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No. 2 }

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, D.C., 8 August 1973

Direct Support, General Support, and Depot Maintenance Manual
Including Repair Parts and Special Tools Lists
PROJECTOR, STILL PICTURE AP-42A

TM 11-6730-236-35, November 1970, is changed as follows:

- 1 Title is changes as shown above
2. Remove old pages and insert new pages as Indicated below. New or changed material is indicated by a vertical bar in the margin of the page. Added or revised illustrations are indicated by the appearance of the change number in the identification number When a complete chapter is changed. the vertical bar is placed opposite the chapter title only

Remove pages

None

Insert pages

B-1 through B-17

3. File this change sheet in front of the publication for reference purposes.

CHANGE

NO.

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 18 March 1971

**DS, GS, and Depot Maintenance Manual
PROJECTOR, STILL PICTURE AP-42A**

TM 11-6730-236-35, 23 November 1970, is changed as follows:

Page 7. In the table of contents, the page number for appendix A is changed to read "A-1."

Page 4-3, appendix A. The page number "4-3" is changed to read "A-1."

Chapter 5 is added.

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

**DS, GS, AND DEPOT MAINTENANCE MANUAL
PROJECTOR, STILL PICTURE AP-42A**

**Headquarters, Department of the Army, Washington, D. C.
23 November 1970**

WARNING

Be careful when working on the 115-volt ac line connections. Serious INJURY or DEATH may result from contact with these terminals. Remove power when making any inspections inside the equipment.

DON'T TAKE CHANCES!

CAUTION

Handle projection lamps with care. Oils from skin on glass surface of lamp may cause glass to blister and cause damage to projector optics.

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CHAPTER 1
INTRODUCTION

1-1. Scope

a. This manual provides maintenance instructions on Projector, Still Picture AP-42A, for direct support, general support, and depot maintenance personnel. It includes a functional description: troubleshooting, testing, removal, replacement, and repair instructions for each category of maintenance: direct support and general support testing procedures. References are included as appendix A.

b. TM 11-6730-236-12, Operator and Organizational Maintenance Manual, Projector, Still Picture AP-42A provides operation, installation, and maintenance instructions applicable to operators and organizational maintenance personnel. It also provides a physical description of the equipment.

1-2. Indexes of Publications

a. DA Pam 310-4 Refer to the latest issue of DA Pam 310-4 to determine whether there are new

editions, changes or additional publications pertaining to the equipment.

b. DA Pam 310-7. Refer to DA Pam 310-7 to determine whether there are modification work orders (MWOs) pertaining to the equipment.

NOTE

For applicable forms and records, see paragraph 1-3, TM 11-6730-236-12.

1-3. Reporting of Equipment Publication Improvements

The reporting of errors, omissions, and recommendations for improving this publication by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to Publications) and forwarded direct to U. S. Army Electronics Command, ATTN AMSEL-NMP-EM, Fort Monmouth, N J. 07703.

CHAPTER 2
FUNCTIONING OF EQUIPMENT

2-1. General

The projector is a device for projecting a selected image onto a smooth, white plane surface or screen. Single- or double-frame slide or film strips can be shown using the appropriate carrier. Slides are projected with the turret in the horizontal position. Single frame film strip projection exposes a film area of about 18 x 24 millimeters (mm) for each frame of 35-mm film, and is projected with the turret in its upright (vertical) position. Double-frame film strip projection exposes about 24 x 36-mm of 35-mm film area, and is projected with the turret rotated 90° to the horizontal position.

2-2. Optics

(fig. 2-1)

The light source is a lamp assembly, that incorporates the projection lamp and sealed-in reflector, which radiates light toward the screen through a heat filter and the projection lens. The heat filter absorbs much of the heat and infra-red rays, and the projection lens gathers the gradients of light passing through the film, inverts them, and projects them on the screen. The light from the lens is in the form of an angle or cone. The size of the projected image is proportional to the distance between the projector and the screen. The illumination intensity is inversely proportional to the projection distance. The larger the image, the lower the light intensity.

