	2							
35	19748	AC line socket		1								
36	19608	Control knob		2	2				3	2		2
37	18688-A	Fuse cover		1	1							
	18645	Fuse holder (not shown)		1	1							
38	19747	Main line AC plug		1	1	1	1	1	1	1	1	1
39	19608	Control knob		2	2				3	2		2

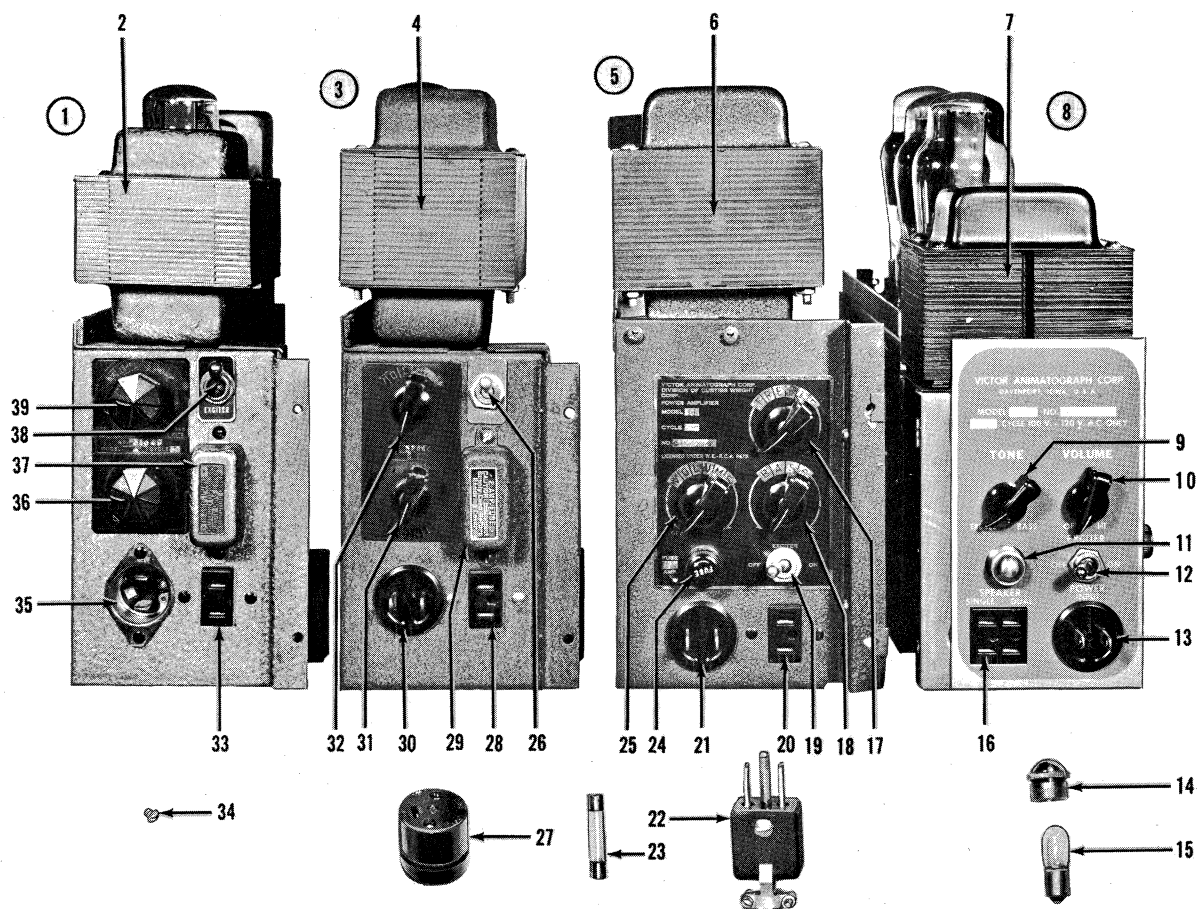
\*25 Cycle transformer 19846 is used on 40-A, 40-B and 60-B.

†25 Cycle transformer 26936 is used on 60-2 and 60-25.

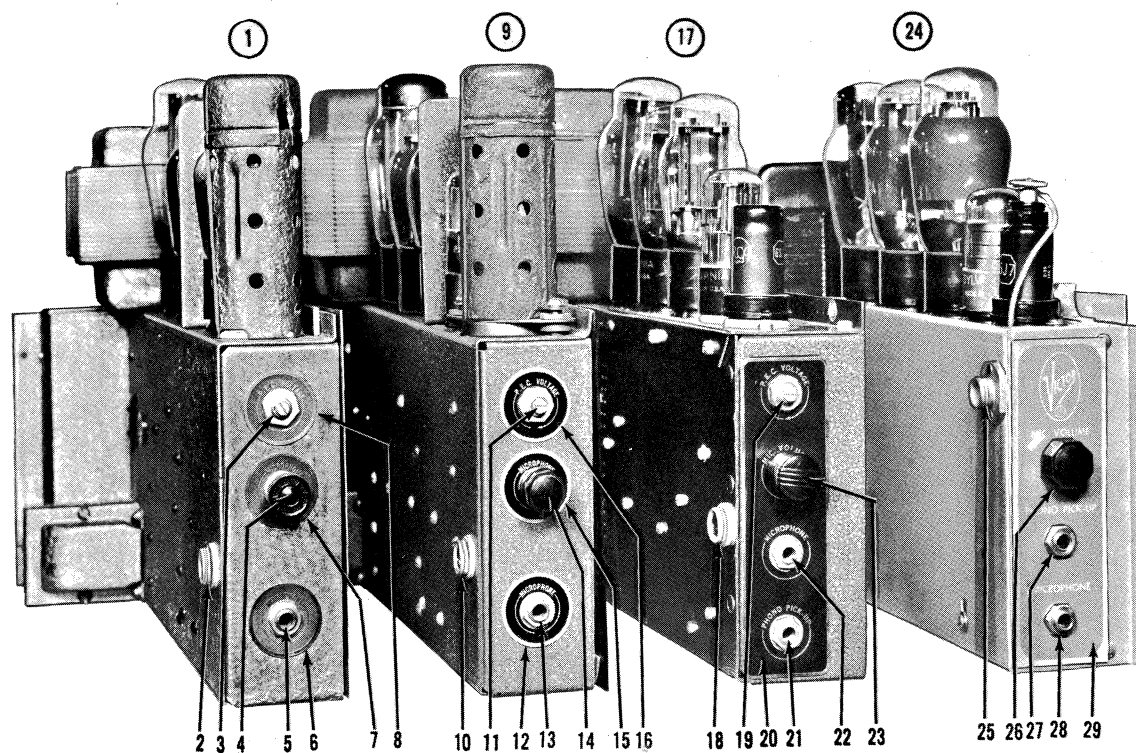
NOTE: Replacing 50-60 cycle transformers with 25 cycle transformers will not convert amplifiers for use on 25 cycles. Many other changes are necessary. Such a change is not recommended.

# AMPLIFIERS MODELS 40-A, 40-B, 60-B, 60-2, 60-25

USED ON MODELS												
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10 60-25
1		Model 40-A amplifier			1							
2	19818	P.E. cell socket			1	1	1		1			
3	19719	P.E. cell control*			1	1	1		1			
4	25040	Microphone control knob			1	1			1			1
5	18643	Microphone and phono jack		1	1	2	1		2	1	1	1
6	19922	Microphone nameplate			2	2						
7	19922	Microphone nameplate			2	2						
8	19920	P.E. cell nameplate			1	1						
9	19990-A	Model 40-B amplifier				1						
10	19818	P.E. cell socket			1	1	1		1			
11	19719	P.E. cell control*		1	1	1	1		1			
12	19922	Microphone nameplate			2	2						
13	18643	Microphone and phono jack			1	2	1		2	1	1	1
14	25040	Microphone control knob		1	1	1	1		1	1	1	1
15	19922	Microphone nameplate			2	2						
16	19920	P.E. cell nameplate			1	1						
17	23250-A	Model 60-B amplifier							1			
18	19818	P.E. cell socket			1	1	1		1			
19	19719	P.E. cell control*			1	1	1		1			
20	23126	Nameplate							1			
21	18643	Microphone and phono jack			1	2	1		2	1	1	1
22	18643	Microphone and phono jack		1	1	2	1		2	1	1	1
23	25040	Microphone control knob		1	1	1	1		1	1	1	1
24	26855-A	Models 60-2 and 60-25 amplifiers								1	1	1
25	26917	P.E. cell contact connector						1		1	1	1
26	25040	Microphone control knob		1	1	1	1		1	1	1	1
27	18643	Microphone and phono jack		1	1	2	1		2	1	1	1
28	26791	Microphone jack								1		1
29	26780	Nameplate								1		1
*	20058	P.E. cell control cap			1	1			1			



**AMPLIFIERS  
MODELS 40-A  
40-B, 60-B,  
60-2, 60-25**



**AMPLIFIERS  
MODELS 40-A  
40-B, 60-B,  
60-2, 60-25**

# AMPLIFIER MODELS 60-2, 60-25

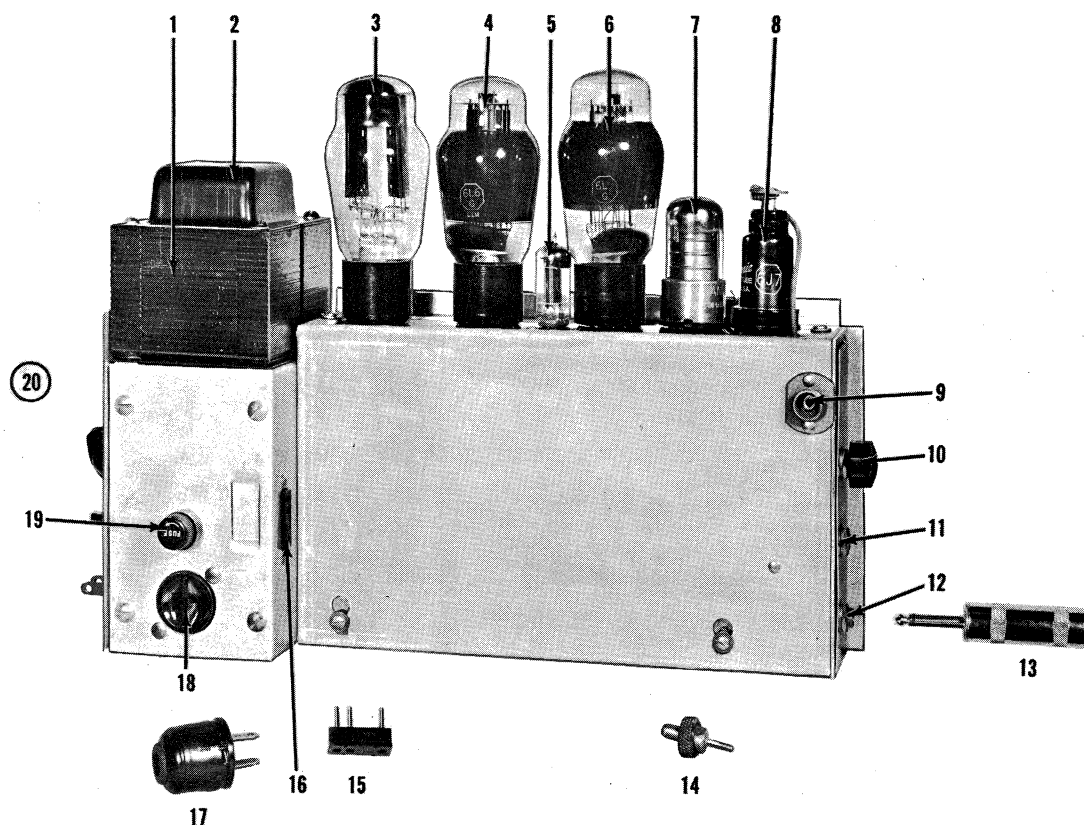
USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	26925	Power transformer 50-60 cycle*											
2	19729	Transformer half-shell cover											
3	5U4G	Rectifier tube											
4	6L6G	Output tube				2			2	2			2
5	6C4GT	Input tube											
6	6L6G	Output tube				2			2	2			2
7	6SJ7M	Second stage tube											
8	6J7M	Input tube											
9	26917	P.E. cell connector (female)											
10	25040	Microphone control knob											
11	26791	Microphone jack											
12	18643	Microphone jack				2			2				
13	18766	Microphone plug (male)											
14	26561-A	P.E. cell connector (male)											
15	20628	Exciter plug (male)											
16	20629	Exciter socket (female)											
17	19747	AC main line plug											
18	20169	AC power plug (female)											
19	23128	Fuse holder											
20	26855-A	Amplifier complete											

\*25 Cycle transformer 26936 is used on Models 60-2 and 60-25.

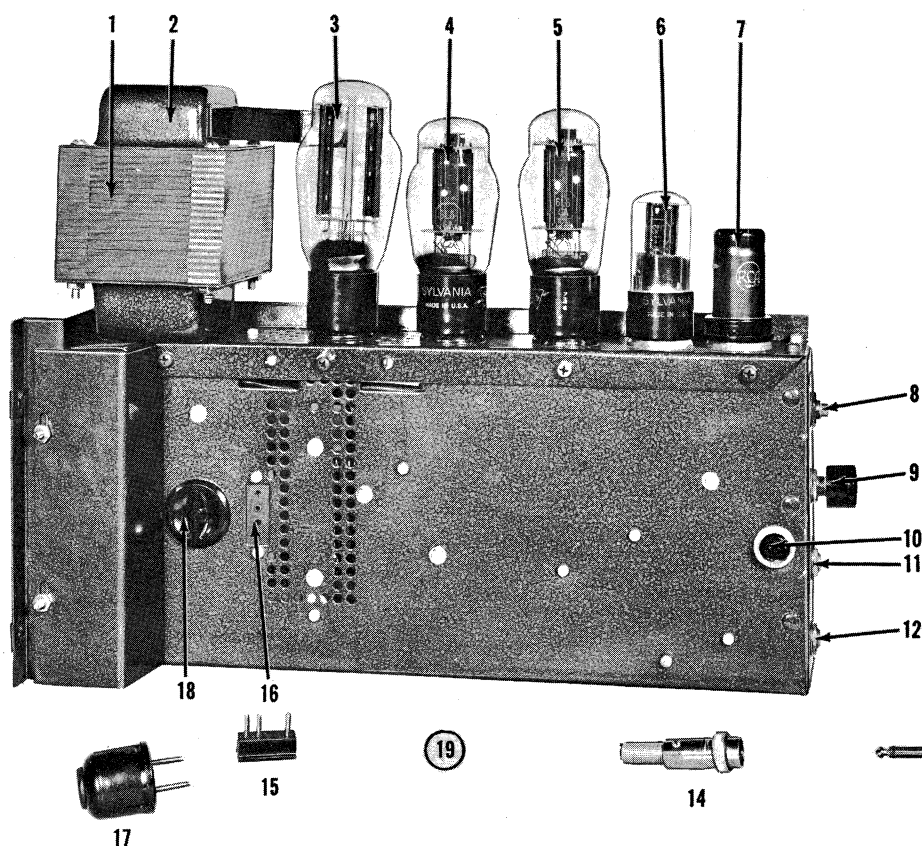
# AMPLIFIER MODEL 60-B

USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	19845	Power transformer 50-60 cycle*				1			1				
2	23234-A	Transformer top cover assembly							1				
3	5U4G	Rectifier tube			1	1			1	1			1
4	6L6G	Output tube				2			2	2			2
5	6L6G	Output tube				2			2	2			2
6	6SL7GT	Second stage tube					1		1	1			
7	6SJ7M	Input tube				1	1		1	1			1
8	19719	P.E. cell voltage control			1	1	1		1				
9	25040	Microphone control knob			1	1	1		1	1			1
10	19818	P.E. cell socket (female)			1	1	1		1				
11	18643	Microphone and phono jack			1	2	1		2	1	1	1	1
12	18643	Microphone and phono jack			1	2	1		2	1	1	1	1
13	18766	Microphone plug (male)			1	1	1		1	1	1	1	1
14	19819	P.E. cell plug (male)			1	1	1		1				
15	20628	Exciter plug (male)				1			1	1			1
16	20629	Exciter socket (female)				1			1	1			1
17	19747	AC plug (male)			1	1	1	1	1	1	1	1	1
18	20169	AC socket (female)			1	1	1	1	1	1	1	1	1
19	23250-A	Amplifier complete							1				

\*25 Cycle transformer 19846 is used on Model 60-B.



**AMPLIFIER  
MODELS  
60-2, 60-25**



**AMPLIFIER  
MODEL 60-B**

## AMPLIFIER MODEL 40-B

USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	19845	Power transformer 50-60 cycle*				1			1				
2	19789	Transformer half shell			1	1			1				
3	5U4G	Rectifier tube			1	1			1	1			1
4	6L6G	Output tube				2			2	2			2
5	6L6G	Output tube				2			2	2			2
6	6N7GT	Second stage tube			1	1							
7	18728-A	Tube shield			1	1							
8	6J7M	Input tube			1	1							1
9	19719	P.E. cell voltage control			1	1	1		1				
10	25040	Microphone control knob			1	1	1		1	1			1
11	19818	P.E. cell socket (female)			1	1	1		1				
12	18643	Microphone and phono jack			1	2	1		2	1	1	1	1
13	18766	Microphone plug			1	1	1		1	1	1	1	1
14	19819	P.E. cell plug (male)			1	1	1		1				
15	19990-A	Complete model 40-B Amplifier†				1							
16	20618	Four contact exciter plug (male)				1							
17	19747	AC plug (male)			1	1	1	1	1	1	1	1	1
18	18732	200 ohm filter choke			1	1			1				
19	20619	Four contact exciter socket (female)				1							
20	20169	AC socket power output to projector head				1	1	1	1	1	1	1	1

\*25 Cycle power transformer 19846 is used on Model 40-B.

By making a few minute changes the 60-25 amplifier is interchangeable. All that is necessary is to raise amplifier  $\frac{3}{4}$ ", place adapter on P.E. cell connector and shield 6J7 tube.

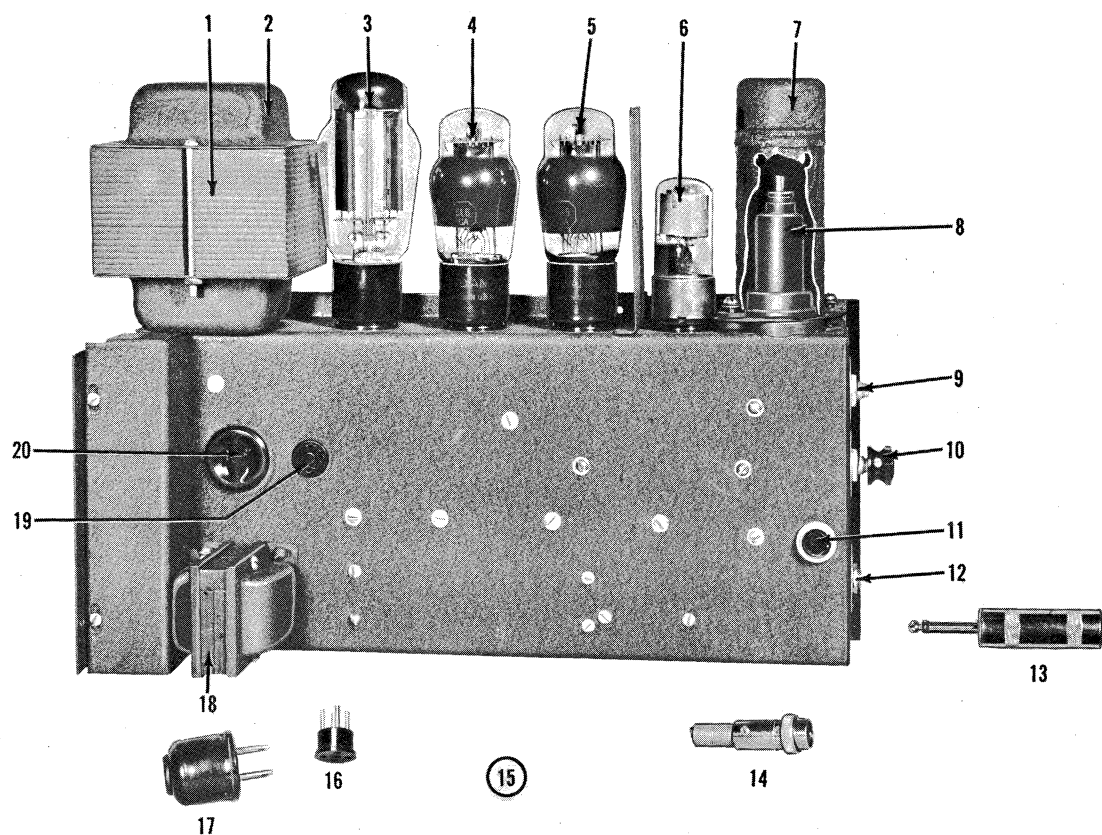
†No. 15, 19990-A, 40-B amplifier can no longer be supplied.

## AMPLIFIER MODEL 40-A

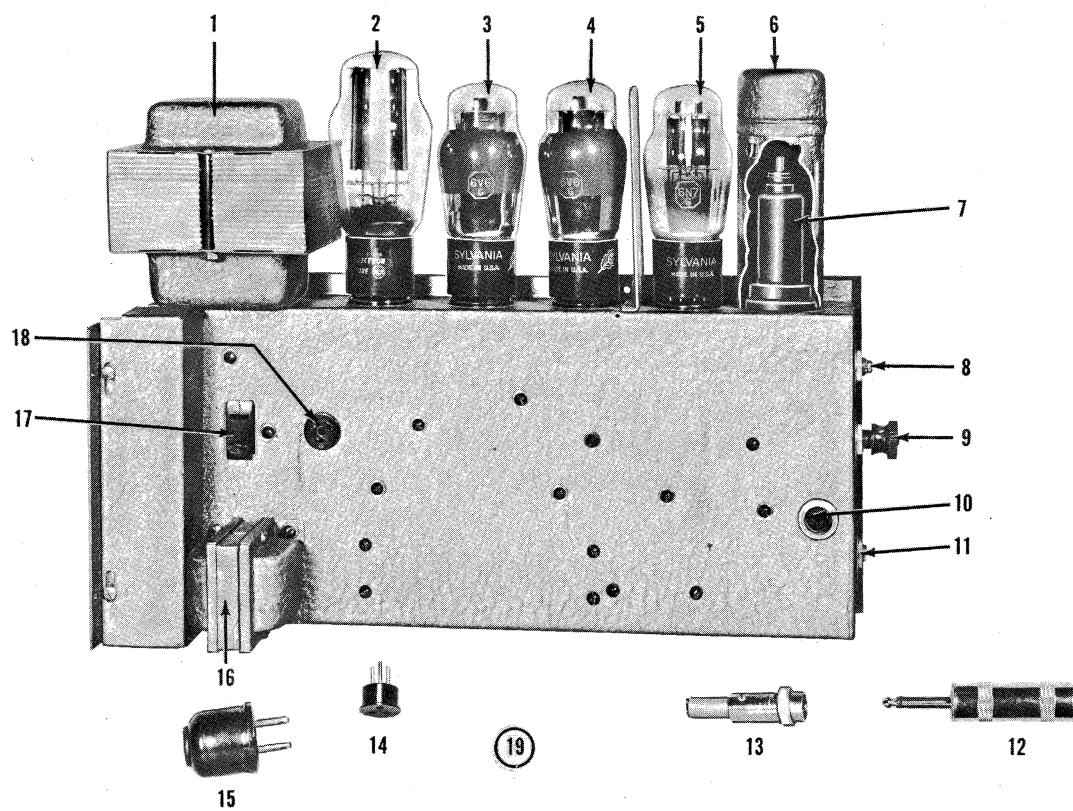
USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	19745	Power transformer, 50-60 cycle*											
2	5U4	Tube											
3	6V6	Tube			2								
4	6V6	Tube			2								
5	6N7GT	Tube											
6	18728-A	Tube shield											
7	6J7	Tube											
8	19719	P.E. cell control											
9	25040	Microphone control knob											
10	19818	P.E. cell socket (female)											
11	18643	Microphone jack							2				
12	18766	Microphone plug (male)											
13	19819	P.E. cell connector (male)											
14	19643	Exciter plug (male)											
15	19747	AC plug (male)											
16	18732	200 ohm filter choke											
17	19748	AC plug (female)											
18	19648	Exciter socket (female)											

\*25 Cycle transformer 19846 is used on Model 40-A.





**AMPLIFIER  
MODEL 40-B**



**AMPLIFIER  
MODEL 40-A**

## AMPLIFIER MODEL 60-10

USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	26561-A	P.E. cell connector (male)											
2	26917	P.E. cell socket (female)											
3	30586	Four contact exciter socket (female)											
4	30586-A	Exciter cord assembly											
5	30543-A	Model 60-10 amplifier complete assembly											
6	36190	200 Mfd. 150 VDC condenser											
7	23128	Fuse holder											
8	50L6GT	Output tube						2			2	2	
9	30503-A	AC cord assembly power line											
10	19747	AC plug (male)											
11	26522-2	AC power receptacle											
12		6/32 x 3/8 B.H. AC power retainer screw for case											
13	17189	AC plug for power cord replacement (female)											
14	12AX7G	Second stage tube											
15	5879G	Input tube											
16	23284	Tone control knob											
17	23283	Volume control knob											
18	26935	Volume control											
19	25096	Speaker cord plug (male)*			2	2			2	2			2
20		5/40 x 3/8 B.H. speaker cord retainer screw for case					2	2			2	2	
21	18643	Microphone jack				2			2				
22	26934	Tone control											
23	25030-2	Speaker socket assembly											
24	30550-A	Speaker socket cord assembly											
25	23298	Four contact exciter plug (male)											

\*No. 19, 25096, is interchangeable with 25054 (page 131).

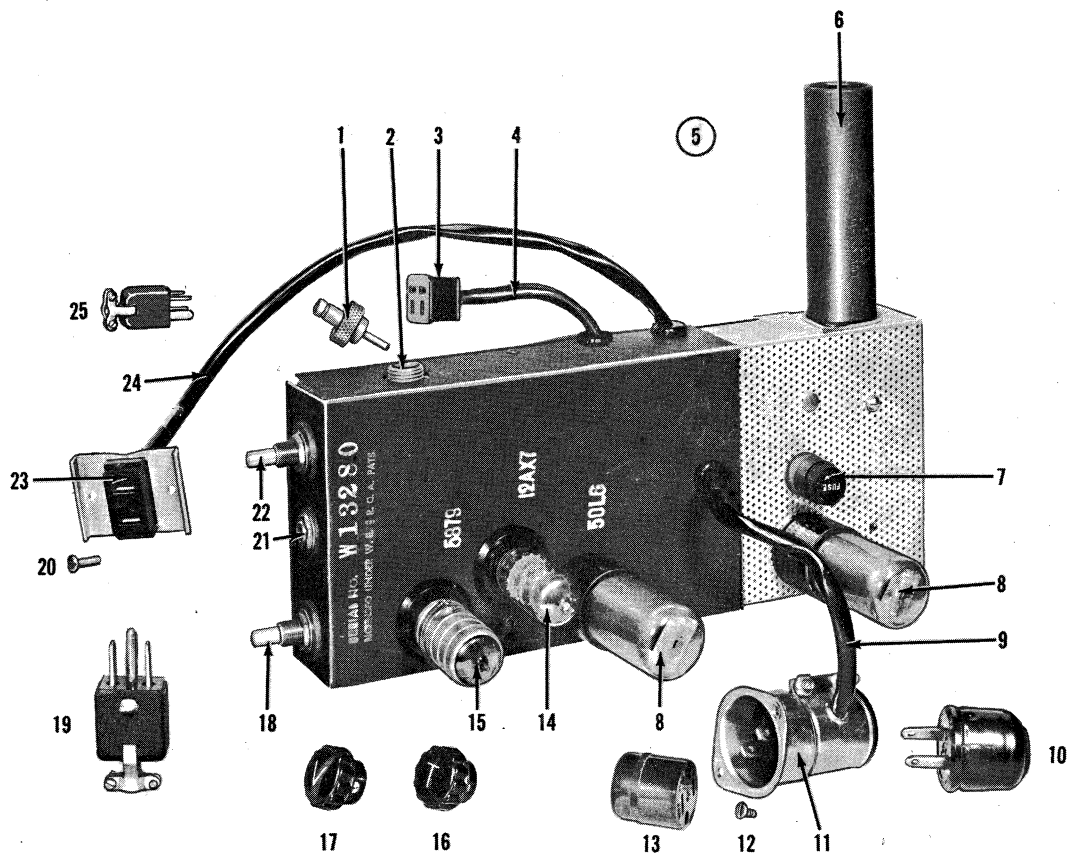
## AMPLIFIER MODEL 60-4

USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	25030-2	Speaker socket assembly											
2	26934	Tone control											
3	26561-A	P.E. Cell connector (male)											
4	30550-A	Speaker socket cord assembly											
5	26917	P.E. Cell contact (female)											
6	30490-A	60-4 Amplifier*											
7	36190	200 Mfd. 150 Volts DC condenser											
8	23128	Fuse holder											
9	50L6GT	Tube						2			2	2	
10	30503-A	AC cord assembly											
11	19747	AC plug (male)											
12	26522-2	Receptacle shell sub assembly											
13		6/32 x 1/4 B.H. screw						2			2	2	
14	17189	AC plug (female)											
15	50L6GT	Tube						2			2	2	
16	12AX7GT	Tube											
17	5879GT	Tube											
18	23284	Tone control knob											
19	23283	Volume control knob											
20	25096	Speaker plug (male)†			2	2			2	2			
21	26935	Volume control											
22	18643	Microphone and phono jack				2			2				
23		5/40 x 3/8 B.H. screw					2	2			2	2	

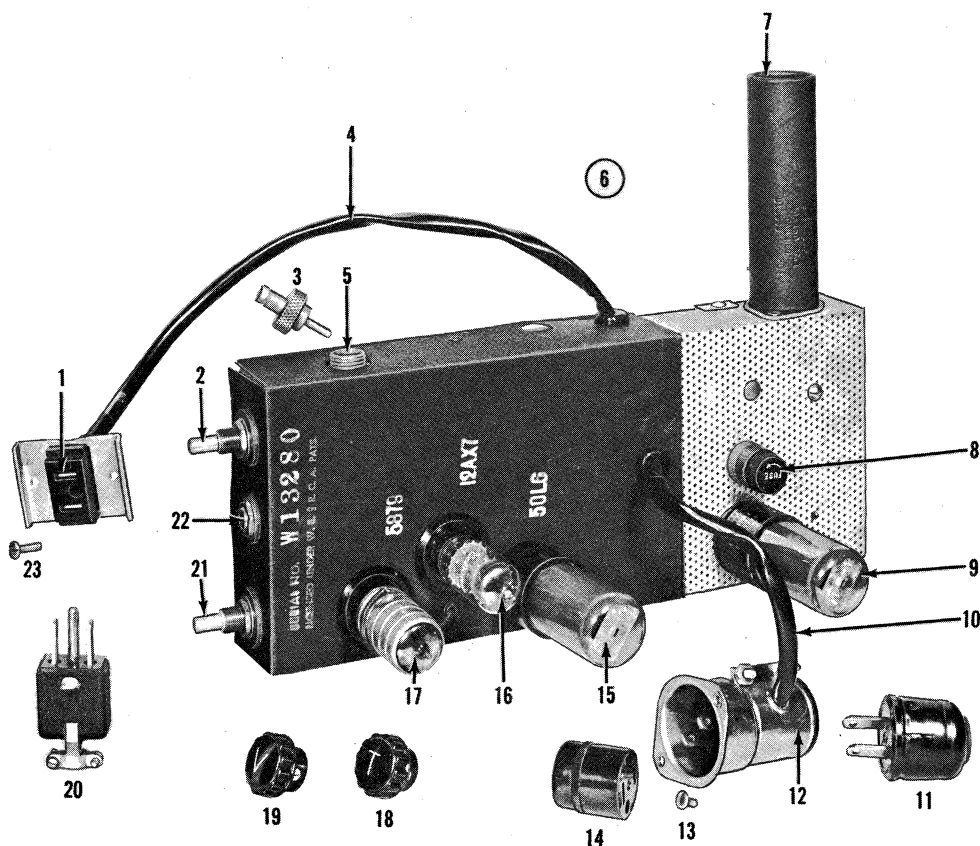
\*Model 60-4 amplifier may be used on 25-50-60 cycle and AC-DC.

†No. 20, 25096, is interchangeable with 25054 (Page 131).





**AMPLIFIER  
MODEL 60-10**



**AMPLIFIER  
MODEL 60-4**

## AMPLIFIER MODEL 55

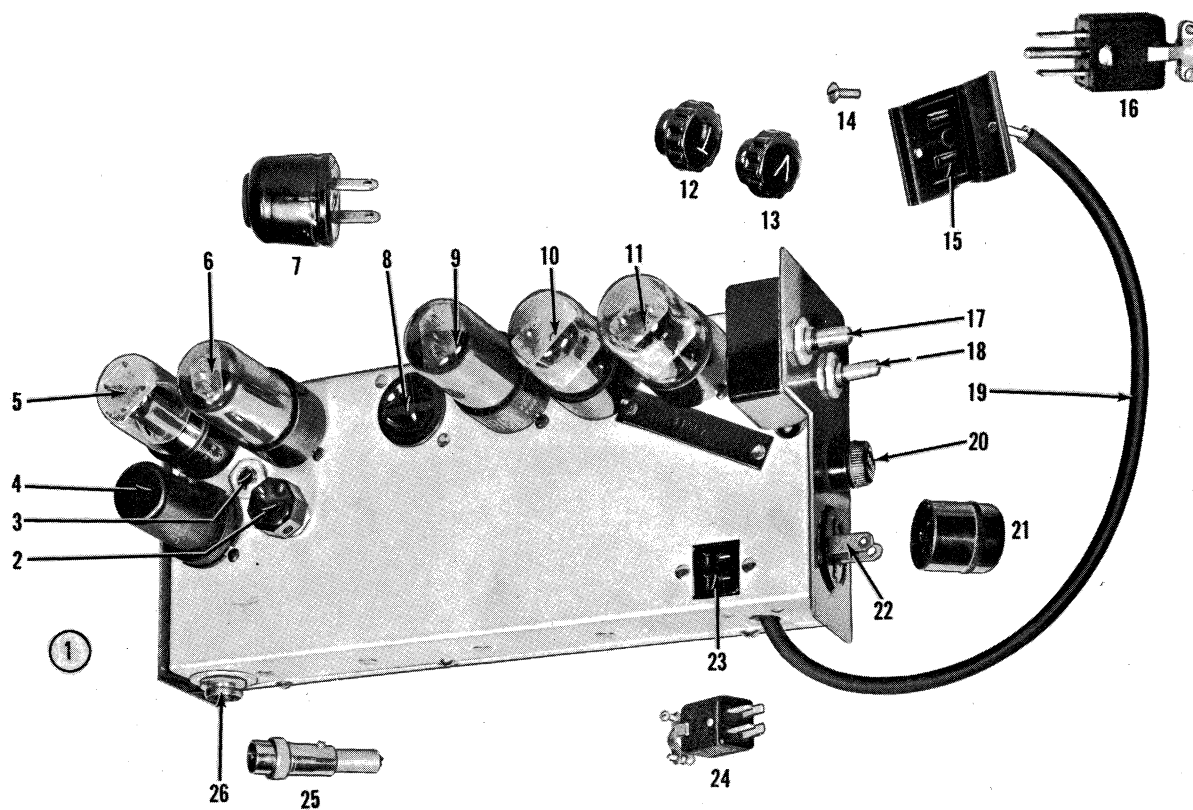
USED ON MODELS												
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10 60-25
1	23270-A	Model 55 amplifier complete					1					
2	25040	P.E. Cell voltage control knob					1					
3	18643	Microphone jack			3	2	1		2	1	1	
4	6SJ7M	Input tube				1	1		1	1		1
5	6SL7GT	Second stage tube					1		1			
6	25L6GT	Output tube					2					
7	19747	AC Plug (male)			1	1	1	1	1	1	1	1
8	20169	AC Receptacle (female)			1	1	1	1	1	1	1	1
9	25L6GT	Output tube					2					
10	25Z6GT	Rectifier tube					2					
11	25Z6GT	Rectifier tube					2					
12	23284	Tone control knob "T"					1	1			1	1
13	23283	Volume control knob "V"					1	1			1	1
14		5/40 x 3/8 B.H. speaker socket retainer screw					2	2			2	2
15	25030-2	Speaker socket assembly					1	1			1	1
16	25096	Speaker plug (male)*			2	2	1	1	2	2	1	2
17	18635	Tone control			1	1	1	1	1			
18	18852	Volume and switch control			1	1	1	1	1			1
19	25030-A	Speaker cord assembly					1	1			1	1
20	23128	Fuse holder					1	1	1	1	1	1
21	17189	AC Plug (female)			1	1	1	1	1	1	1	1
22	19747	AC Plug (male)			1	1	1	1	1	1	1	1
23	23297	4 Contact exciter socket (female)					1					1
24	23298	4 Contact exciter plug (male)					1					1
25	19819	P.E. Cell cord plug (male)			1	1	1		1			
26	19818	P.E. Cell socket (female)			1	1	1		1			

\*No 16, 25096, is interchangeable with 25054 (Page 131).

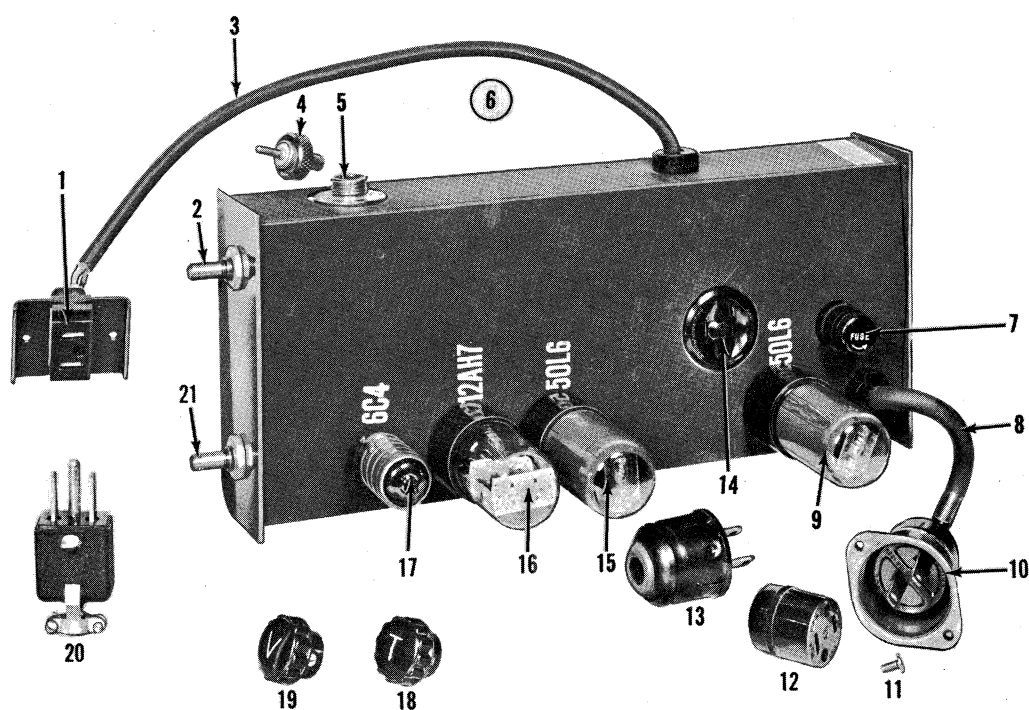
## AMPLIFIER MODEL 56

USED ON MODELS												
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10 60-25
1	25030-2	Speaker socket assembly					1	1			1	1
2	18635	Tone control									1	1
3	25030-A	Speaker socket and cord assembly					1	1			1	1
4	26561-A	P.E. Cell connector (male)						1		1	1	1
5	26917	P.E. Cell connector (female)						1		1	1	1
6	26623-A	Model 56-C amplifier complete*						1				
7	23128	Fuse holder					1	1	1	1	1	1
8	30586-A	AC cord assembly power output amplifier						1			1	1
9	50L6G	Output tube						2			2	2
10	26522-A	Receptacle AC shell assembly						1			1	1
11		6/32 x 3/8 B.H. AC receptacle retainer screw						2			2	2
12	17189	AC Power plug (female)			1	1	1	1	1	1	1	1
13	19747	AC plug (male)			1	1	1	1	1	1	1	1
14	20169	AC Main line plug (female)			1	1	1	1	1	1	1	1
15	50L6G	Output tube						2			2	2
16	12AH7GT	Second stage tube						1				
17	6C4GT	Input tube						1		1		
18	23284	Tone control knob				1	1				1	1
19	23283	Volume control knob				1	1				1	1
20	25096	Speaker plug (male)			2	2	1	1	2	2	1	2
21	18852	Volume and switch control									1	1

\*Model 56C amplifier can be used on 25-50-60 cycle and AC-DC.



**AMPLIFIER  
MODEL 55**



**AMPLIFIER  
MODEL 56**

ITEM	V.A.C. PART	ELECTRICAL RATING
1	26791	
2	30523A	P.E.C. Not Included.
3	12918	
4	26561	
5	19210	90 VDC Photo Cell.
6	26222	1/2 Watt.
7	23148	1/2 Watt.
8	26218	1/2 Watt.
9	26234	1/2 Watt.
10	26585	1/2 Watt.
11	26226	500 VDC.
12	26889	
13	26227	450 VDC.
14	26201	1/2 Watt.
15	26219	1/2 Watt.
16	26228	400 VDC.
17	26235	1/2 Watt.
18	26236	1/2 Watt.
19	29590	50 VDC.
20	18426	400 VDC.
21	26230	1/2 Watt.
22	18621	1/2 Watt.
23	18852	1/2 Watt.
24	26204	1/2 Watt.
25	26220	1/2 Watt.
26	26232	400 VDC.
27	26200	1/2 Watt.
28	18616	1/2 Watt.
29	26221	1/2 Watt.
30	18619	1/2 Watt.
31	18622	1/2 Watt.
32	26207	500 VDC.
33	19722	10 Watt. 5%
34	26184	50 VDC.
35	19635	10 Watt. 5%
36	26210	450 VDC.
37	26211	5 Watt. 5%
38	26790	6600 Ohm P to P (Pri.) 0-4-8 (Sec.)
39	18643	1 Watt.
40	26188	1/2 Watt. 5%
41	26212	1/2 Watt. 5%
42	18616	
43	26925	50-60 Cycle. Model 60-25
44	26926	25 Cycle. Model 60-25M
45	26786	1/2 Watt Dual.
46	26213	1/2 Watt.
47	26214	1/2 Watt.
48	18641	6 Amp. 125 Volts.
49	19734	1/2 Watt.
50	26215	450 VDC. Must Withstand 203 Ma Ripple Current.
51	26787	
52	19747	15 Amp. 125 Volt.
53	Part of 18852	3 Amp. 125 Volt.
54	18639	3 Amp. 125 Volt.
55	25118	15 Amp. 125 Volt.
56	20629	
57	19747 & 30559	15 Amp. 125 Volt.
58	23330	10 Amp. 125 Volt.
59	Proj. Lamp	750-1000 Watt. 100-120 Volt.
60	11026	3 Amp. 125 Volt.
61	26708A	.01 Mfd. 450 Volts.
62	18640	6 Mfd. 125 Volt.
63	20519	
64	26841	
65	26931	30 Watt 110 Ohms.
66	26930	20 Watt 90 Ohms.
67	26949	15 Amp. 125 Volt.
68	19299	6.5 Amp. 5 Volt.
69	20628	
70	28130	0.15 Amp. 5 Volt.
71	19936	1/2 Watt.
72	23146	8 Ohm. Voice Coil.
73	25096	
74	25066	75 Ft.
75	25181A	
76	637	
77	6537	
78	6C4	
79	6L6-G.	
80	504-G.	

\*These circuits are identical except for Item 43

WIRING DIAGRAM  
MODEL 60-25  
50-60 CYCLE

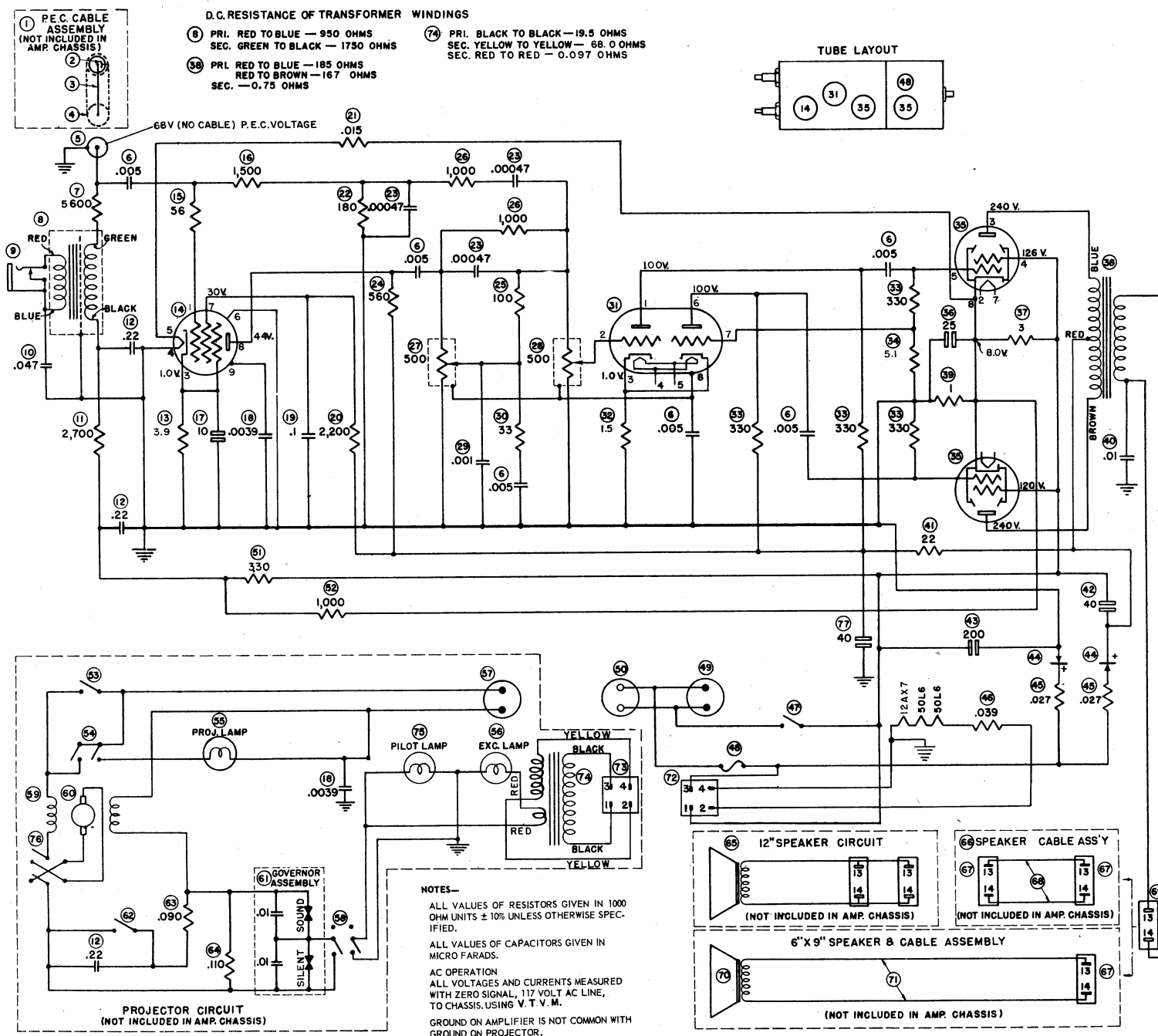
WIRING DIAGRAM  
MODEL 60-25M  
25 CYCLE

PART NO. 30552 ISSUE

PART NO 36086 ISSUE 1

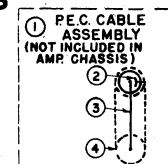
**VICTOR ANIMATOGRAPH CORP.**  
Davenport, Iowa

**NOTE--**  
ALL VALUES OF RESISTOR GIVEN IN 1,000 OHM  
UNITS  $\pm$  10% UNLESS OTHERWISE SPECIFIED.  
ALL VALUES OF CAPACITORS GIVEN IN MICROFARADS  
ALL VOLTAGES AND CURRENTS MEASURED WITH  
ZERO SIGNAL, 117 VOLT AC LINE, TO CHASSIS,  
UNLESS OTHERWISE INDICATED.