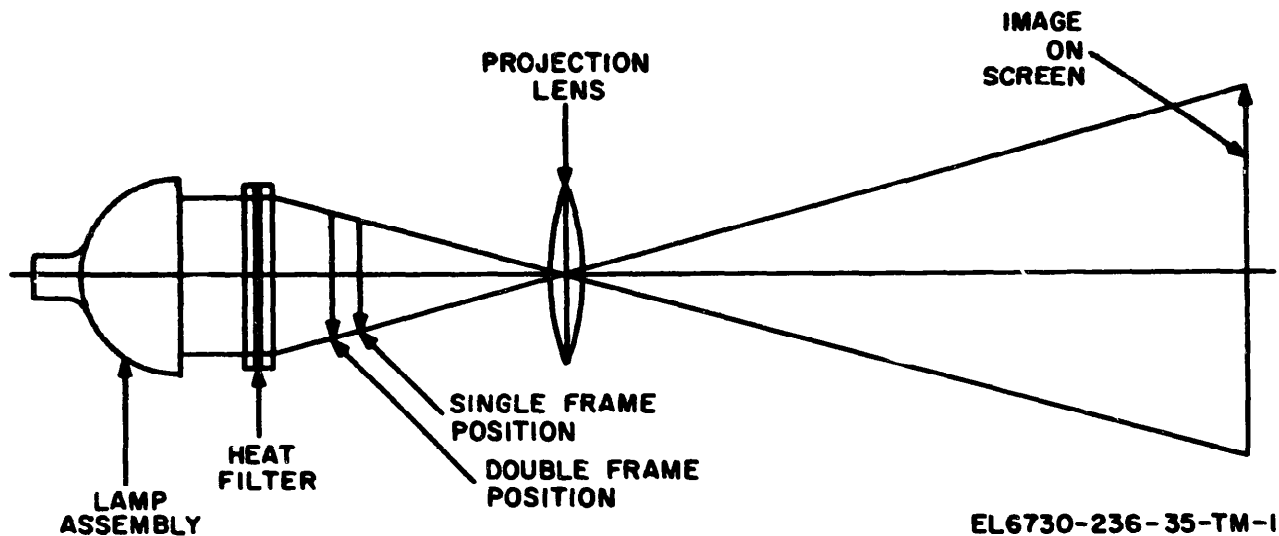


Figure 2-1. Projector optics schematic

2-3. Electrical System

(fig. 2-2)

a The projector electrical controls are FAN switch S1 and LAMP switch S2. S2 is inoperative unless S1 is set to ON. S1 operates independently of S2.

b Input power of 115-volt ac 60-Hz is applied to FAN switch S1. With S1 set to ON, fan motor B1

provides cooling air to the unit, and the input power is applied to LAMP switch S2. With S2 set to ON, the 115-volt input is dropped to 24 volts ac by transformer T1 and applied to lamp DS1, which provides the projection illumination. Because S1 and S2 are connected in series, DS1 cannot be turned on without turning on the fan motor.