ITEM	V.A.C. PART NO.	ELECTRICAL RATING
1	26759-A	.....
2	19210	90 V.D.C. PHOTO CELL
3	19218	COAX CABLE
4	26561 & 26646	MALE CONNECTOR
5	26689	FEMALE CONNECTOR
6	36277	450 V.D.C.
7	36237	1/2 WATT
8	30504	.....
9	18643	.....
10	36232	400 V.D.C.
11	36230	1/2 WATT
12	36228	400 V.D.C.
13	36243	1/2 WATT
14	5879	.....
15	36235	1/2 WATT
16	36222	1/2 WATT
17	25050	50 V.D.C.
18	36238	600 V.D.C.
19	18626	400 V.D.C.
20	36239	1/2 WATT
21	36240	1 WATT
22	36241	1/2 WATT
23	36226	500 V.D.C.
24	36234	1/2 WATT
25	18621	1/2 WATT
26	18616	1/2 WATT
27	26954	1/4 WATT
28	26925	1/4 WATT
29	46242	500 V.D.C.
30	36181	1/2 WATT
31	12AX7	.....
32	18618	1/2 WATT
33	36182	1/2 WATT 5%
34	36233	1/2 WATT 5%
35	50L6	.....
36	36184	50 V.D.C.
37	36185	5 WATT
38	30507	PR1, 6000 OHM P.P. SEC. 0-8 OHM
39	36186	2 WATT
40	18628	450 V.D.C.
41	36188	1 WATT
42	36189	150 V.D.C.
43	36190	150 V.D.C.
44	23113	150 M.A.
45	36191	5 WATT
46	36192	2 WATT
47	PART OF #26935	3 AMP. 125 V.
48	19973	2 AMP.
49	30541	15 AMP. 125 V.
50	20169	15 AMP. 125 V.
51	36182	1/2 WATT 5%
52	18616	1/2 WATT 5%
53	18641	6 AMP. 125 V.
54	23330	10 AMP. 125 V.
55	PROJ. LAMP	750 WATT 110 V. 6.5 AMP. 5 V.
56	19299	15 AMP. 125 V.
57	19747, 30559, & 30540	6 AMP. 125 V.
58	25587	6 AMP. 125 V.
59	30519	.....
60	26841	.....
61	26708-A	GOVERNOR ASSY.
62	26949	15 AMP. 125 V.
63	26930	20 WATT
64	26931	30 WATT
65	25166	8 OHM VOICE COIL
66	25181-A	.....
67	25096	.....
68	25066	75 FEET
69	25030-2	.....
70	26103	50 FEET
71	25066	15 AMP. 125 V.
72	30586	15 AMP. 125 V.
73	23298	PR1, 117 V. 50-60 CYCLE SEC. 5.6 AMP. & 117V., 15 AMP.
74	23299	0.15 AMP. 5 V.
75	29130	3 AMP. 125 V.
76	11026	350 V.
77	36195	.....

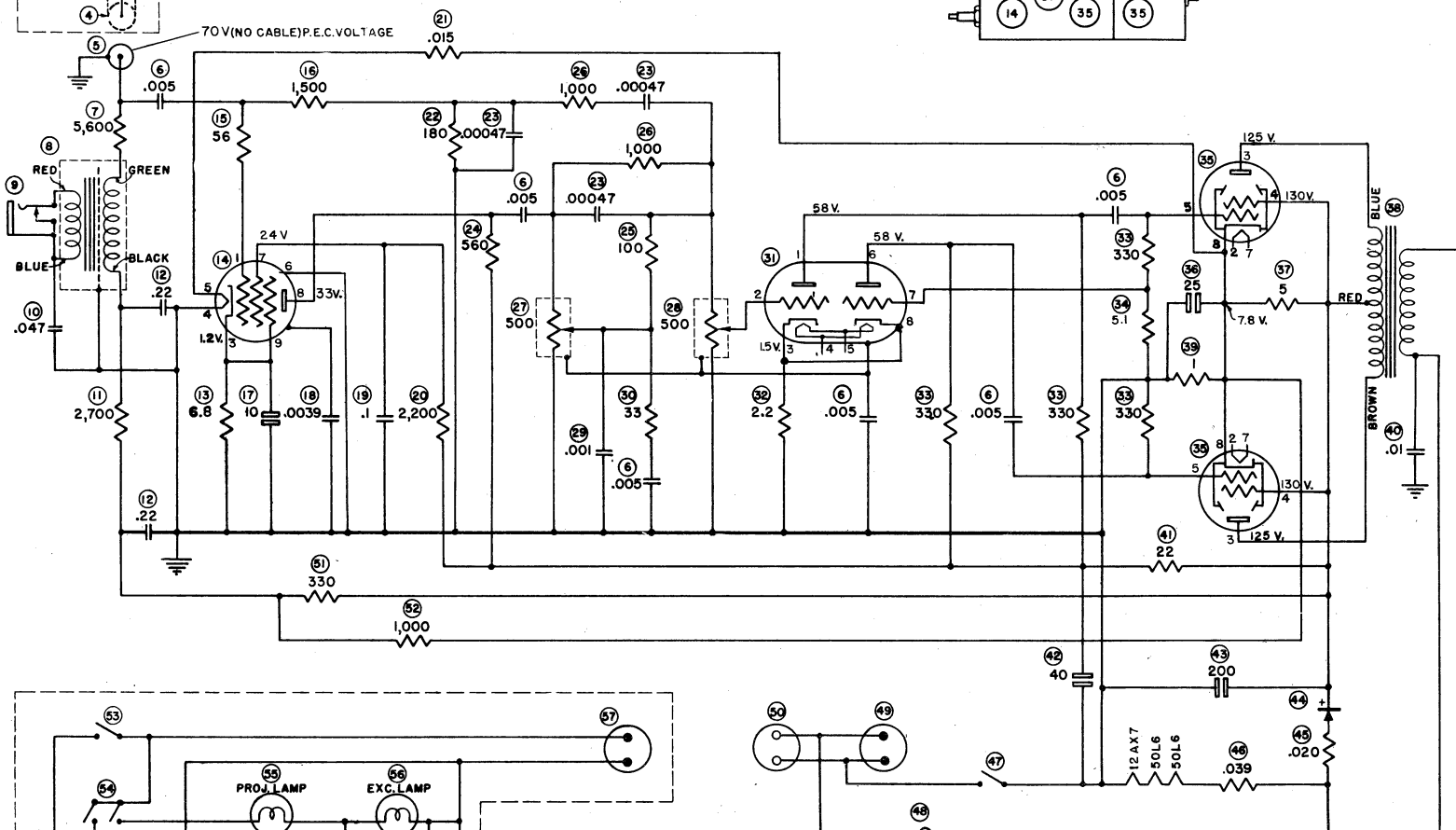
DAVENPORT, IOWA	U. S. A.
PART NO. 30557	ISSUE 3



## D.C. RESISTANCE OF TRANSFORMER WINDINGS

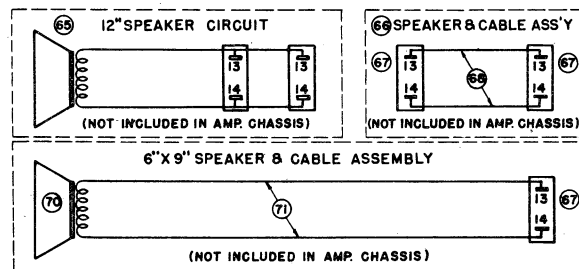
- (8) PRI. RED TO BLUE — 950 OHMS  
SEC. GREEN TO BLACK — 1750 OHMS  
(38) PRI. RED TO BLUE — 119 OHMS  
RED TO BROWN — 106 OHMS  
SEC. — 0.62 OHMS

70V (NO CABLE) P.E.C. VOLTAGE

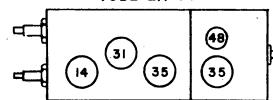


## NOTES—

- ALL VALUES OF RESISTORS GIVEN IN 1000 OHM UNITS  $\pm 10\%$  UNLESS OTHERWISE SPECIFIED.  
ALL VALUES OF CAPACITORS GIVEN IN MICRO FARADS.  
AC OPERATION  
ALL VOLTAGES AND CURRENTS MEASURED WITH ZERO SIGNAL, 117 VOLT AC LINE, TO CHASSIS, USING V.T.V.M.  
GROUND ON AMPLIFIER IS NOT COMMON WITH GROUND ON PROJECTOR.

PROJECTOR CIRCUIT  
(NOT INCLUDED IN AMP. CHASSIS)

## TUBE SOCKET



ITEM	V.A.C. PART	ELECTRICAL RATING
1	26759-A	90 V.D.C. PHOTO CELL # 927
2	19210	COAX CABLE
3	19218	MALE CONNECTOR
4	26561 & 26646	FEMALE CONNECTOR
5	26889	450 V.D.C.
6	36227	1/2 WATT
7	36237	1/2 WATT
8	30504	1/2 WATT
9	18643	1/2 WATT
10	36232	400 V.D.C.
11	36230	1/2 WATT
12	36228	400 V.D.C.
13	36196	1/2 WATT
14	5879	1/2 WATT
15	36235	1/2 WATT
16	36222	1/2 WATT
17	25050	50 V.D.C.
18	18631	600 V.D.C.
19	18626	400 V.D.C.
20	36239	1/2 WATT
21	36240	1 WATT
22	36241	1/2 WATT
23	36226	500 V.D.C.
24	36234	1/2 WATT
25	18621	1/2 WATT
26	18616	1/2 WATT 5%
27	26934	1/4 WATT
28	26935	1/4 WATT
29	36242	500 V.D.C.
30	36181	1/2 WATT
31	12AX7	1/2 WATT
32	36197	1/2 WATT
33	36182	1/2 WATT 5%
34	36233	1/2 WATT 5%
35	50L6	50 V.D.C.
36	36184	5 WATT
37	36198	(PRI.) 4000- $\mu$ P.P.
38	30502	(SEC.) 0-8
39	36186	2 WATT
40	18628	450 V.D.C.
41	36188	1 WATT
42	36189	150 V.D.C.
43	36190	150 V.D.C.
44	23113	150 M.A.
45	36199	5 WATT
46	36192	2 WATT
47	PART OF # 26935	3 AMP. 125 V.
48	19978	2 AMP.
49	30541	15 AMP. 125 V.
50	20169	15 AMP. 125 V.
51	36182	1/2 WATT 5%
52	18616	1/2 WATT 5%
53	18641	3 AMP. 125 V.
54	23330	10 AMP. 125 V.
55	PROJ. LAMP	750 WATT 110 V.
56	19299	6.5 AMP. 5 V.
57	19747, 30559 & 30540	15 AMP. 125 V.
58	26507	6 AMP. 125 V.
59	30519	1/2 WATT
60	26841	1/2 WATT
61	26708-A	GOVERNOR ASSY.
62	26949	15 AMP. 125 V.
63	26930	20 WATT
64	26931	30 WATT
65	25166	8 OHM VOICE COIL
66	25181-A	1/2 WATT
67	25096	1/2 WATT
68	25066	75 FEET
69	25030-2	1/2 WATT
70	26103	1/2 WATT
71	25064	50 FEET
72	11026	3AMP. 125V.

## WIRING DIAGRAM MODEL 60-4

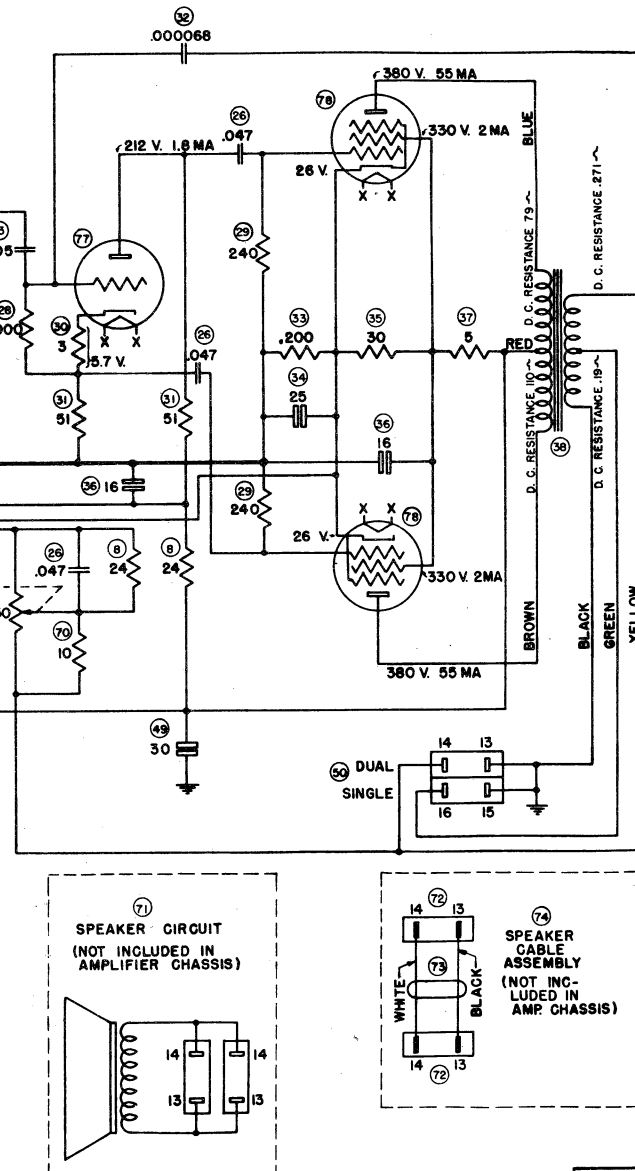
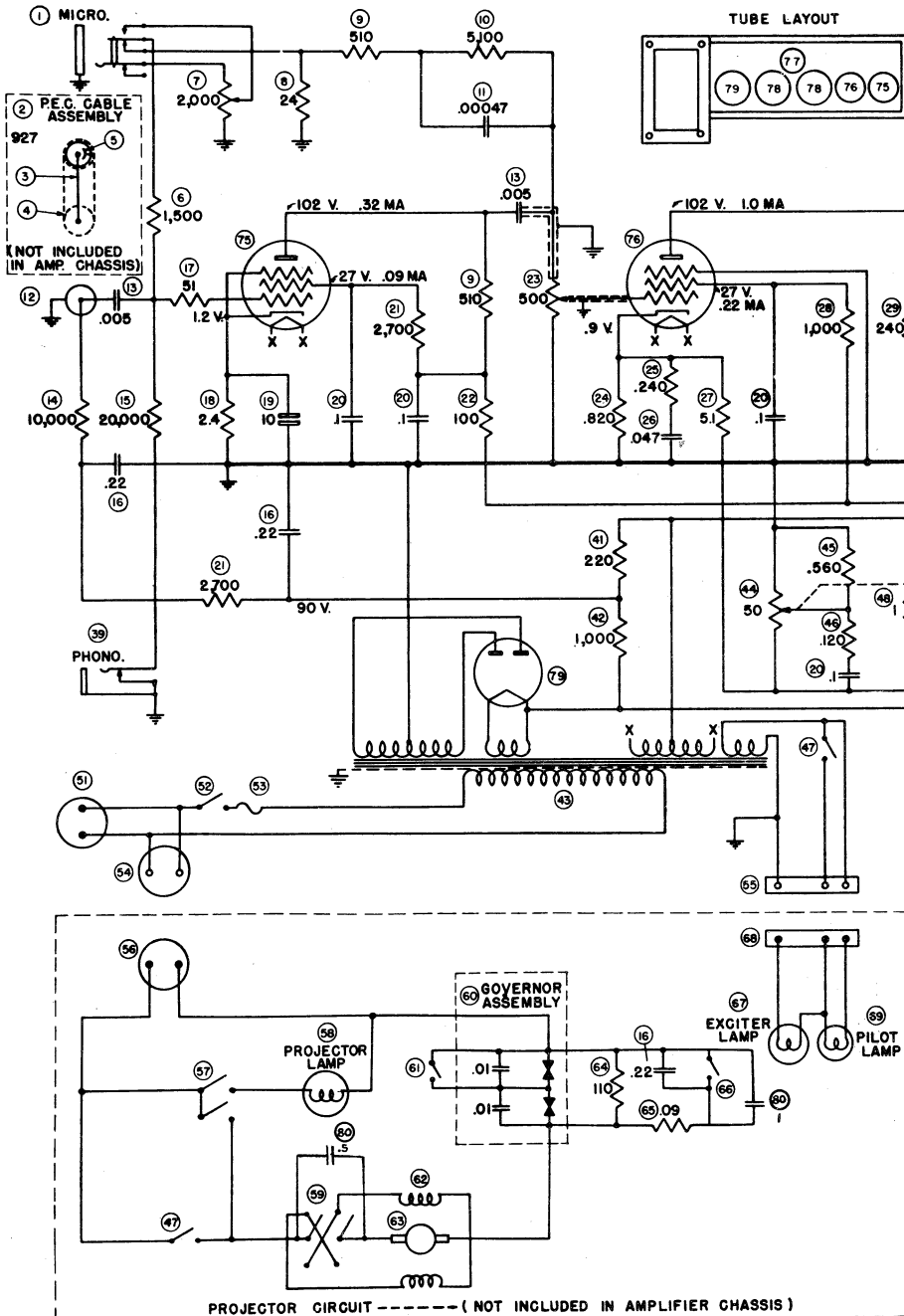
VICTOR ANIMATOGRAPH CORP.

DAVENPORT, IOWA

U. S. A.

PART NO. 36061

ISSUE I



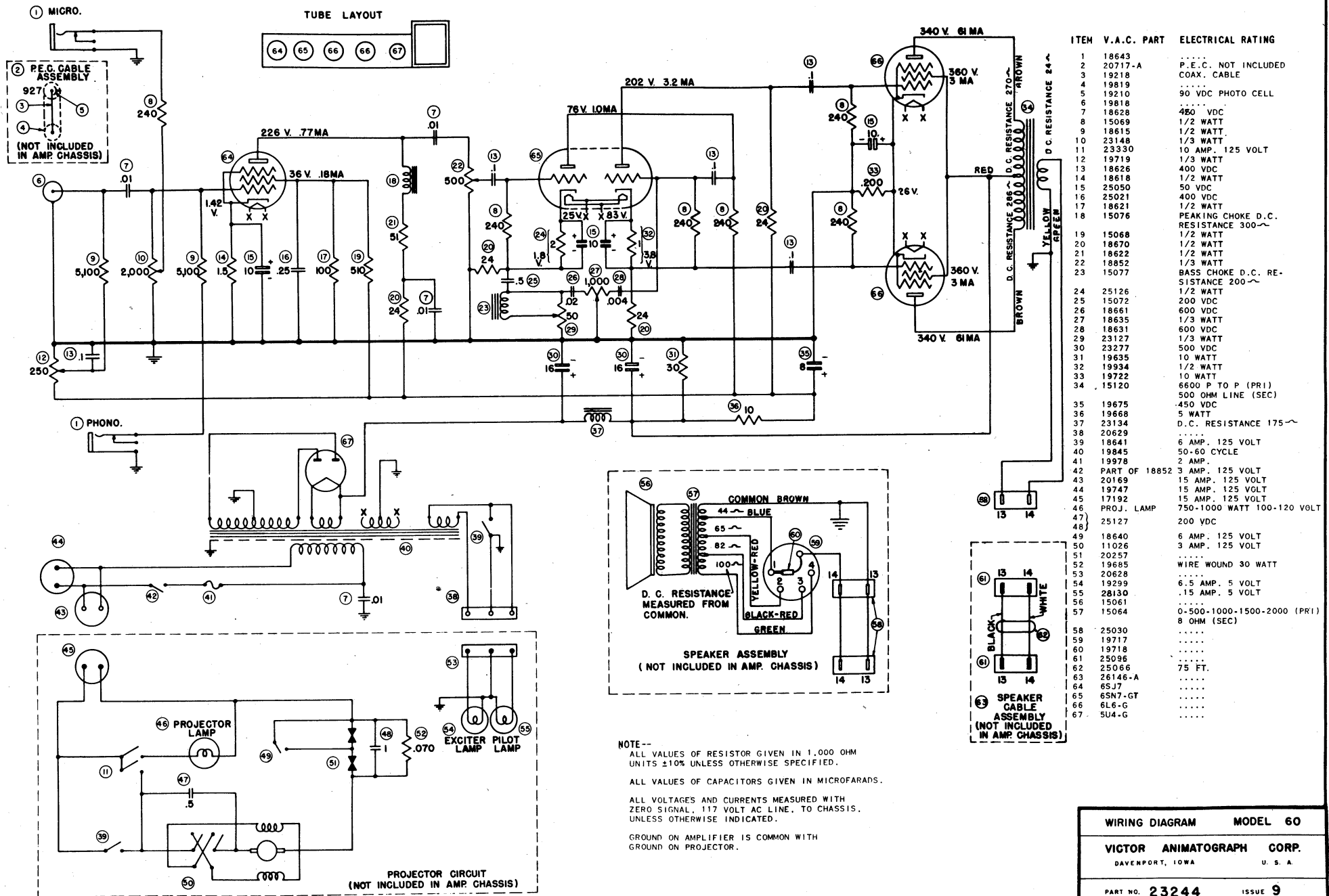
ITEM	V.A.C. PART	ELECTRICAL RATING
1	26791	
2	26905A	
3	19218	
4	26561	
5	19210	
6	36222	90 VDC Photo Cell.
7	23148	1/2 Watt.
8	18670	1/2 Watt.
9	15048	1/2 Watt.
10	18615	1/2 Watt.
11	36226	500 VDC.
12	26889	
13	36227	450 VDC
14	36201	1/2 Watt.
15	36202	1/2 Watt.
16	36228	400 VDC.
17	18622	1/2 Watt.
18	36203	1/2 Watt.
19	25050	50 VDC.
20	18626	400 VDC.
21	36230	1/2 Watt.
22	18621	1/2 Watt.
23	18652	1/2 Watt.
24	36204	1/2 Watt.
25	36231	1/2 Watt.
26	36232	400 VDC.
27	36233	1/2 Watt. 5%
28	18616	1/2 Watt. 5%
29	15069	1/2 Watt.
30	18619	1/2 Watt.
31	18622	1/2 Watt.
32	36207	500 VDC.
33	19722	10 Watt. 5%
34	36184	50 VDC.
35	19635	10 Watt. 5%
36	36210	450 VDC
37	36211	5 Watt. 5%
38	26790	6600 Ohm P To P (Pri.) 0-4-8 (Sec.)
39	18643	
40	36212	1/2 Watt. 5%
41	18616	1/2 Watt. 5%
42	26925	50-60 Cycle. Model 60-2
43	26936	25 Cycle. Model 60-2M
44	26786	1/2 Watt. Dual.
45	36213	1/2 Watt.
46	36214	1/2 Watt.
47	18641	6 Amp. 125 Volts.
48	19934	1/2 Watt.
49	36215	450 VDC. Must Withstand 203 Ma Ripple Current.
50	26787	
51	19747	15 Amp. 125 Volt.
52	Part of 18852	3 Amp. 125 Volt.
53	19978	2 Amp.
54	25118	15 Amp. 125 Volt.
55	20629	
56	19747 & 30559	15 Amp. 125 Volt.
57	23330	10 Amp. 125 Volt.
58	Proj. Lamp	750-1000 Watt.
59	11026	100-120 Volt.
60	26708A	3 Amp. 125 Volt.
61	18640	.01 Mfd. 450 Volt.
62	20260	6 Amp. 125 Volt.
63	26841	
64	26931	30 Watt 110 Ohms.
65	26930	20 Watt 90 Ohms.
66	26949	15 Amp. 125 Volt.
67	19299	6.5 Amp. 5 Volt.
68	20628	
69	28130	0.15 Amp. 5 Volt.
70	19936	1/2 Watt.
71	25166	8 Ohm. Voice Coil.
72	25096	
73	25066	75 Ft.
74	25181A	
75	6J7	
76	65J7	
77	6C4	
78	6L6-G.	
79	5U4-G.	
80	25127	200 VDC.