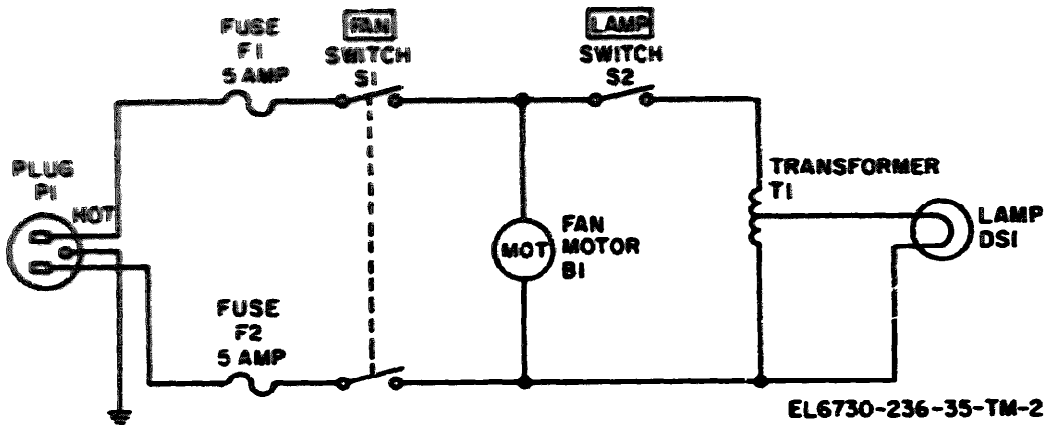


Figure 2-2. Projector electrical schematic

CHAPTER 3 MAINTENANCE

Section I. GENERAL

WARNING

Be extremely careful when troubleshooting or repairing the projector. Voltages as high as 115 volts ac are present internally. Use insulated test probes when making voltage measurements. Always disconnect the power cord from the equipment before touching any of the internal parts.

3-1. Scope of Maintenance

The maintenance duties assigned to direct support maintenance personnel are listed below. References to the paragraphs covering the specific maintenance functions are also listed.

- a. Tools, test equipment and materials required (para 3-2).**
- b. Troubleshooting (para 3-5).**
- c. DC resistances (para 3-6).**
- d. Disassembly, repair, cleaning, inspection, and reassembly (para 3-8 through 3-13).**

3-2. Tools and Test Equipment Required

- a** Toolkit Photographic Repairmen TK-77.
- b** Toolkit Photographic Repair TK-109/GF.
- c** Multimeter 352/B.

Section II. TROUBLESHOOTING

3-3. General Instructions

Troubleshooting at direct support general support, and depot maintenance categories includes all the techniques described for organizational maintenance, and any special or additional techniques required to isolate a defective part. Troubleshooting may be performed while the equipment is operating or, if necessary, after the equipment (or part of it) has been removed from service. Paragraphs 3-4 through 3-6 describe the systematic procedures to be followed which will enable maintenance personnel to isolate the cause of trouble and correct the fault.

3-4. Organization of Troubleshooting Procedures

a General. The first step in servicing a defective projector is to sectionalize the fault. i.e., trace it to the projector, the slide carrier, or the film strip mechanism. The second step is to localize the fault to the defective subassembly or assembly. The third step, isolation, is tracing the fault to the defective part.

Most faults can be isolated by sight, touch, or sound

b Visual Inspection. The purpose of visual inspection is to locate faults without testing or measuring circuits or components. All visual signs should be analyzed to help localize the fault to a particular sub-assembly or component. Mechanical faults are most often localized through visual inspection

c Troubleshooting Chart. The trouble symptoms listed in the troubleshooting chart (para 3-5) will aid in localizing trouble to a component part.

d Voltage and Resistance Measurements. Figure 2-2 is the electrical schematic. The wiring diagram (fig 3-1) shows the location and connection of each component and lead. Checks can be made for primary power (115-volt, 60-Hz) across the motor (terminals 1-3) and 24 volts across the lamp with switches S1 and S2 (FAN and LAMP) closed, and for continuity (motor B1 operative with S1 only closed, and B1 and lamp DSI energized with S1 and S2 closed). Refer to para 3-6 for de resistances.