\*These circuits are identical except for Item 43

NOTE--  
ALL VALUES OF RESISTOR GIVEN IN 1,000 OHM  
UNITS ± 10% UNLESS OTHERWISE SPECIFIED.  
ALL VALUES OF CAPACITORS GIVEN IN MICROFARADS.  
ALL VOLTAGES AND CURRENTS MEASURED WITH  
ZERO SIGNAL, 117 VOLT AC LINE, TO CHASSIS.  
UNLESS OTHERWISE INDICATED.

<b>WIRING DIAGRAM</b> <b>MODEL 60-2</b> 50-60 CYCLE PART NO. 26867 ISSUE 2	<b>WIRING DIAGRAM</b> <b>MODEL 60-2M</b> 25 CYCLE PART NO. 26873 ISSUE 2
<b>VICTOR ANIMATOGRAPH CORP.</b> Davenport, Iowa	



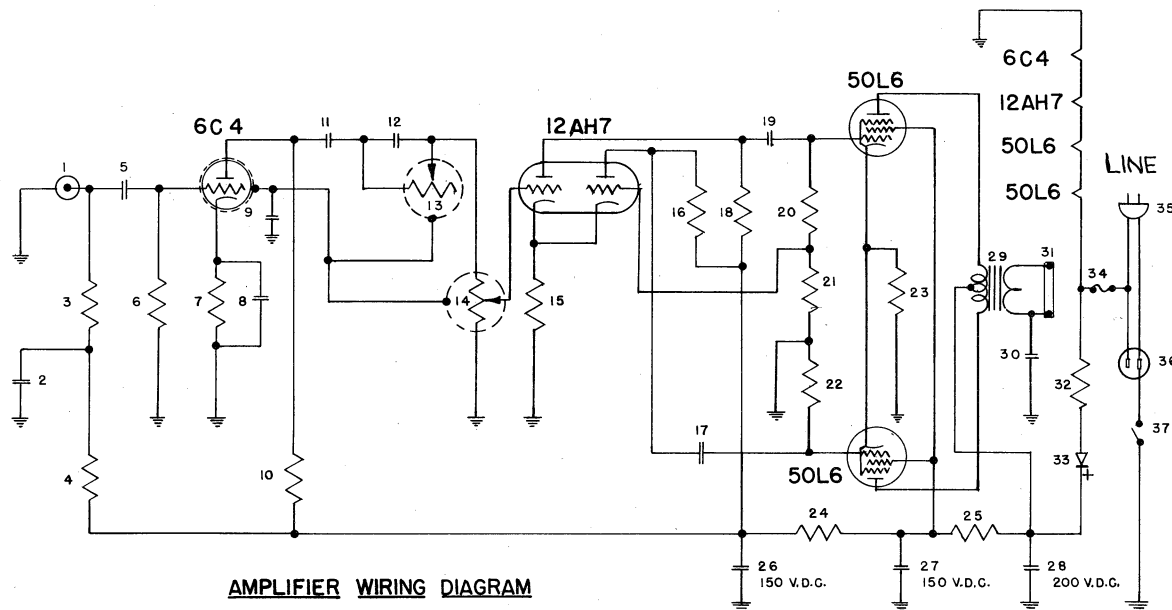


ITEM	V.A.C. PART	ELECTRICAL RATING
1	18643	P.E.C. NOT INCLUDED
2	20717-A	COAX. CABLE
3	19218	90 VDC PHOTO CELL
4	19819	450 VDC
5	19210	1/2 WATT
6	19818	1/2 WATT
7	18628	1/2 WATT
8	15069	1/2 WATT
9	18615	1/2 WATT
10	23148	10 AMP. 125 VOLT
11	23330	1/2 WATT
12	19719	1/3 WATT
13	18626	400 VDC
14	18618	1/2 WATT
15	25050	50 VDC
16	25021	400 VDC
17	18621	1/2 WATT
18	15076	PEAKING CHOKE D.C. RESISTANCE 300~
19	15068	1/2 WATT
20	18670	1/2 WATT
21	18622	1/2 WATT
22	18652	1/3 WATT
23	15077	BASS CHOKE D.C. RESISTANCE 200~
24	25126	1/2 WATT
25	15072	200 VDC
26	18661	600 VDC
27	18635	1/3 WATT
28	18631	600 VDC
29	23127	1/3 WATT
30	23277	500 VDC
31	19635	10 WATT
32	19934	1/2 WATT
33	19722	10 WATT
34	15120	6600 P TO P (PRI) 500 OHM LINE (SEC) 450 VDC
35	19675	5 WATT
36	19668	5 WATT
37	23134	D.C. RESISTANCE 175~
38	20629	50-60 CYCLE
39	18641	6 AMP. 125 VOLT
40	19845	2 AMP.
41	19978	3 AMP. 125 VOLT
42	PART OF 18852	15 AMP. 125 VOLT
43	20169	15 AMP. 125 VOLT
44	19747	15 AMP. 125 VOLT
45	17192	15 AMP. 125 VOLT
46	PROJ. LAMP	750-1000 WATT 100-120 VOLT
47	25127	200 VDC
48	18640	6 AMP. 125 VOLT
49	11026	3 AMP. 125 VOLT
50	20257	WIRE WOUND 30 WATT
51	19685	20628
52	19299	6.5 AMP. 5 VOLT
53	28130	.15 AMP. 5 VOLT
54	15061	0-500-1000-1500-2000 (PRI) 8 OHM (SEC)
55	15064	
56	25030	
57	19717	
58	19718	
59	25096	
60	25066	75 FT.
61	26146-A	
62	65J7	
63	65N7-GT	
64	6L6-G	
65	5U4-G	
66		
67		

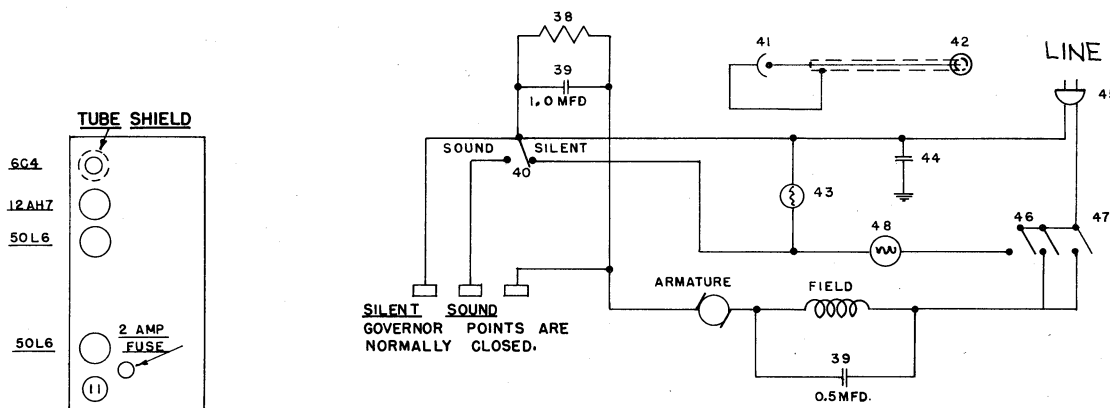


WIRING DIAGRAM	MODEL 55
VICTOR ANIMATOGRAPH	CORP.
DAVENPORT, IOWA	U. S. A
PART NO. 23370	ISSUE 1

PART NUMBER		ISSUE	
26502		2	
DR. BY	DATE	CK. BY	
HUCK	5-12-53		
CHANGE NO.	BY	DATE	
10641	RB	2-14-69	



AMPLIFIER WIRING DIAGRAM



PROJECTOR WIRING DIAGRAM

AMPLIFIER TUBE LAYOUT

NOTE: PROJECTOR MECHANISM TO BE GROUNDED  
TO PROJECTOR CASE.

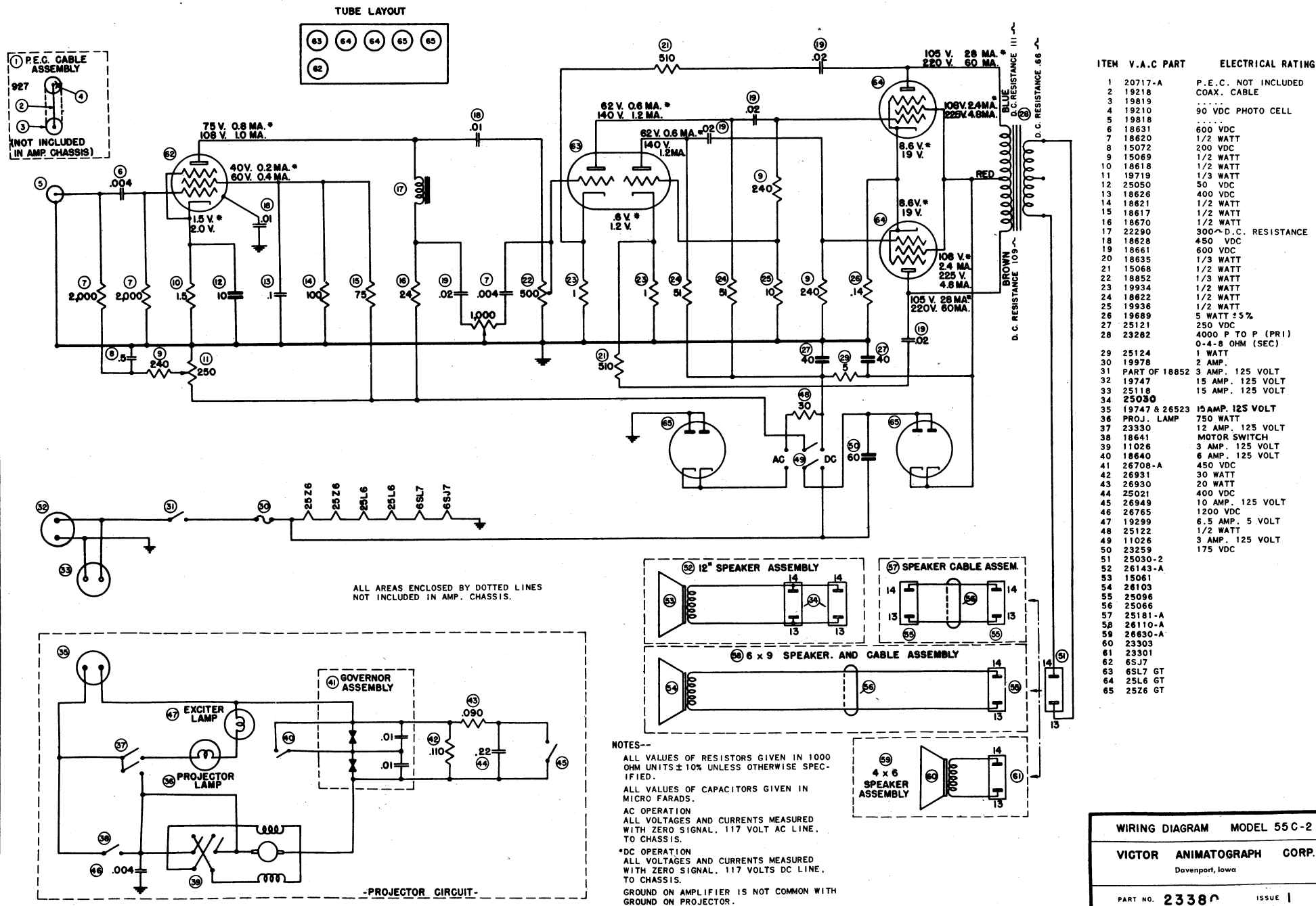
1. 26562 P.C. CELL SOCKET
2. 18626 CAP. 0.1 MFD. 400 V.D.C.
3. 18620 RESISTOR 2 MEG. 1/2 WATT
4. 15069 RESISTOR 240K 1/2 WATT
5. 18631 CAP. 0.004 MFD. 600 V.D.C.
6. 18620 RESISTOR 2 MEG. 1/2 WATT
7. 19666 RESISTOR 5.1K 1/2 WATT
8. 25050 CAP. 10 MFD. 50W.V.D.C.
9. 18631 CAP. 0.004 MFD. 600 V.D.C.
10. 15069 RESISTOR 240K 1/2 WATT
11. 18628 CAP. 0.01 MFD. 450 V.D.C.
12. 23088 CAP. 0.0005 MFD. 600 V.D.C.
13. 18635 TONE CONTROL 1 MEG.
14. 18852 VOLUME CONTROL 500K
15. 18619 RESISTOR 3K 1/2 WATT
16. 15069 RESISTOR 240K 1/2 WATT
17. 18661 CAP. 0.02 MFD. 600 V.D.C.
18. 15069 RESISTOR 240K 1/2 WATT
19. 18661 CAP. 0.02 MFD. 600 V.D.C.
20. 15069 RESISTOR 240K 1/2 WATT
21. 26585 RESISTOR 22K 1/2 WATT
22. 15069 RESISTOR 240K 1/2 WATT
23. 23102 RESISTOR 75 OHM 1/2 WATT
24. 19936 RESISTOR 10K 1/2 W
25. 23115 RESISTOR 2K 5WATT
26. 23103 CAP. 40-40-40 MFD./150-150-200 V.D.C.
27. 23282 OUTPUT TRANSFORMER
28. 18631 CAP. 0.004 MFD. 600 V.D.C.
29. 25030-2 SPEAKER SOCKET
30. 23114 RESISTOR 270HM 5 WATT
31. 23113 SELENIUM RECTIFIER 150 MA.
32. 19978 FUSE - 2 AMP.
33. 26641 LINE PLUG
34. 20169 A.C. SOCKET
35. S.P.S.T SWITCH - PART OF ITEM # 14
36. 18685 RESISTOR 70 OHM 40 WATT
37. 26592 CAP. 1.0-0.5 MFD./200-200 V.D.C.
38. 26587 SWITCH, SOUND-SILENT
39. 19210 PHOTO ELECTRIC CELL
40. 19619 P.C. MALE CONNECTOR
41. 19299 EXCITER LAMP - 5 VOLT 6.5 AMP.
42. 18631 CAP. 0.004 MFD. 600 V.D.C.
43. 26613 PLUG, PROJECTOR
44. 23330 LAMP SWITCH
45. 18641 MOTOR SWITCH
46. 23330 LAMP SWITCH
47. 18641 MOTOR SWITCH
48. 23330 LAMP SWITCH

GENERAL TOLERANCES	
DEC. ±	FRACT. ±
CONCENTRICITY WITHIN	ANGLES
RUNOUT LESS THAN	T.I.R.
MAX. DEVIATION FROM STRAIGHT ±	T.I.R. AT MAX. DIA.
TREATMENT & FINISH DATA	
TOLERANCE	

MATERIAL SPECIFICATIONS	
WPS. STANDARD TOL. & SPEC. TO APPLY TO ALL PURCHASED ITEMS & MATERIAL	

SCALE	NAME WIRING DIAGRAM
	MODEL F-3-C-2
	VICTOR ANIMATOGRAPH CORP.
	Dove 2WQ
26502	NUMBER 2





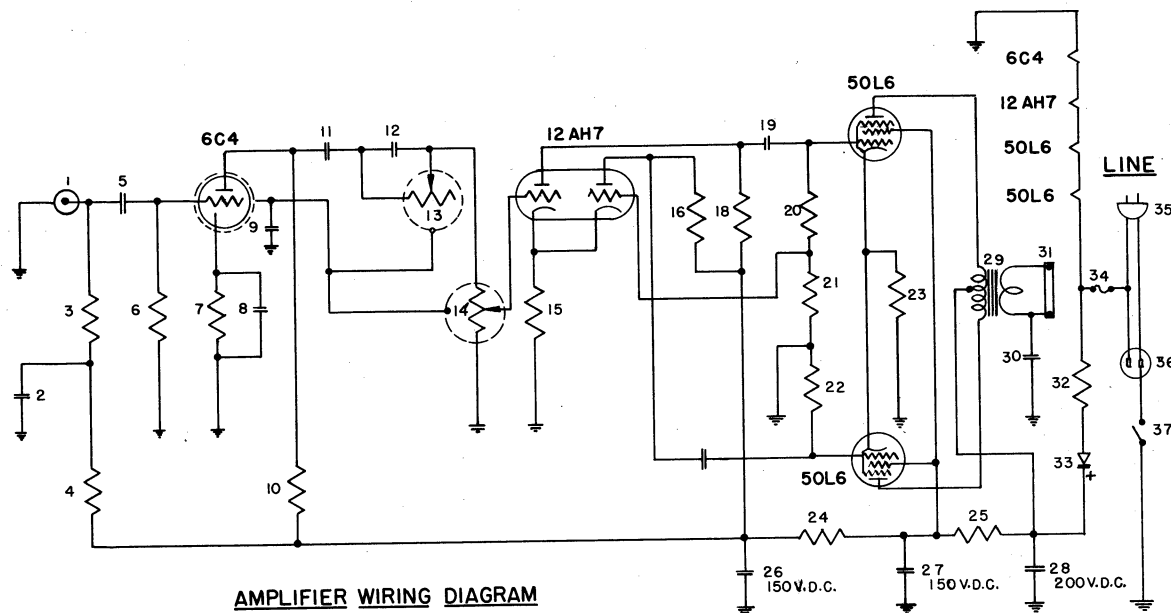
ITEM	V.A.C PART	ELECTRICAL RATING
1	20717-A	P.E.C. NOT INCLUDED
2	19218	COAX. CABLE
3	19819	.....
4	19210	90 VDC PHOTO CELL
5	19818	.....
6	18631	600 VDC
7	18620	1/2 WATT
8	15072	200 VDC
9	15069	1/2 WATT
10	18618	1/2 WATT
11	19719	1/3 WATT
12	25050	50 VDC
13	18626	400 VDC
14	18621	1/2 WATT
15	18617	1/2 WATT
16	18670	1/2 WATT
17	22290	300~D.C. RESISTANCE
18	18628	450 VDC
19	18661	600 VDC
20	18635	1/3 WATT
21	15068	1/2 WATT
22	19852	1/3 WATT
23	19934	1/2 WATT
24	18622	1/2 WATT
25	19936	1/2 WATT
26	19689	5 WATT ±5%
27	25121	250 VDC
28	23282	4000 P TO P (PRI) 0.4-8 OHM (SEC)
29	25124	1 WATT
30	19978	2 AMP
31	PART OF 18852	3 AMP. 125 VOLT
32	19747	15 AMP. 125 VOLT
33	25118	15 AMP. 125 VOLT
34	<b>25030</b>	
35	19747 & 26523	15 AMP. 125 VOLT
36	PROJ. LAMP	750 WATT
37	23330	12 AMP. 125 VOLT
38	18761	MOTOR SWITCH
39	11026	3 AMP. 125 VOLT
40	18640	6 AMP. 125 VOLT
41	26708-A	450 VDC
42	26931	30 WATT
43	26930	20 WATT
44	25021	400 VDC
45	26949	12 AMP. 125 VOLT
46	16765	1200 VDC
47	19299	6.5 AMP. 5 VOLT
48	25122	1/2 WATT
49	11026	3 AMP. 125 VOLT
50	23259	175 VDC
51	25030-2	
52	26143-A	
53	15061	
54	26103	
55	25096	
56	25066	
57	25181-A	
58	26110-A	
59	26630-A	
60	23303	
61	23301	
62	6517	
63	6517 GT	
64	2516 GT	
65	2526 GT	

WIRING DIAGRAM MODEL 55 C-2

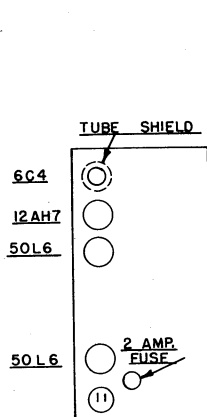
**VICTOR ANIMATOGRAPH CORP**  
Davenport, Iowa

PART NO. 23380 ISSUE 1

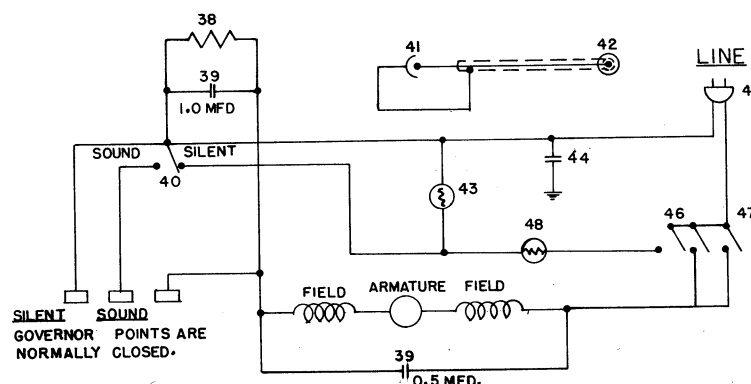
PART NUMBER		ISSUE	
26986		1	
DATE	CK. BY		
K 5-11-53			
CHANGE NO.	BY	DATE	



AMPLIFIER WIRING DIAGRAM



AMPLIFIER TUBE LAYOUT



PROJECTOR WIRING DIAGRAM

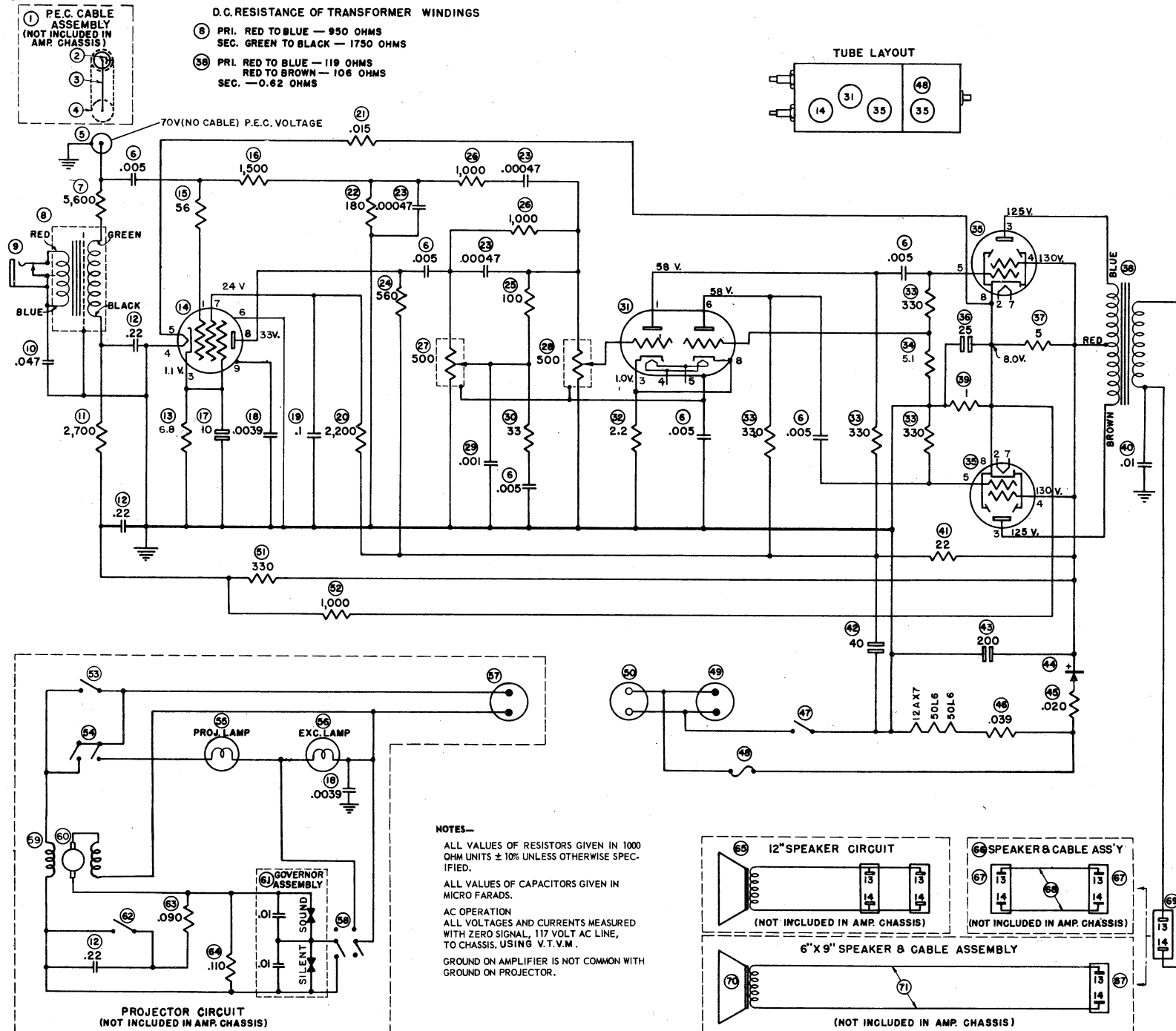
NOTE: PROJECTOR MECHANISM TO BE GROUNDED TO PROJECTOR CASE.

1. 26562 RE.CELL SOCKET
2. 18626 CAP. 0.1 MFD. 400 V.D.C.
3. 18620 RESISTOR 2 MEG. 1/2 WATT
4. 15069 RESISTOR 240K. 1/2 WATT
5. 18631 CAP. 0.004 MFD. 600V.D.C.
6. 18620 RESISTOR 2 MEG. 1/2 WATT
7. 19666 RESISTOR 5.1K 1/2 WATT
8. 25050 CAP. 10 MFD. 50WV.D.C.
9. 18631 CAP. 0.004 MFD. 600 V.D.C.
10. 15069 RESISTOR 240 K. 1/2 WATT
11. 18628 CAP. 0.01 MFD. 600 V.D.C.
12. 23088 CAP. 0.0005 MFD. 600V.D.C.
13. 18635 TONE CONTROL 1 MEG.
14. 18852 VOLUME CONTROL 500K
15. 18619 RESISTOR 3K 1/2 WATT
16. 15069 RESISTOR 240K 1/2 WATT
17. 18661 CAP. 0.02 MFD. 600 V.D.C.
18. 15069 RESISTOR 240K. 1/2 WATT
19. 18661 CAP. 0.02 MFD. 600V.D.C.
20. 15069 RESISTOR 240 K. 1/2 WATT
21. 26585 RESISTOR 22 K. 1/2 WATT
22. 15069 RESISTOR 240 K. 1/2 WATT
23. 23102 RESISTOR 75 OHM VIT. 10 WATT
24. 19936 RESISTOR 10K. 1/2 WATT
25. 23115 RESISTOR 2K. 5 WATT
26. 23103 CAP. 40-40-40MFD/150-150-200 V.D.C.
27. 23282 OUTPUT TRANSFORMER
28. 18631 CAP. 0.004 MFD. 600V.D.C.
29. 25030-2 SPEAKER SOCKET
30. 23114 RESISTOR 27 OHM 5 WATT
31. 23113 SELENIUM RECTIFIER 150 MA.
32. 19978 FUSE - 2 AMP.
33. 26641 LINE PLUG
34. 20169 A.C. SOCKET
35. 19685 S.P.S.T. SWITCH - PART OF ITEM #14
36. 26592 RESISTOR 70 OHM 40 WATT
37. 26592 CAP. 10-0.5 MFD./200-200V.D.C.
38. 26587 SWITCH, SOUND-SILENT
39. 19210 PHOTO ELECTRIC-CELL
40. 19819 P.E.C. MALE CONNECTOR
41. 19299 EXCITER LAMP - 5 VOLT 6.5 AMP.
42. 18631 CAP. 0.004 MFD. 600 V.D.C.
43. 26613 PLUG, PROJECTOR LINE
44. 23330 LAMP SWITCH
45. 18641 MOTOR SWITCH
46. 18641 PROJECTION LAMP - 750 WATT

GENERAL TOLERANCES	
DEC. ±	FRACT. ±
CONCENTRICITY WITHIN	T. I. R.
RUNOUT LESS THAN	T. I. R. AT MAX. DIA.
MAX. DEVIATION FROM STRAIGHT ±	T. I. R. AT MAX. DIA.
TREATMENT & FINISH DATA	
TOLERANCE	

MATERIAL SPECIFICATIONS	
SPR. STANDARD TOL. & SPEC. TO APPLY TO	ALL PURCHASED ITEMS & MATERIAL

SCALE	NAME	MODEL
	WIRING DIAGRAM	56-C-3
VICTOR ANIMATOGRAPH CORP.		
Davenport, Iowa		
PART NUMBER		ISSUE
26986		1



ITEM	V.A.C. PART	ELECTRICAL RATING
1	26759-A	90 V.D.C. PHOTO CELL
2	19210	COAX CABLE
3	19218	MALE CONNECTOR
4	26561 & 26646	FEMALE CONNECTOR
5	26889	450 V.D.C.
6	36227	1/2 WATT
7	36237	1/2 WATT
8	30504	400 V.D.C.
9	18643	1/2 WATT
10	36232	400 V.D.C.
11	36230	1/2 WATT
12	36228	400 V.D.C.
13	36196	1/2 WATT
14	3879	1/2 WATT
15	36235	1/2 WATT
16	36222	1/2 WATT
17	25050	50 V.D.C.
18	18631	600 V.D.C.
19	18676	400 V.D.C.
20	36239	1/2 WATT
21	36240	1 WATT
22	36241	1/2 WATT
23	36226	500 V.D.C.
24	36234	1/2 WATT
25	18621	1/2 WATT
26	18616	1/2 WATT 5%
27	26934	1/4 WATT
28	26935	1/4 WATT
29	36242	500 V.D.C.
30	36181	1/2 WATT
31	12AX7	1/2 WATT
32	36197	1/2 WATT
33	36182	1/2 WATT 5%
34	36233	1/2 WATT 5%
35	50L6	50 V.D.C.
36	36184	5 WATT
37	36198	(PRI.) 4000 P.P.
38	30502	(SEC.) 0.8
39	36186	2 WATT
40	18628	450 V.D.C.
41	36188	1 WATT
42	36189	150 V.D.C.
43	36190	150 V.D.C.
44	23113	150 M.A.
45	36199	5 WATT
46	36192	2 WATT
47	PART OF #26935	3 AMP. 125 V.
48	19978	2 AMP.
49	30541	15 AMP. 125 V.
50	20169	15 AMP. 125 V.
51	36182	1/2 WATT 5%
52	18616	1/2 WATT 5%
53	18641	6 AMP. 125 V.
54	23330	10 AMP. 125 V.
55	PROJ. LAMP	750 WATT 110 V.
56	19229	6.5 AMP. 5 V.
57	19747, 30559 & 30540	15 AMP. 125 V.
58	26587	6 AMP. 125 V.
59	30519	.....
60	26841	.....
61	26708-A	GOVERNOR ASSY.
62	26949	15 AMP. 125 V.
63	26930	20 WATT
64	26931	30 WATT
65	25166	8 OHM VOICE COIL
66	25181-A	.....
67	25096	.....
68	25066	75 FEET
69	25030-2	.....
70	26103	.....
71	25066	50 FEET

WIRING DIAGRAM MODEL 56-4

VICTOR ANIMATOGRAPH CORP.

DAVENPORT, IOWA

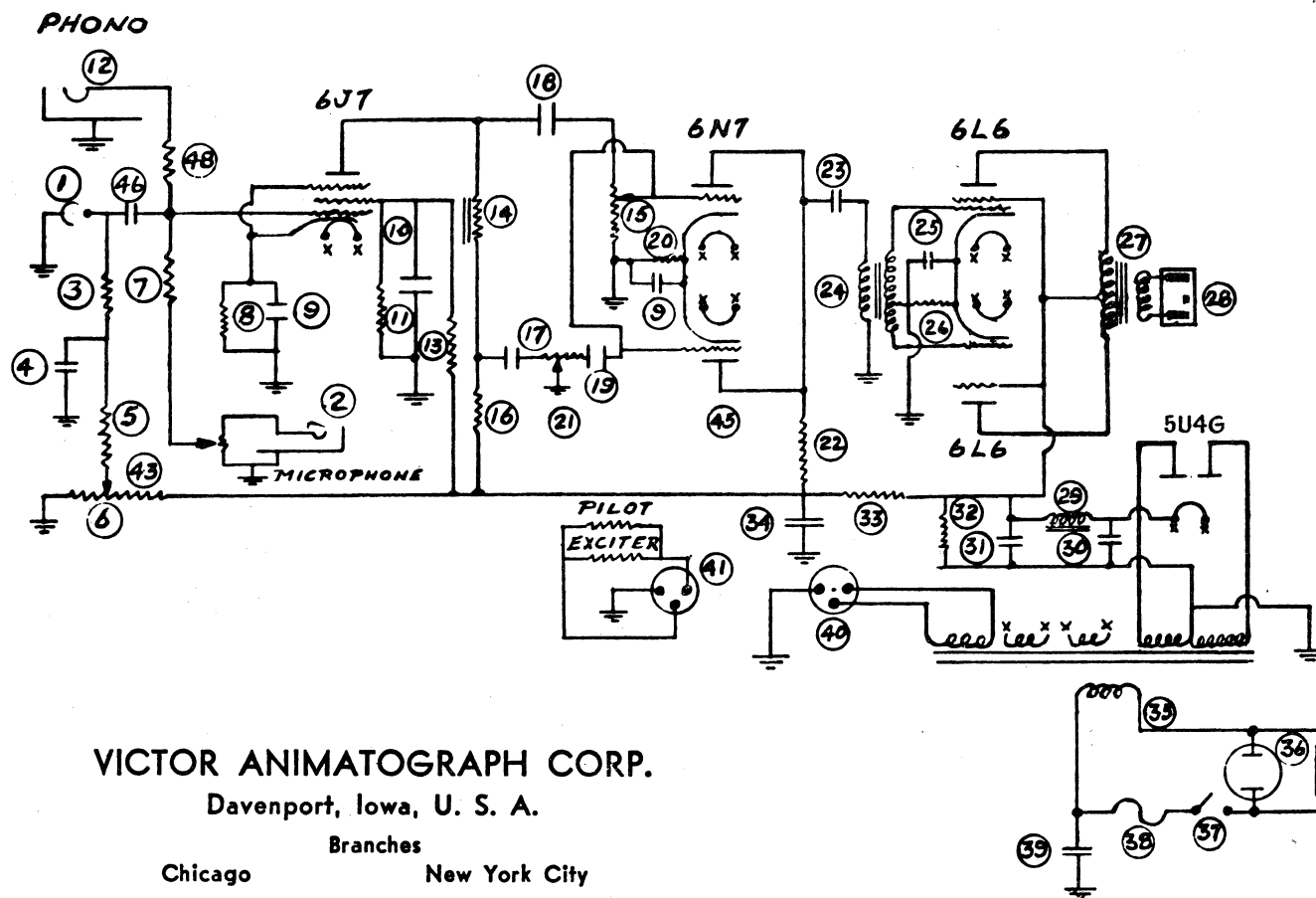
U. S. A.

PART NO. 30416

ISSUE 2

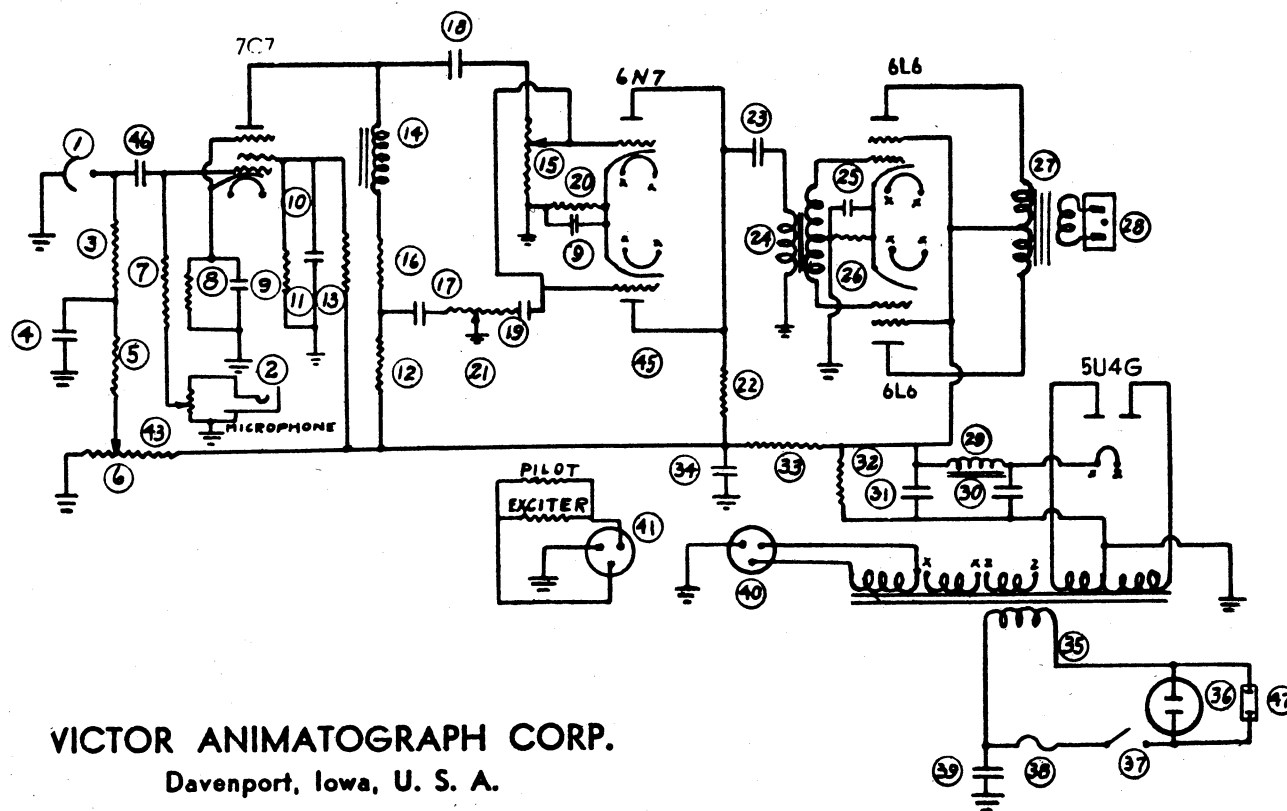


## MODEL 40B AMPLIFIER WIRING DIAGRAM



- |    |       |   |
|----|-------|---|
| 1  | 19210 | P. E. Cell                              |
| 2  | 18643 | Micro Jack                              |
| 3  | 18615 | Resistor 5.1 Meg $\frac{1}{2}$ Watt     |
| 4  | 18626 | Condenser .1 Mfd 400 VDC.               |
| 5  | 18616 | Resistor 1 Meg $\frac{1}{2}$ Watt       |
| 6  | 19719 | P. E. Cell Control $\frac{1}{4}$ Meg    |
| 7  | 18620 | Resistor 2 Meg $\frac{1}{2}$ Watt       |
| 8  | 18618 | Resistor 1500 Ohms $\frac{1}{2}$ W.     |
| 9  | 25050 | Condenser 10 Mfd 50 W.VDC.              |
| 10 | 18621 | Resistor 100,000 Ohm $\frac{1}{2}$ W.   |
| 11 | 25021 | Condenser .22 Mfd 400 W.VDC.            |
| 12 | 18643 | Phono. Jack                             |
| 13 | 15069 | Resistor 240,000 Ohms $\frac{1}{2}$ W.  |
| 14 | 15076 | Plate Choke                             |
| 15 | 18852 | Volume Control $\frac{1}{2}$ Meg        |
| 16 | 18617 | Resistor 75,000 Ohms $\frac{1}{2}$ W.   |
| 17 | 25021 | Condenser .22 Mfd 400 W.VDC.            |
| 18 | 18628 | Condenser .01 Mfd                       |
| 19 | 18631 | Condenser .004 Mfd 600 W.VDC.           |
| 20 | 19934 | Resistor 1,000 Ohms $\frac{1}{2}$ Watt  |
| 21 | 18635 | Tone Control 1 Meg                      |
| 22 | 18617 | Resistor 75,000 Ohms $\frac{1}{2}$ Watt |
| 23 | 18626 | Condenser .1 Mfd 400 W.VDC.             |
| 24 | 15078 | Input Transformer                       |
| 25 | 25050 | Condenser 10 Mfd 50 W.VDC.              |
| 26 | 19722 | Resistor 200 Ohm 10 Watt                |
| 27 | 15120 | Output Transformer                      |
| 28 | 25030 | Speaker Socket                          |
| 29 | 18732 | Filter Choke 200 Ohm                    |
| 30 | 23277 | Filter Condenser 16 Mfd 500 W. V.       |
| 31 | 23277 | Filter Condenser 16 Mfd 500 W.V.        |
| 32 | 19635 | Resistor 30,000 Ohms 10 Watt            |
| 33 | 19668 | Resistor 10,000 Ohms 5 Watt             |
| 34 | 19675 | Condenser 8 Mfd 450 W.VDC.              |
| 35 | 19845 | Power Transformer                       |
| 36 | 19747 | AC Receptacle                           |
| 37 | 18852 | Power Switch Part Of                    |
| 38 | 19978 | Fuse 2 Amp.                             |
| 39 | 18661 | Condenser .02 Mfd 600 W.VDC.            |
| 40 |       | Exciter Lamp Connector Socket           |
|    | 19644 | 3 Contact Round                         |
|    | 20619 | 4 Contact Round                         |
|    | 20629 | 3 & 4 Contact Rectangular               |
| 41 |       | Exciter Lamp Plug Attached to Proj.     |
|    | 19643 | 3 Contact Round                         |
|    | 20618 | 4 Contact Round                         |
|    | 20628 | 3 & 4 Contact Rectangular               |
| 42 |       |   |
| 43 | 18634 | Microphone Control $\frac{1}{2}$ Meg    |
| 44 |       |   |
| 45 | 18620 | Resistor 2 Meg $\frac{1}{2}$ Watt       |
| 46 | 18628 | Condenser .01 Mfd                       |
| 47 | 20169 | Projector Power Socket                  |
| 48 | 18615 | Resistor 5.1 Meg $\frac{1}{2}$ Watt     |

# MODEL 40BX AMPLIFIER WIRING DIAGRAM



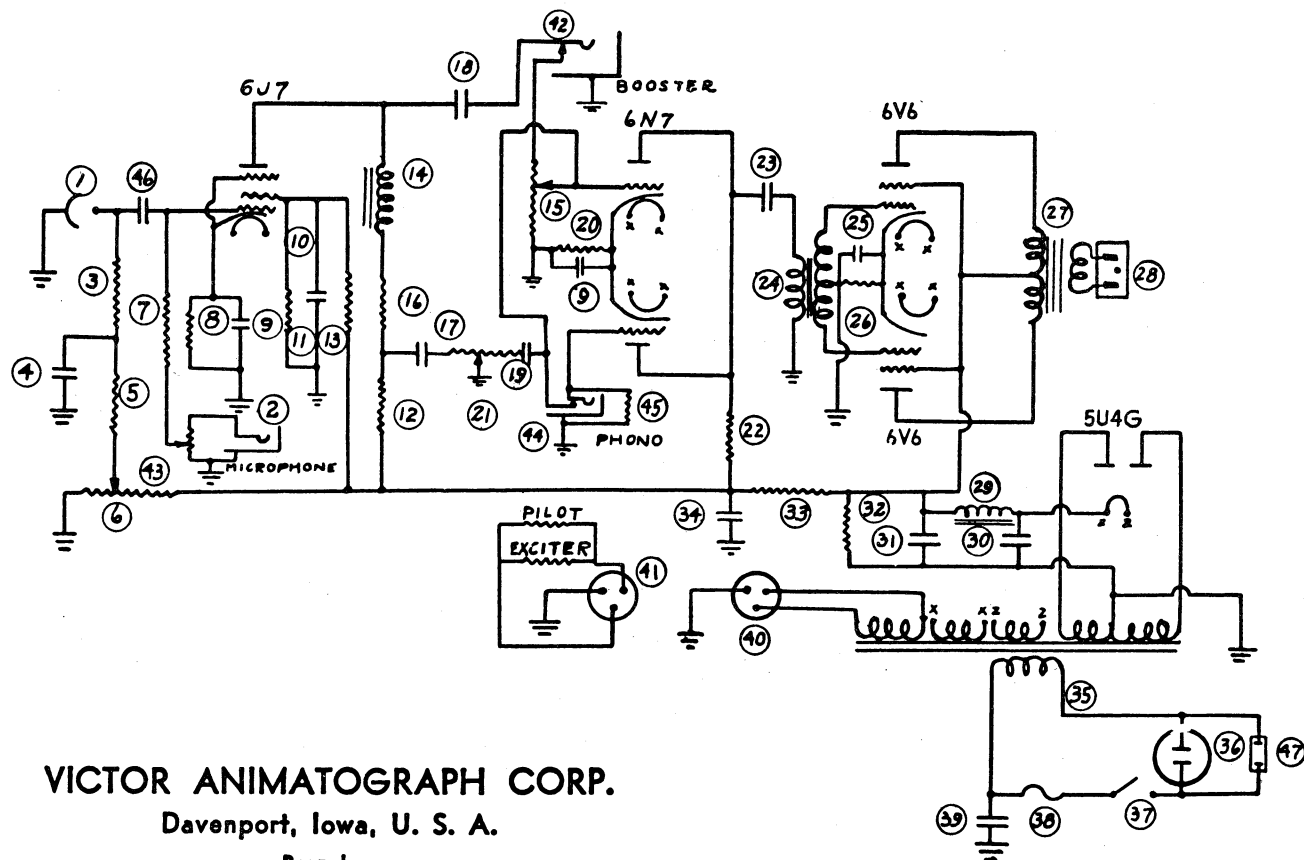
VICTOR ANIMATOGRAPH CORP.

Davenport, Iowa, U. S. A.

Chicago Branches New York City

- |    |       |                                     |
|----|-------|-------------------------------------|
| 1  | 19210 | P. E. Cell                          |
| 2  | 18643 | Micro Jack                          |
| 3  | 18615 | Resistor 5.1 Meg 1/2 Watt           |
| 4  | 18626 | Condenser .1 Mfd 400 VDC.           |
| 5  | 18616 | Resistor 1 Meg 1/2 Watt             |
| 6  | 19719 | P. E. Cell Control 1/4 Meg          |
| 7  | 18620 | Resistor 2 Meg 1/2 Watt             |
| 8  | 18618 | Resistor 1500 Ohms 1/2 W.           |
| 9  | 25050 | Condenser 10 Mfd 50 W.VDC.          |
| 10 | 18621 | Resistor 100,000 Ohm 1/2 W.         |
| 11 | 25021 | Condenser .22 Mfd 400 W.VDC.        |
| 12 | 18622 | Resistor 51,000 Ohms 1/2 Watt       |
| 13 | 18617 | Resistor 75,000 Ohms 1/2 Watt       |
| 14 | 15076 | Plate Choke                         |
| 15 | 18852 | Volume Control 1/2 Meg              |
| 16 | 18670 | Resistor 24,000 Ohms 1/2 Watt       |
| 17 | 25021 | Condenser .22 Mfd 400 W.VDC.        |
| 18 | 18628 | Condenser .01 Mfd                   |
| 19 | 18631 | Condenser .004 Mfd 600 W.VDC.       |
| 20 | 19934 | Resistor 1,000 Ohms 1/2 Watt        |
| 21 | 18635 | Tone Control 1 Meg                  |
| 22 | 18617 | Resistor 75,000 Ohms 1/2 Watt       |
| 23 | 18626 | Condenser .1 Mfd 400 W.VDC.         |
| 24 | 15078 | Input Transformer                   |
| 25 | 25050 | Condenser 10 Mfd 50 W.VDC.          |
| 26 | 19722 | Resistor 200 Ohm 10 Watt            |
| 27 | 15120 | Output Transformer                  |
| 28 | 25030 | Speaker Socket                      |
| 29 | 18732 | Filter Choke 200 Ohm                |
| 30 | 23277 | Filter Condenser 16 Mfd 500 W. V.   |
| 31 | 23277 | Filter Condenser 16 Mfd 500 W.V.    |
| 32 | 19635 | Resistor 30,000 Ohms 10 Watt        |
| 33 | 19668 | Resistor 10,000 Ohms 5 Watt         |
| 34 | 19675 | Condenser 8 Mfd 450 W.VDC.          |
| 35 | 19845 | Power Transformer                   |
| 36 | 19747 | AC Receptacle                       |
| 37 | 18852 | Power Switch Part Of                |
| 38 | 19978 | Fuse 2 Amp.                         |
| 39 | 18661 | Condenser .02 Mfd 600 W.VDC.        |
| 40 |       | Exciter Lamp Connector Socket       |
|    | 19644 | 3 Contact Round                     |
|    | 20619 | 4 Contact Round                     |
|    | 20629 | 3 & 4 Contact Rectangular           |
| 41 |       | Exciter Lamp Plug Attached to Proj. |
|    | 19643 | 3 Contact Round                     |
|    | 20618 | 4 Contact Round                     |
|    | 20628 | 3 & 4 Contact Rectangular           |
| 42 |       |                                     |
| 43 | 18634 | Microphone Control 1/2 Meg          |
| 44 |       |                                     |
| 45 | 18620 | Resistor 2 Meg 1/2 Watt             |
| 46 | 18628 | Condenser .01 Mfd                   |
| 47 | 20169 | Projector Power Socket              |
| 48 | 18615 | Resistor 5.1 Meg 1/2 W.             |

# MODEL 40A AMPLIFIER WIRING DIAGRAM



VICTOR ANIMATOGRAPH CORP.

Davenport, Iowa, U. S. A.

Chicago Branches New York City

- |    |       |                                     |
|----|-------|-------------------------------------|
| 1  | 19210 | P. E. Cell                          |
| 2  | 18643 | Micro Jack                          |
| 3  | 18615 | Resistor 5.1 Meg 1/2 Watt           |
| 4  | 18626 | Condenser .1 Mfd 400 VDC.           |
| 5  | 18616 | Resistor 1 Meg 1/2 Watt             |
| 6  | 19719 | P. E. Cell Control 1/4 Meg          |
| 7  | 18620 | Resistor 2 Meg 1/2 Watt             |
| 8  | 18618 | Resistor 1500 Ohms 1/2 W.           |
| 9  | 25050 | Condenser 10 Mfd 50 W.VDC.          |
| 10 | 18621 | Resistor 100,000 Ohm 1/2 W.         |
| 11 | 25021 | Condenser .22 Mfd 400 W.VDC.        |
| 12 | 18622 | Resistor 51,000 Ohms 1/2 Watt       |
| 13 | 18617 | Resistor 75,000 Ohms 1/2 Watt       |
| 14 | 15076 | Plate Choke                         |
| 15 | 18852 | Volume Control 1/2 Meg              |
| 16 | 18670 | Resistor 24,000 Ohms 1/2 Watt       |
| 17 | 25021 | Condenser .22 Mfd 400 W.VDC.        |
| 18 | 18628 | Condenser .01 Mfd                   |
| 19 | 18631 | Condenser .004 Mfd 600 W.VDC.       |
| 20 | 19934 | Resistor 1,000 Ohms 1/2 Watt        |
| 21 | 18635 | Tone Control 1 Meg                  |
| 22 | 18617 | Resistor 75,000 Ohms 1/2 Watt       |
| 23 | 18626 | Condenser .1 Mfd 400 W.VDC.         |
| 24 | 15078 | Input Transformer                   |
| 25 | 25050 | Condenser 10 Mfd 50 W.VDC.          |
| 26 | 19722 | Resistor 200 Ohm 10 Watt            |
| 27 | 15120 | Output Transformer                  |
| 28 | 25030 | Speaker Socket                      |
| 29 | 18732 | Filter Choke 200 Ohm                |
| 30 | 23277 | Filter Condenser 16 Mfd 500 W. V.   |
| 31 | 23277 | Filter Condenser 16 Mfd 500 W.V.    |
| 32 | 19635 | Resistor 30,000 Ohms 10 Watt        |
| 33 | 19668 | Resistor 10,000 Ohms 5 Watt         |
| 34 | 19675 | Condenser 8 Mfd 450 W.VDC.          |
| 35 | 19745 | Power Transformer                   |
| 36 | 19747 | AC Receptacle                       |
| 37 | 18852 | Power Switch Part Of                |
| 38 | 19978 | Fuse 2 Amp.                         |
| 39 | 18661 | Condenser .02 Mfd 600 W.VDC.        |
| 40 |       | Exciter Lamp Connector Socket       |
|    | 19644 | 3 Contact Round                     |
|    | 20619 | 4 Contact Round                     |
|    | 20629 | 3 & 4 Contact Rectangular           |
| 41 |       | Exciter Lamp Plug Attached to Proj. |
|    | 19643 | 3 Contact Round                     |
|    | 20618 | 4 Contact Round                     |
|    | 20628 | 3 & 4 Contact Rectangular           |
| 42 | 18643 | Booster Jack                        |
| 43 | 18634 | Microphone Control 1/2 Meg          |
| 44 | 18643 | Microphone Jack                     |
| 45 | 18620 | Resistor 2 Meg 1/2 Watt             |
| 46 | 18628 | Condenser .01 Mfd                   |
| 47 | 20169 | Projector Power Socket              |
| 48 | 18615 | Resistor 5.1 Meg 1/2 Watt           |

**PROJECTOR  
CASE  
MODEL 60-25**

USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	23197	Case catch			2	2	2	2	2	2	2	2	2
2	36037	Case emblem					1	1	1	1	1	1	1
3	30402-A	Projector case less liftopt*											1
4	36031-A	Liftopt											1
5	26141	Handle					1	1	1	1	1	1	1

\*No. 30402-A Metal case is interchangeable with 36033-A (below).

**PROJECTOR  
CASE  
WOOD  
MODEL 60-25  
Not Available**

USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	36033-A	Projector case with liftopt*								1			1

\*No. 1, 36033-A Wood case is replaced by 30402-A metal case.

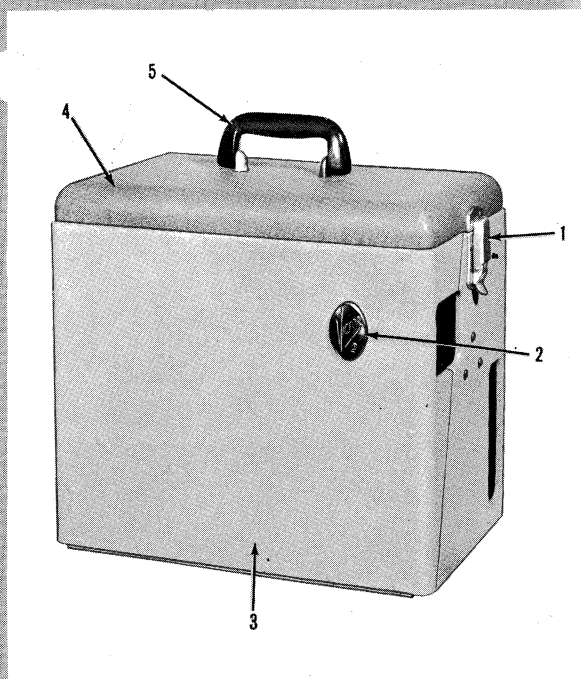
**PROJECTOR  
CASE AND  
J4B  
SPEAKER  
CASE**

**MODELS 60-4  
AND 60-10**

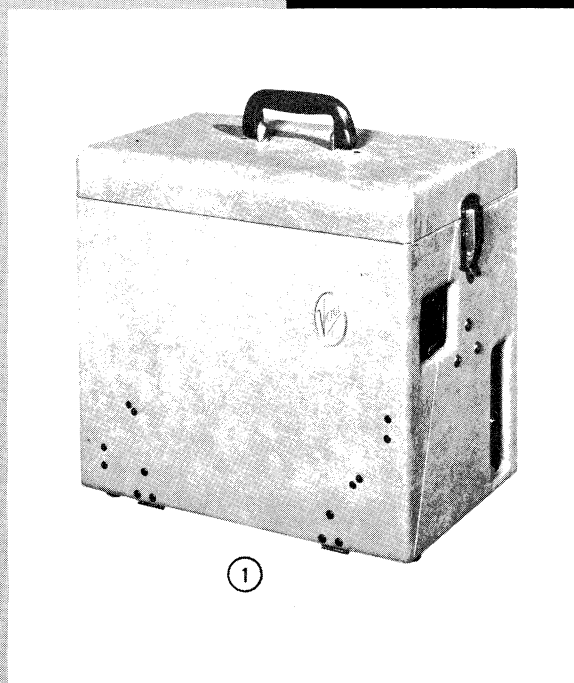
USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	36031-AT	Liftopt											
2	26100-3-R	J4B speaker case					1	1			1	1	
3	36037	Case emblem					1	1	1	1	1	1	1
4	30361-AT	Projector case assembly									1	1	
5	26141	Handle					1	1	1	1	1	1	1

**PROJECTOR  
CASE  
MODEL 60-B**

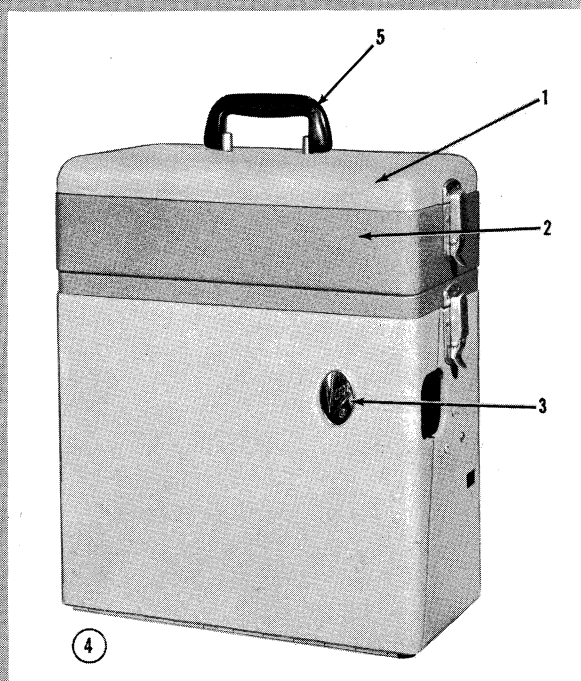
USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	26019-A	Case handle					1		1				
2	26021	Case handle post					2		2				
3	23190-5	Early Model 60-B without clips in door								1			



**PROJECTOR  
CASE  
MODEL 60-25**

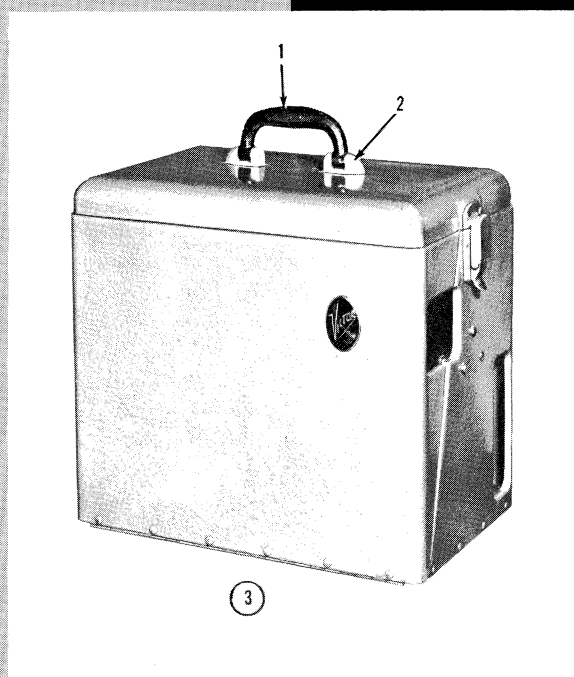


**PROJECTOR  
CASE  
WOOD  
MODEL 60-25  
Not Available**



**PROJECTOR  
CASE AND  
J4B  
SPEAKER  
CASE**

**MODELS 60-4  
AND 60-10**



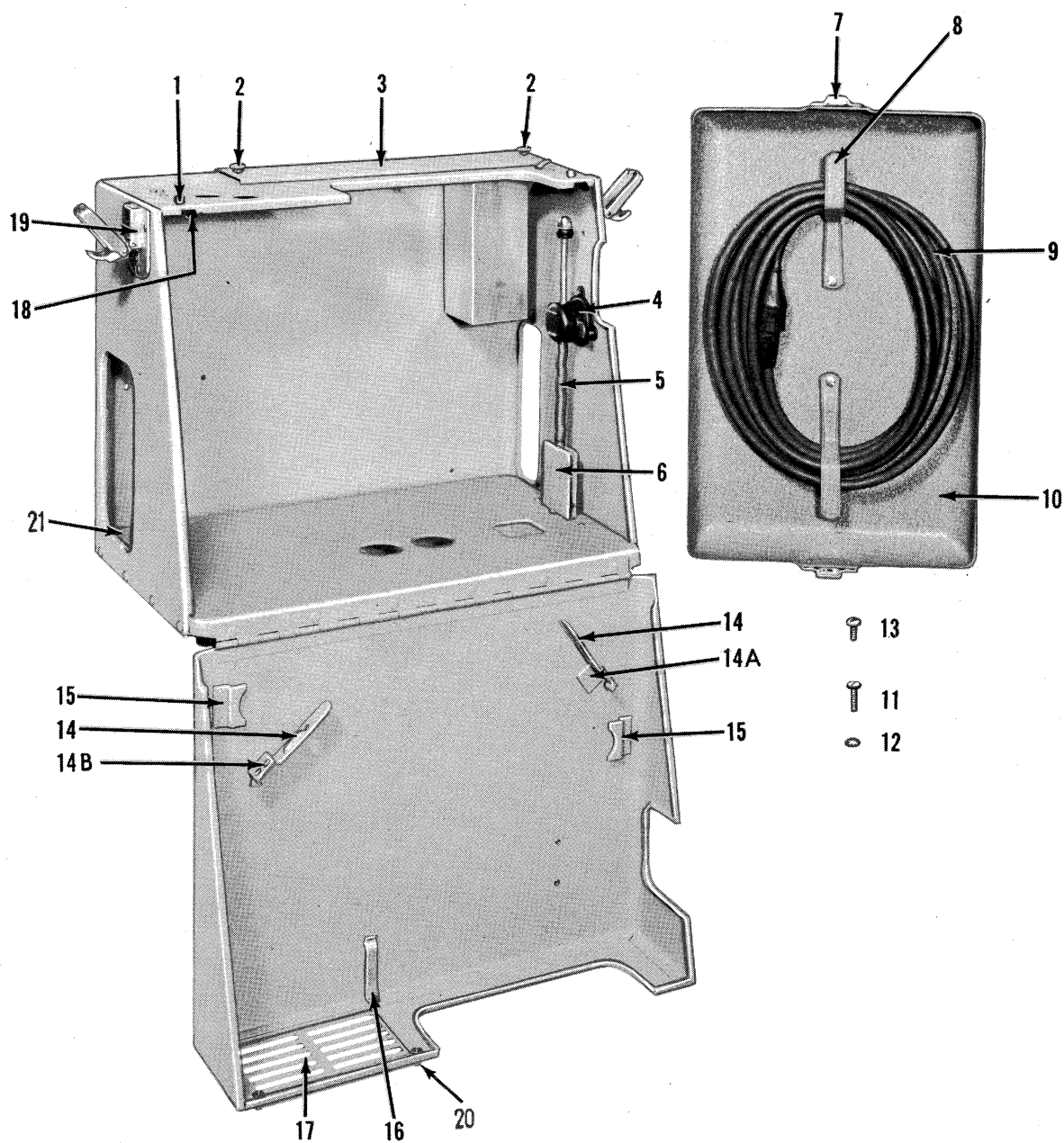
**PROJECTOR  
CASE  
MODEL 60-B**

**PROJECTOR  
CASE  
MODELS 60-2  
AND 60-25**

USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	23196	Case release button					1	1	2	2	1	1	2
2	23367	Tube grille thumb screw							2	2			2
3	26939-AT	Tube grille								1			1
4	22332-A	Case tilt cup assembly					1	1	1	1	1	1	1
5	22338-55	Tilt spring*					1	1	1	1	1	1	1
6	22269-50A	Tilt foot assembly					1	1	1	1	1	1	1
7	23198	Case catch			2	2	2	2	2	2	2	2	2
8	23371	AC cord bracket					2	2	2	2	2	2	2
9	20632	12' AC cord			1	1	1	1	1	1	1	1	1
10	36030-A	Liftop											1
11		8/32 x 3/4 T.H. mounting screw for amplifier					4	4	4	4	4	4	4
12		#8 shakeproof washer					4	4	4	4	4	4	4
13		8/32 x 1/2 Amplifier mounting screw							4	8			8
14	30356	Reel arm clip spring					2	2		2	2	2	2
14-A	30419-A	Bracket and clip spring assembly					1	1		1	1	1	1
14-B	30357-A	Bracket and clip spring assembly					1	1		1	1	1	1
15	30256	Reel arm holder					2	2		2	2	2	2
16	23143	Instruction card clip					1	1	1	1	1	1	1
17	23201-T	Lamp house grille					1	1	1	1	1	1	1
18	23200	Case door catch					1	1	2	2	1	1	2
19	23197	Case catch			2	2	2	2	2	2	2	2	2
20	23208	Grille spacer					4	4	4	4	4	4	4
21	23199	Case foot nut					1	1	1	1	1	1	1
22	17189	Attachment plug (female)			1	1	1	1	1	1	1	1	1
23	17191	Attachment plug (male) (replacement)			1	1	1	1	1	1	1	1	1
	23111	Rubber foot screw (not shown)					2	2	2	2	2	2	2

\*Tilt breakdown on page 123.





**PROJECTOR  
CASE  
MODELS 60-2  
AND 60-25**



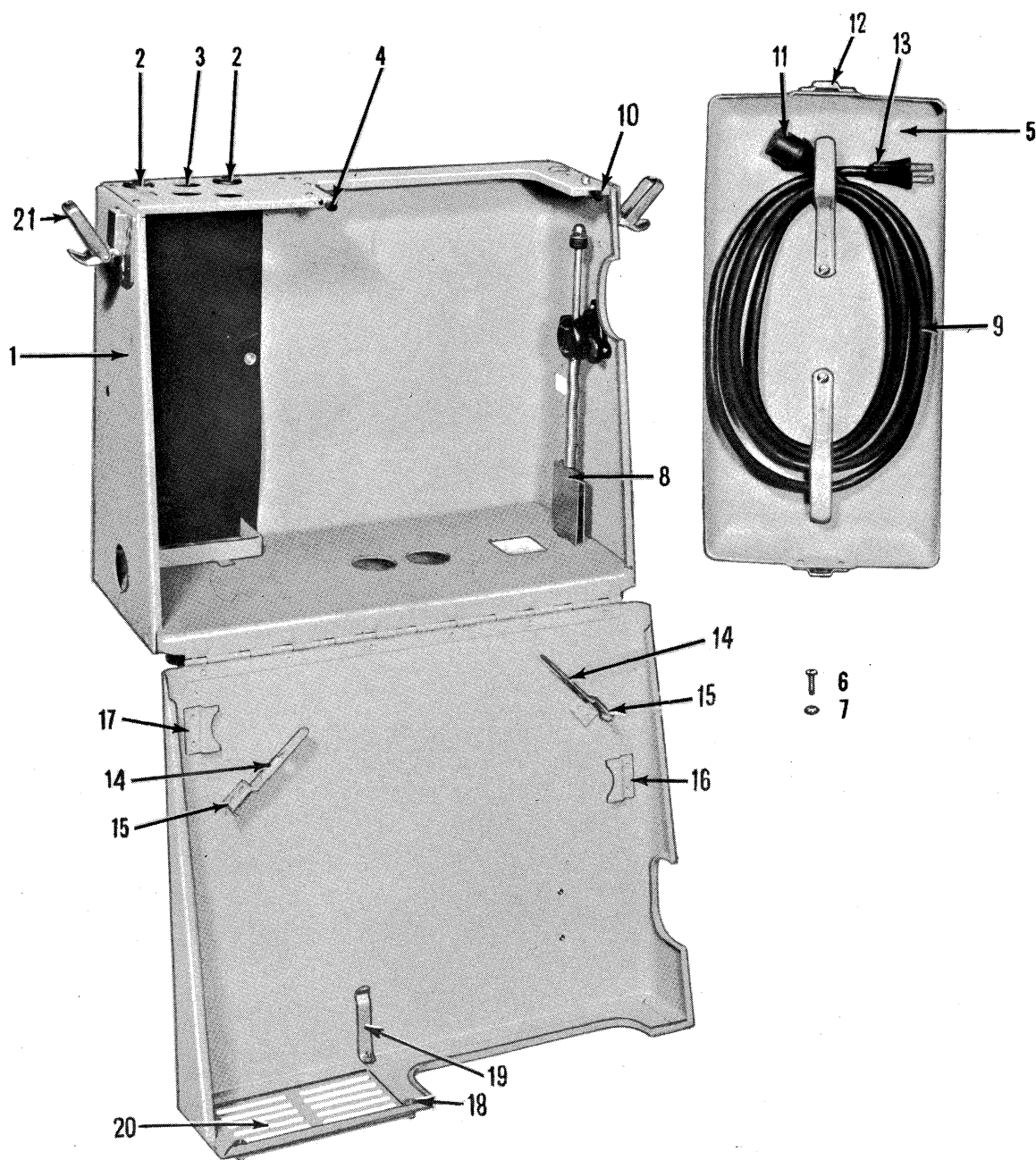
**PROJECTOR  
CASE AND  
LIFTOP  
MODELS 60-4  
AND 60-10,  
55 AND 56**

USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	30361-AT	Case assembly*					1	1			1	1	
2	1111	Case amplifier top plate grommet					2	2			2	2	
3	30533-T	Case amplifier top plate									1	1	
4	23200	Case door catch					1	1			1	1	
5	36031-AT	Case liftop					1	1			1	1	
6		8/32 x 3/4 Oven H. projector head case mounting screw					4	4	4	4	4	4	4
7		#8 Projector head case mounting shakeproof lock washer					4	4	4	4	4	4	4
8	22269-50A	Tilt foot assembly					1	1	1	1	1	1	1
9	20632	Attachment cord			1	1	1	1	1	1	1	1	1
10	23205	Projector case door catches					1	1	2	2	1	1	2
11	17189	Attachment plug (female)			1	1	1	1	1	1	1	1	1
12	23198	Case catch			2	2	2	2	2	2	2	2	
13	17191	Attachment plug (male) (replacement)			1	1	1	1	1	1	1	1	1
14	30386	Reel arm clip spring					2	2		2	2	2	2
15	30419-A	Bracket & clip spring assy.					1	1		1	1	1	1
16	30256	Reel arm holder					2	2		2	2	2	2
16-A	30357-A	Bracket & clip spring assy.					1	1		1	1	1	1
18	23208	Grille spacer					4	4	4	4	4	4	4
19	23143	Instruction card clip					1	1	1	1	1	1	1
20	23201-T	Lamp house grille					1	1	1	1	1	1	1
21	23197	Case catch			2	2	2	2	2	2	2	2	2
	23111	Rubber foot screw (not shown)					2	2	2	2	2	2	2

Tilt breakdown on page 123.

Reel arm holders on page 115.

\*When ordering No. 1, 30361-AT, specify if for models 55 or 56.

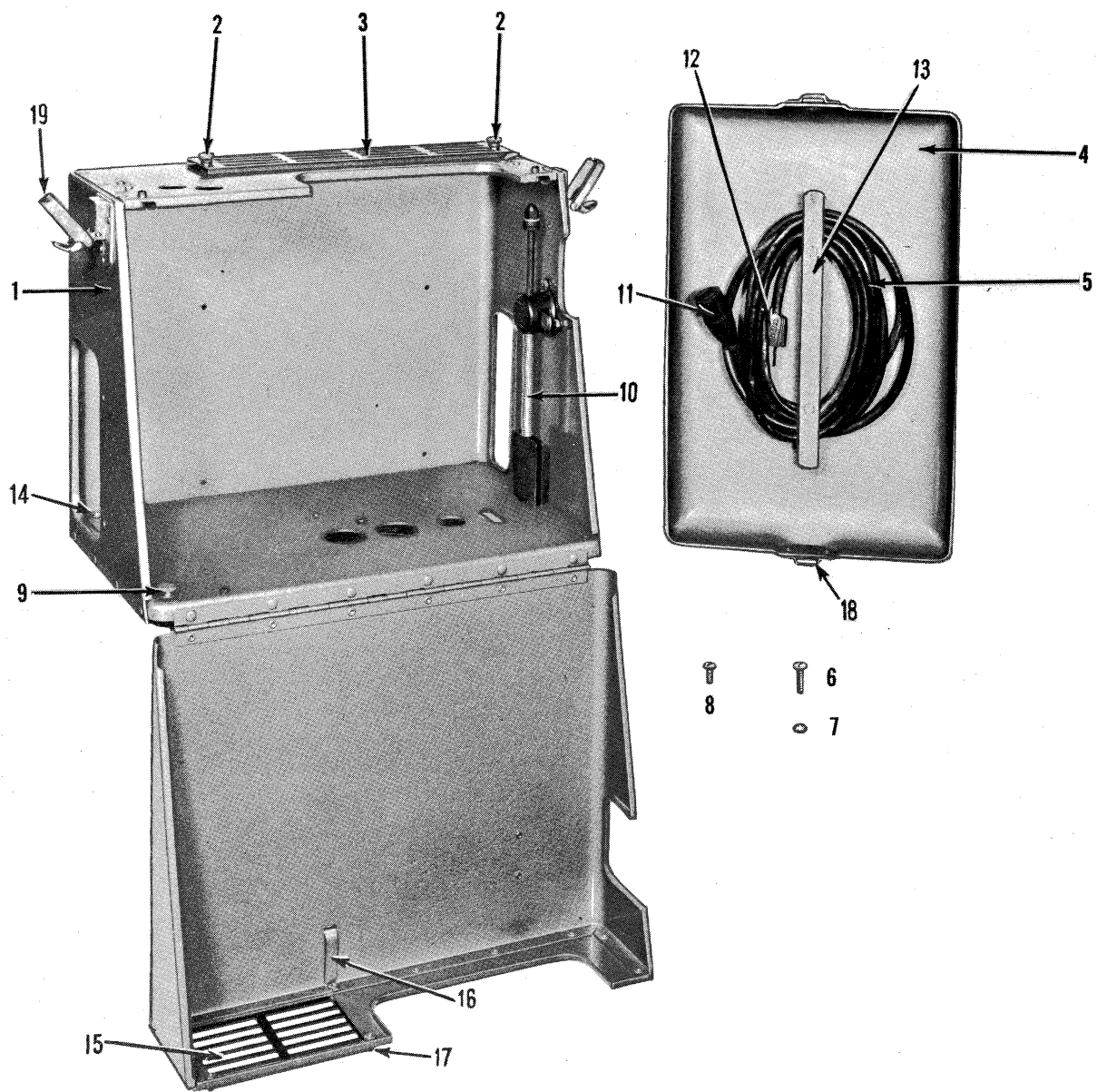


**PROJECTOR  
CASE AND  
LIFTTOP  
MODELS 60-4  
AND 60-10**

**PROJECTOR  
CASE  
MODEL 60-B**

No.	Part No.	Part Name	Page	G	40-A	USED ON MODELS								
						40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25	
1	23190-5	Projector case							1					
2	23203	Tube grille retainer thumb screw							2					
3	23202	Tube cover grille							1					
4	23195-A	Case liftopt							1					
5	20632	12' AC power cord (standard)			1	1	1	1	1	1	1	1	1	
6		8/32 x 3/4 Oven H. projector head case mounting screw					4	4	4	4	4	4	4	
7		#8 Projector head case mounting shakeproof lock washer					4	4	4	4	4	4	4	
8		8/32 x 1/2 Oven H. amplifier case mounting screw							6	8			8	
9	23189	Case adjusting foot sleeve					1		1					
10	22269-50A	Tilt foot assembly					1	1	1	1	1	1		
11	17189	Attachment plug (female)			1	1	1	1	1	1	1	1	1	
12	17191	Attachment plug (male) (replacement)			1	1	1	1	1	1	1	1	1	
13	23371	Power cord bracket for liftopt					1		1					
14	23199	Case foot nut					1	1	1	1	1	1	1	
15	23201-T	Lamp house grille					1	1	1	1	1	1	1	
16	23143	Instruction card clip					1	1	1	1	1	1	1	
17	23208	Grille spacer					4	4	4	4	4	4	4	
18	23198	Case catch			2	2	2	2	2	2	2	2	2	
19	23197	Case catch			2	2	2	2	2	2	2	2	2	
	23111	Rubber foot screw (not shown)					2	2	2	2	2	2	2	

Tilt breakdown on page 123.



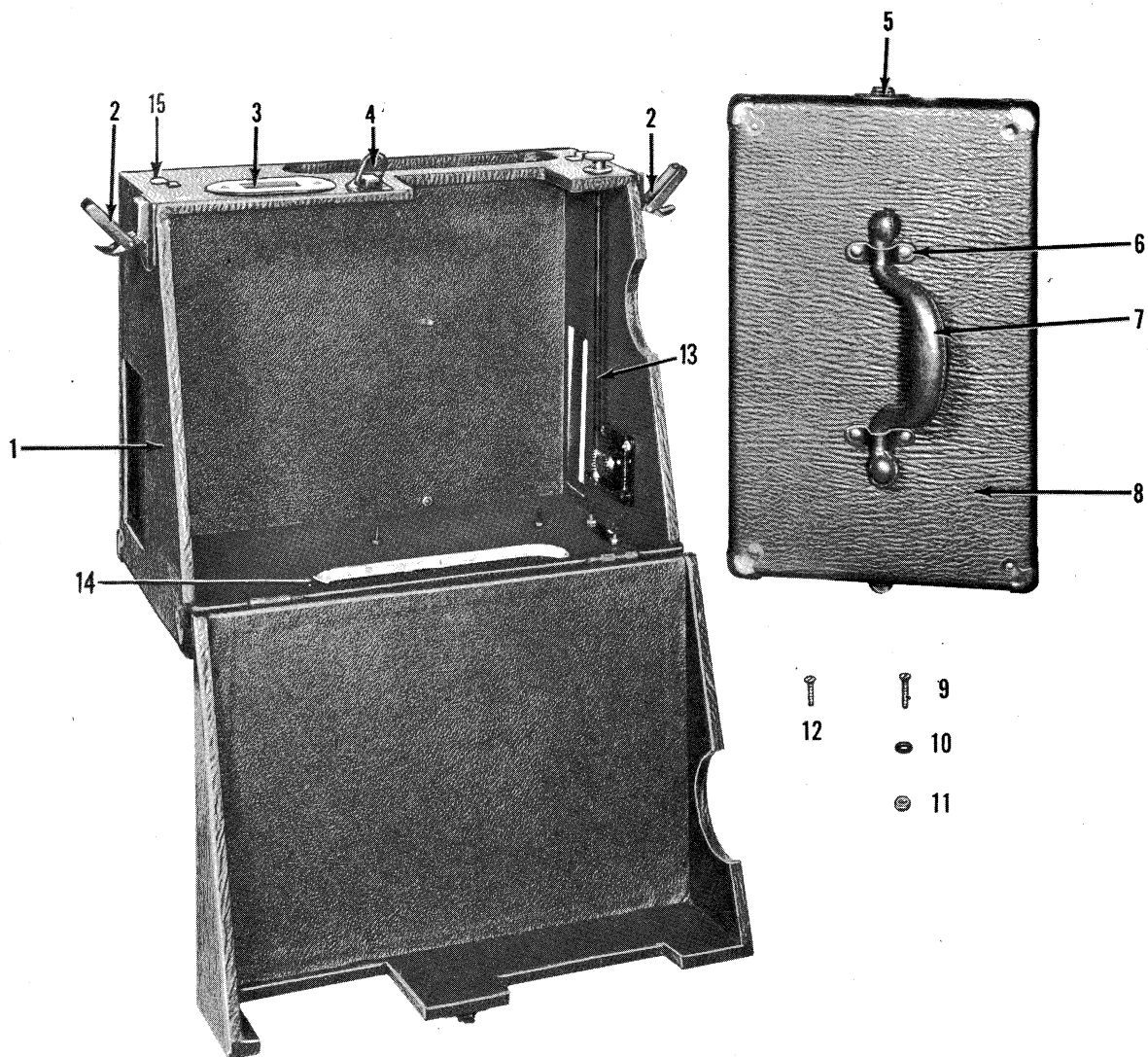
**PROJECTOR  
CASE  
MODEL 60-B**

**PROJECTOR  
CASE  
MODELS 40-A  
AND 40-B**

USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	19554	Projector case			1	1							
2	23197	Case catch			2	2	2	2	2	2	2	2	2
3	20160-A	Rewind belt trap		1	1	1							
4	1001	Case catch (small)			1	1							
5	23198	Case catch			2	2	2	2	2	2	2	2	2
6	1002	Case handle holder			2	2							
7	1003	Leather case handle			1	1							
8	19555	Liftop			1	1							
9		8/32 x 1-1/4 F.H. mounting screw			4	4							
10		#8 Finishing washer			10	10							
11		8/32 Hex nut			2	2							
12		8/32 x 3/4 F.H. screw			6	6							
13	22269-50A	Tilt foot assembly					1	1	1	1	1	1	1
14	19860	Ventilator grille			1	1							
15	19858	Belt hooks			2	2							

Tilt breakdown on page 125.



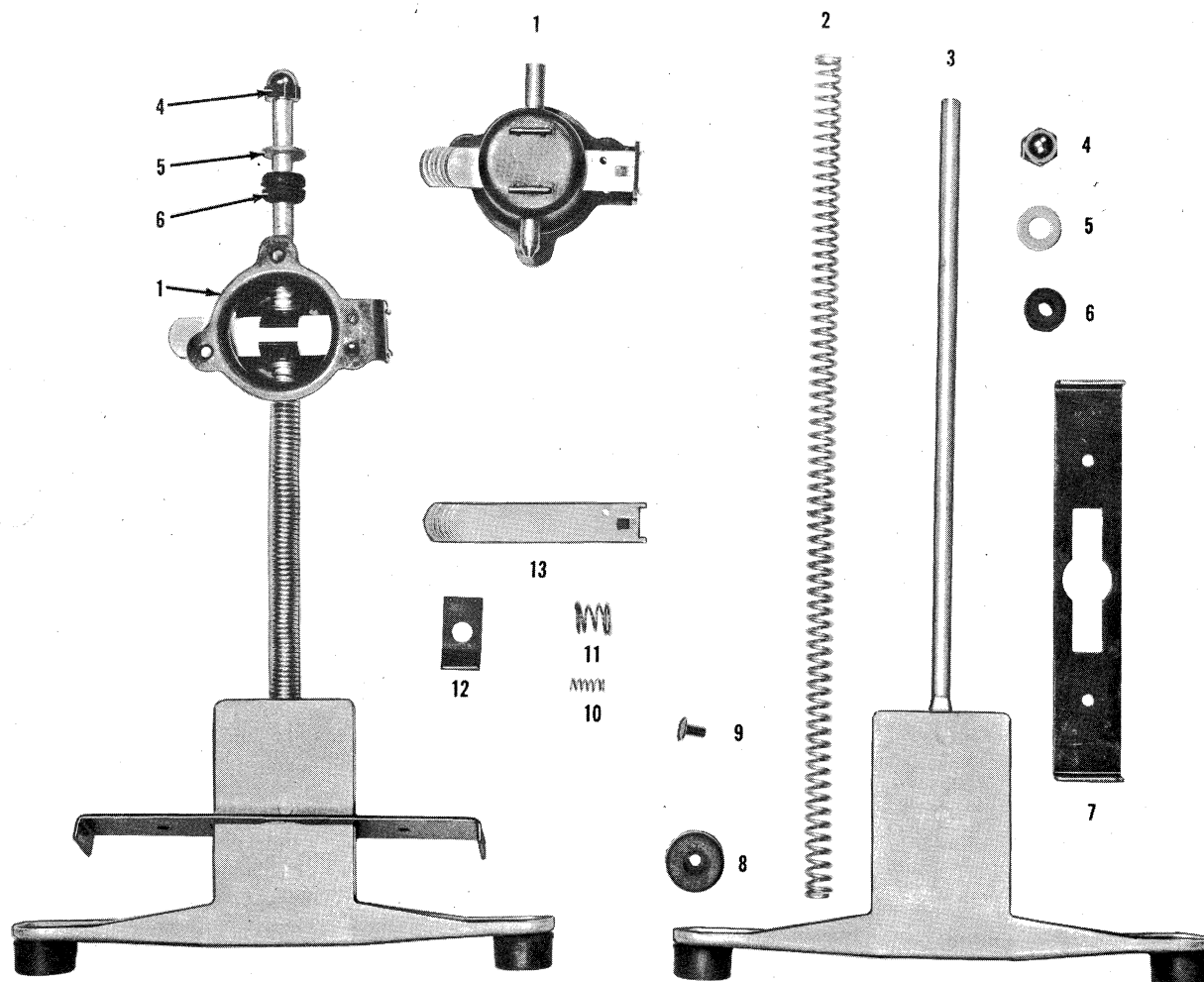


**PROJECTOR  
CASE  
MODELS 40-A  
AND 40-B**

**TILT  
ASSEMBLY  
FOR ALL  
METAL  
PROJECTOR  
CASES**

No.	Part No.	Part Name	Page	G	40-A	USED ON MODELS							
						40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	22332-A	Tilt cup assembly											
2	22338-5	Tilt spring											
3	22269-50A	Tilt foot assembly											
4		1/4 cap retainer hex nut											
5	22336	Tilt rod washer											
6	19143	Rubber grommet											
7	23187-50	Tilt foot bracket											
8	22259	Tilt feet (case feet)					2	2	2	2	2	2	2
9	23141	Tubular rivet					2	2	2	2	2	2	2
10	22334	Tilt cup spring					2	2	2	2	2	2	2
11	23066	Tilt cup spring lever											
12	22330	Tilt lock plate					2	2	2	2	2	2	2
13	22331	Tilt lever											





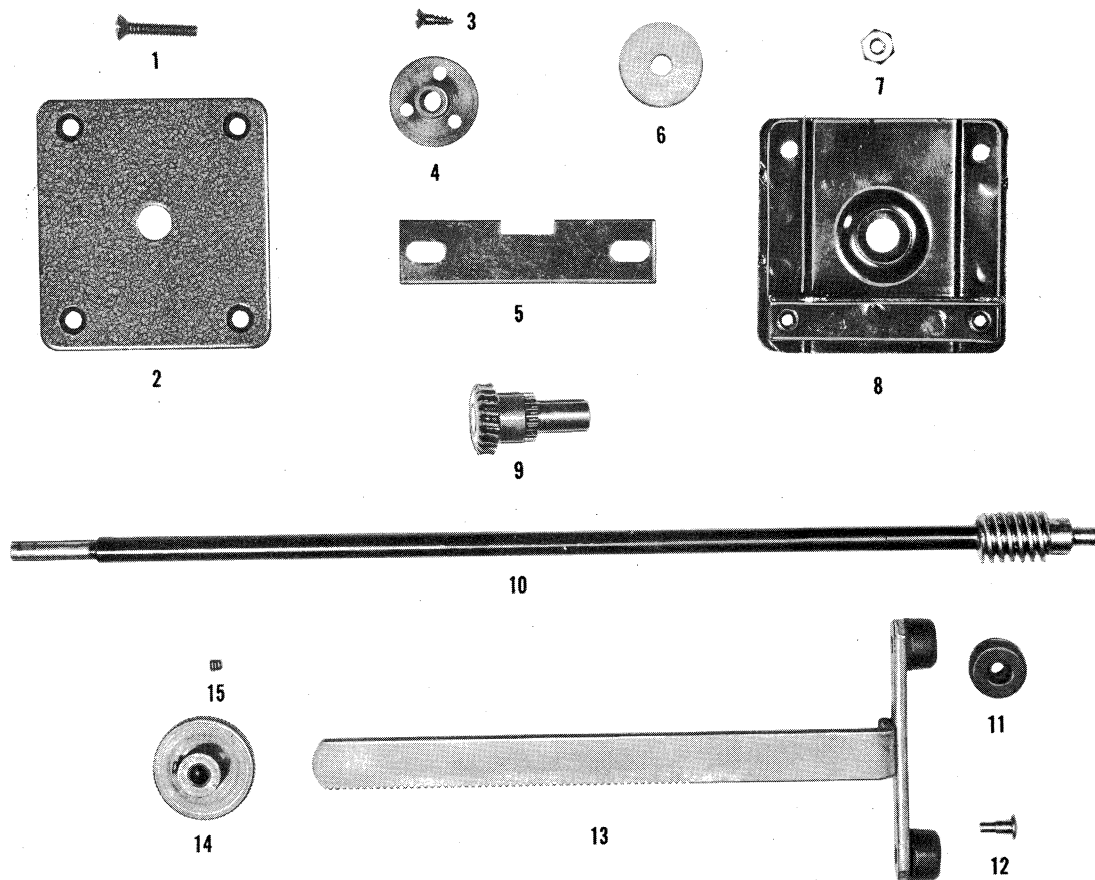
**TILT  
ASSEMBLY  
FOR ALL  
METAL  
PROJECTOR  
CASES**

**TILT  
ASSEMBLY  
FOR  
MODEL 40-B**

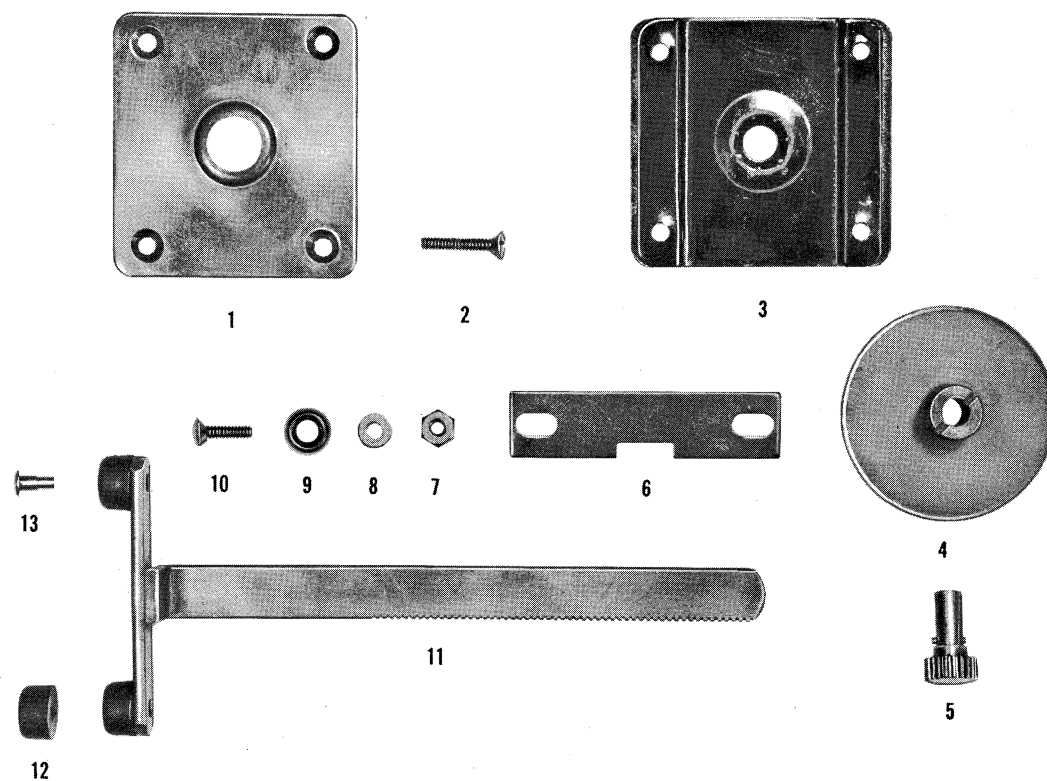
No.	Part No.	Part Name	Page	G	40-A	USED ON MODELS							
						40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1		6/32 x 1 Tilt plate oval head retainer screw			6	6							
2	20146	Tilt plate (outside)				1							
3		#4 x 5/16 Wood screw				3							
4	20137	Tilt rod support				1							
5	20138	Tilt rack guide bar				1							
6	20140	Thrust washer				1							
7		6/32 Hex nut			6	6							
8	20143-A	Tilt plate (inside)				1							
9	20147-A	Tilt gear assembly				1							
10	20142-A	Tilt rod				1							
11	20714	Tilt foot			2	2							
12	20775	Rivet			2	2							
13	20148-A	Tilt rack assembly				1							
14	20139	Tilt knob				1							
15		5/40 x 1/8 Headless set screw				2							

**TILT  
ASSEMBLY  
FOR  
MODEL 40-A**

No.	Part No.	Part Name	Page	G	40-A	USED ON MODELS							
						40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	19792	Tilt plate (outside)				1							
2		6/32 x 1 Tilt plate oval head screw			6	6							
3	19790-A	Tilt plate (inside)				1							
4	19793-A	Tilt knob				1							
5	19794-A	Tilt gear				1							
6	20138	Tilt rack guide				1	1						
7		6/32 Tilt assembly retainer hex nut and belt trap retainer			8	8							
8		#6 Tilt flat washer				1	1						
9		#6 Case finishing washer				8	8						
10		6/32 x 3/4 Tilt plate guide oval head retainer screw			2	2							
11	20148-A	Tilt rack				1	1						
12	20714	Tilt foot			2	2							
13	20775	Tilt foot rivet			2	2							



**TILT  
ASSEMBLY  
FOR  
MODEL 40-B**



**TILT  
ASSEMBLY  
FOR  
MODEL 40-A**

**SPEAKER  
CASE  
COMPLETE  
LESS  
SPEAKER  
AND CORD**

USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	30353-2	J3A Speaker case, complete less speaker and cord					1	1	1	1	1	1	1
2	23175	Case catch					2	2	2	2	2	2	2
3	23174	Body catch							2	2			2

**SPEAKER  
CASE  
BODY AND  
CORD  
ASSEMBLY**

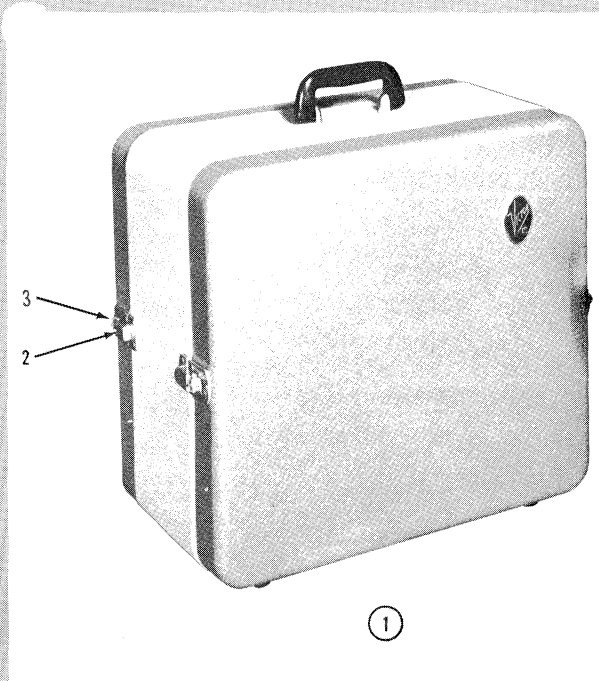
USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	26141	Case handle					1	1		1	1	1	1
2	36008	Case handle hinge					2	2		2	2	2	2
3	25166	12" P.M. speaker					1	1		1	1	1	1
4	30353-2	Speaker case assembly									1	1	1
5	25096	Speaker plug (male)*			2	2	1	1	2	2	1	1	2
6	26146-A	Speaker cord assembly			1	1	1	1	1	1	1	1	1
7	26146	Speaker cord rack					1	1	1	1	1	1	1

\*No. 5, 25096, is interchangeable with 25054 (Page 139).

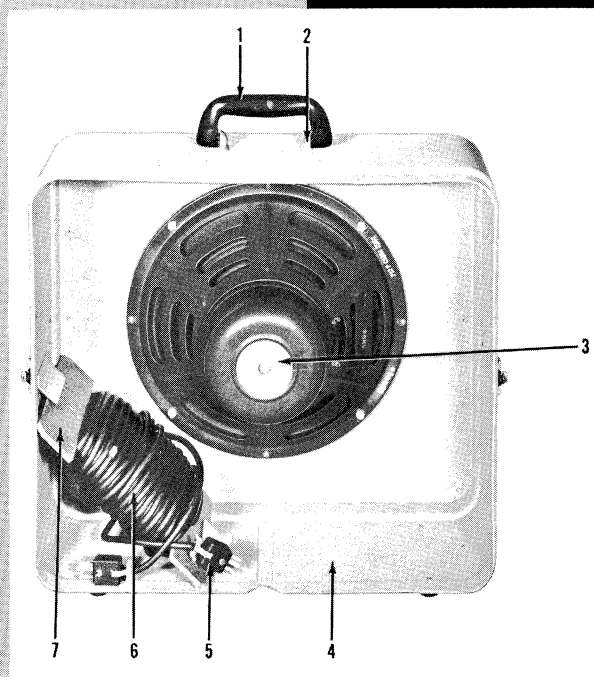
**J3A  
SPEAKER  
CASE  
ASSEMBLY**

USED ON MODELS													
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	23175	Speaker door case catch					4	4	4	4	4	4	4
2	23172-A	Speaker case door (rear)									1	1	1
3	23179-A	Reel holder					1	1	1	1	1	1	1
4	23174	Case catch hook					4	4	4	4	4	4	4
5	22259	Case foot					4	4	4	4	4	4	4
6	30353-2	Speaker case complete, less speaker*										1	1
7	26649	Speaker grille J3A only										1	1
8	25195	Case emblem					1	1	1	1	1	1	1
9	23120	Case emblem					1	1	2	2	1	1	2
10	23172-50A	Speaker case front cover										1	1

\*No. 6, 30353-2 Metal speaker case is interchangeable and replaces 36005-A wood speaker case (Page 129). This case assembly can be used with Models 55, 56, 60-B and 60-2. The cases are the same except color.

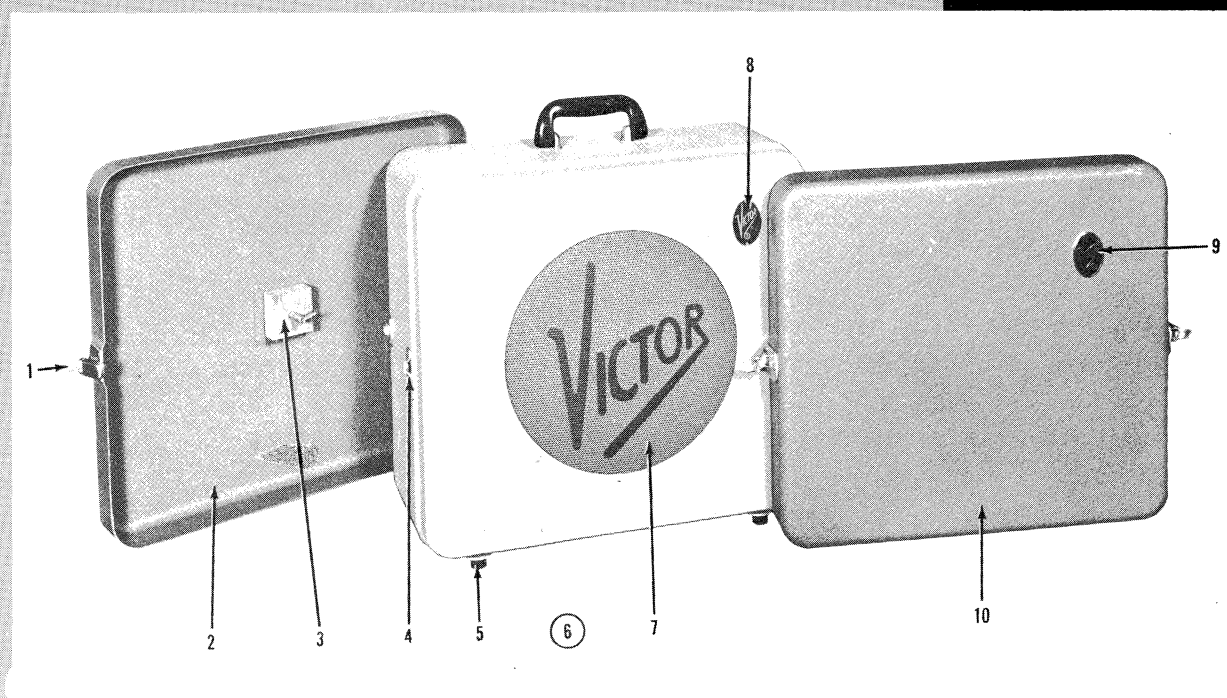


①



**SPEAKER  
CASE  
COMPLETE  
LESS  
SPEAKER  
AND CORD**

**SPEAKER  
CASE  
BODY AND  
CORD  
ASSEMBLY**



**J3A  
SPEAKER  
CASE  
ASSEMBLY**

## SPEAKER

## CASE

## WOOD

## MODEL 60-25

Not Available

### USED ON MODELS

No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	36005-A	Speaker case for 12" (wood)*											1
2	36032	Metal speaker grille											1

\*Wood case is interchangeable with J3A metal case.

## SPEAKER

## CASE

## ASSEMBLY

## J5 AND J4B

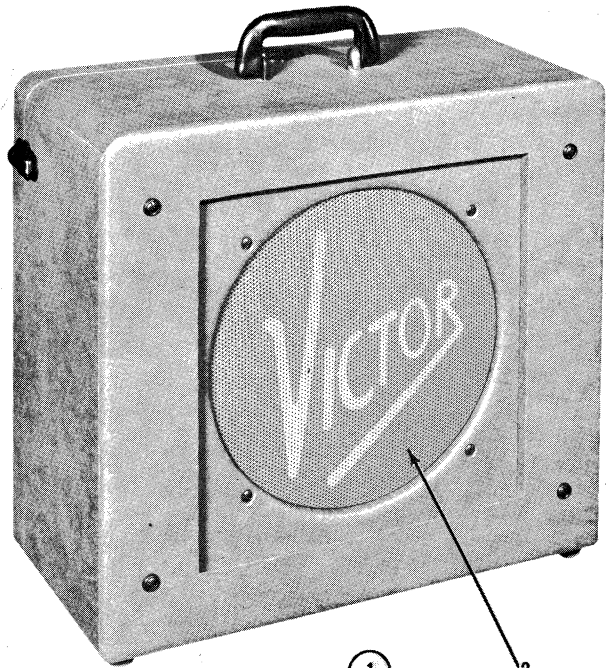
### USED ON MODELS

No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	23267-A	J5 speaker assembly					1	1					
2	26100-AT	J4B top mount speaker*					1	1			1	1	
3	23197	Case catch			2	2	2	2	2	2	2	2	2
4	26104	Cord rack					2	2			2	2	
5	26100-3	J4L speaker (case only)					1	1			1	1	
6	25195	J4 case emblem					1	1	1	1	1	1	1
7	26626-A	J4E speaker complete*						1					
8	23198	Case catch			2	2	2	2	2	2	2	2	2
9	23197	Case catch			2	2	2	2	2	2	2	2	2
10	26103	9" Speaker					1	1			1	1	
11	25096	Speaker plug (male)†			2	2	1	1	2	2	1	1	2
12	23198	Case catch			2	2	2	2	2	2	2	2	2
13	25171-A	J4 speaker cord assembly					1	1			1	1	

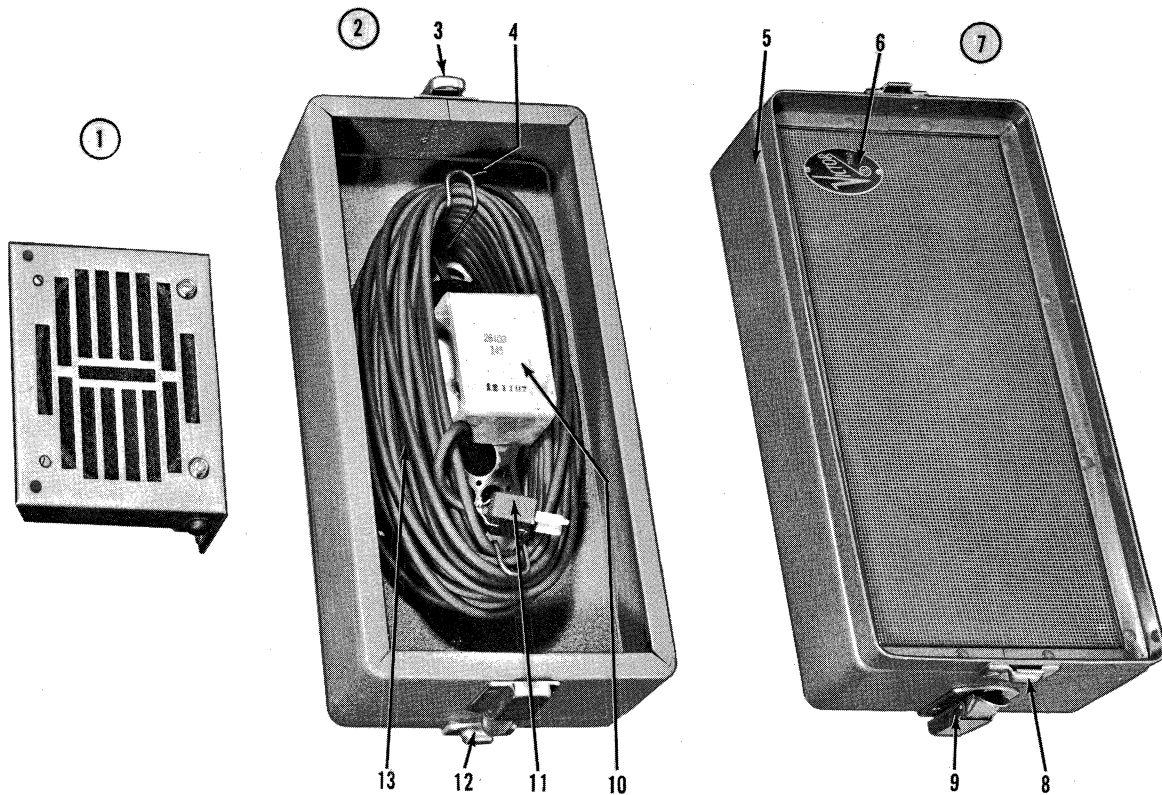
\*No. 7, 26626-A J4E speaker assembly is interchangeable with No. 2, 26100-AT, except for color.

†No. 11, 25096 Speaker plug (male) is interchangeable with 25054 (Page 131).





**SPEAKER  
CASE  
WOOD  
MODEL 60-25  
Not Available**



**SPEAKER  
CASE  
ASSEMBLY  
J5 AND J4B**



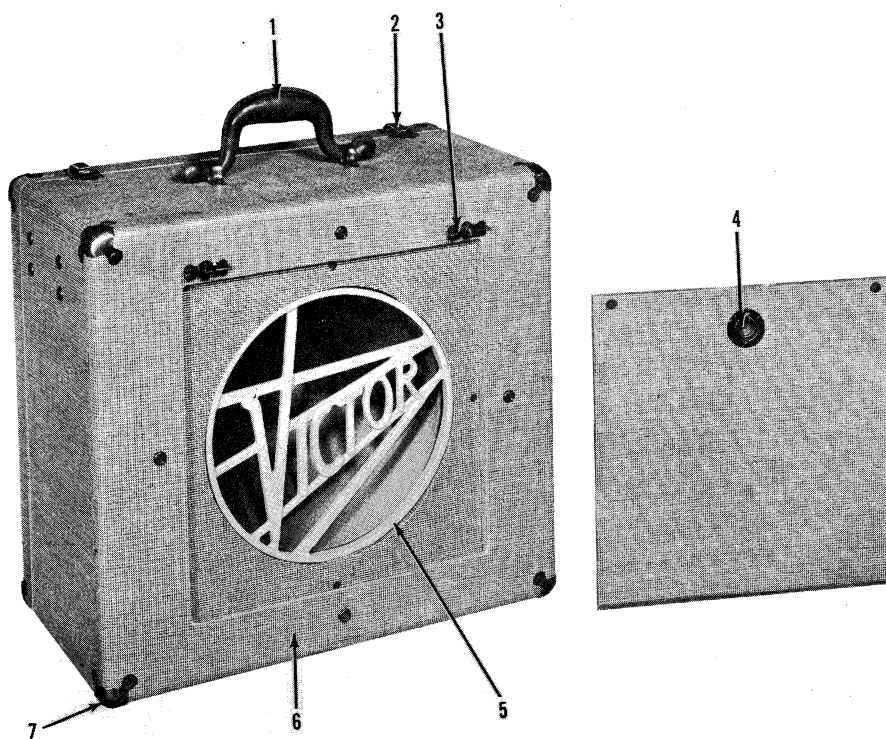
**SPEAKER  
CASE  
MODELS 40-A  
AND 40-B**

					USED ON MODELS									
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25	
1	1003	Leather case handle			2	2								
2	1001	Case catch (small)			2	2								
3	20620	Speaker door turn button			2	2								
4	1113	Speaker door pull			1	1								
5	19778	Speaker grille			1	1								
6	18843-A	Speaker case, complete			1	1								
7	1018	Case corner			8	8								

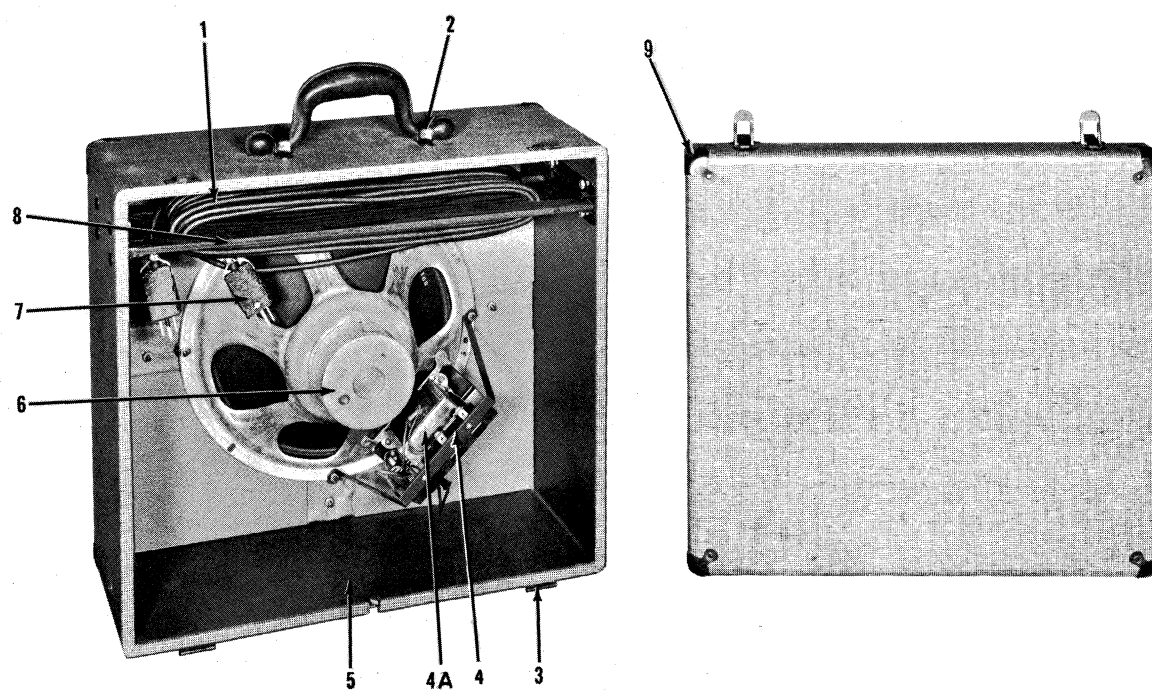
**SPEAKER  
CASE  
ASSEMBLY  
MODELS 40-A  
AND 40-B**

				USED ON MODELS										
No.	Part No.	Part Name	Page	G	40-A	40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25	
1	25066-A	75' Speaker cord		1	1	1			1	1			1	
2	1002	Case handle holder			4	4								
3	1005	Split case hinge			2	2								
4	25056-A	Speaker terminal plate assembly			1	1			1					
4A	15064	Speaker transformer			1	1			1					
5	18843-A	Speaker case (wood)			1	1								
6	15061-A	12" P.M. Speaker with transformer			1	1			1					
7	25054	Speaker plug (male)*		2	2	2	1	1	2	2	1	1	2	
8	25076	Speaker cord rack			1	1								

\*25054 is interchangeable with 25096 (Page 97).



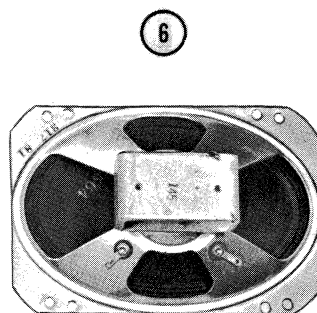
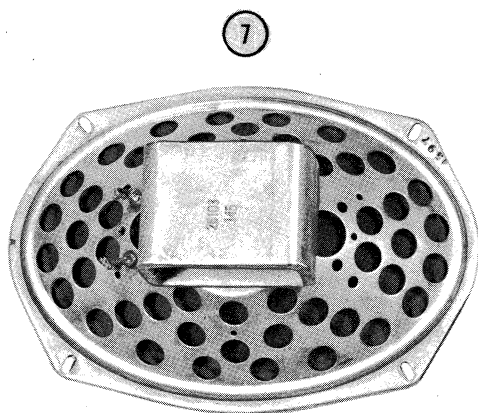
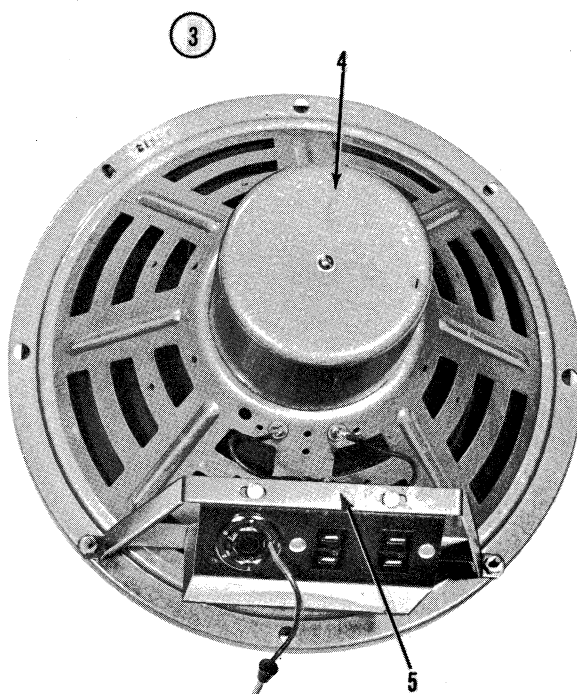
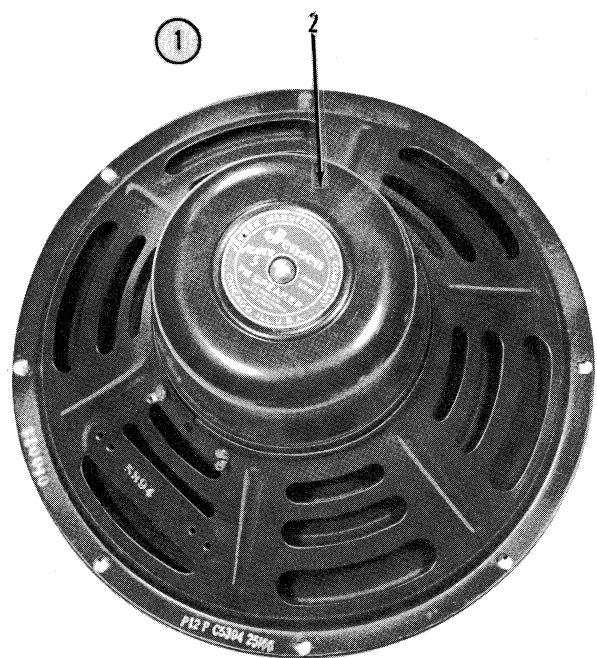
**SPEAKER  
CASE  
MODELS 40-A  
AND 40-B**



**SPEAKER  
CASE  
ASSEMBLY  
MODELS 40-A  
AND 40-B**

# **SPEAKER ASSEMBLY FOR ALL MODELS**

No.	Part No.	Part Name	Page	G	40-A	USED ON MODELS							
						40-BX 40-B	55	56	60-B	60-2	60-4	60-10	60-25
1	25166	12" P.M. Speaker 8 ohm											
2	1010	12" Dust cover											
3	15061-A	12" P.M. Speaker 500 ohm											
4	1011	12" Dust cover											
5	25056-A	Speaker terminal plate assembly											
6	23303	6" Oval P.M. speaker J-5											
7	26103	9" Oval P.M. speaker J-4											



**SPEAKER  
ASSEMBLY  
FOR ALL  
MODELS**