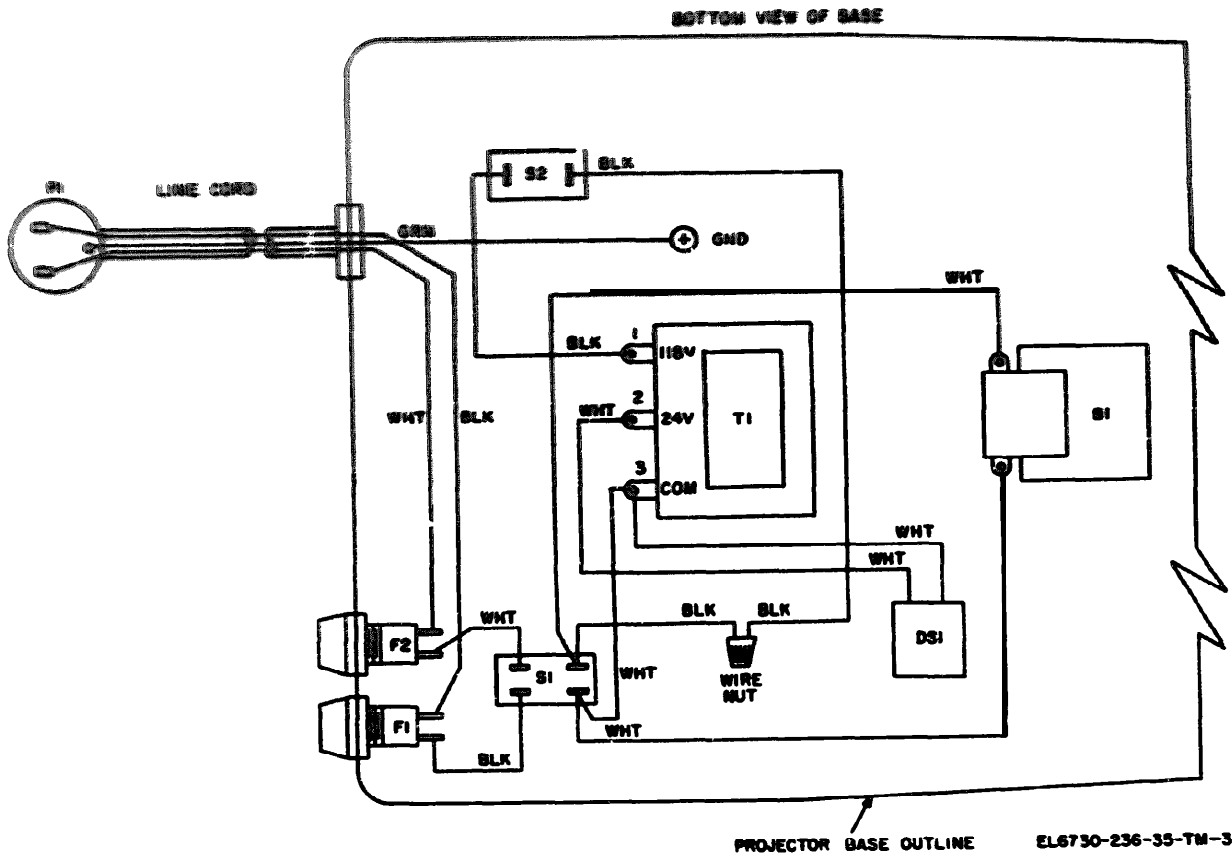


Figure 3-1. Projector wiring diagram

e Intermittent Trouble Check. In all tests, the possibility of intermittent troubles should not be overlooked. Intermittent troubles are often evident by tapping or jarring at various locations. Check all wiring.

3-5. Troubleshooting Chart

The troubleshooting chart lists the symptoms which the maintenance man observes during operation or while performing preventive maintenance checks and services.

WARNING

If possible, before working inside the projector, turn the projector lamp off and operate the fan motor for 2 minutes to cool the lamp. Then turn off the fan motor. If it is necessary to work inside the projector with the projection lamp lighted, be careful to avoid contact with the lamp or the rotating fan blades which could cause severe personal injury.

Item No.	Troubleshooting symptom	Probable trouble	Checks and corrective measures
1	Fan motor does not operate with FAN switch in the on position	External power not being supplied Defective wiring Defective FAN switch (28, fig 3-2) Defective fan motor (57, fig 3-2)	Turn on external power Repair wiring (fig 3-1) Replace FAN switch (para 3-8f and g) Replace motor (para 3-8f through k)
2	Motor operates, but projection lamp does not light with FAN and LAMP switches in the on positions	Defective lamp assembly (24, fig 3-2) Defective wiring Defective LAMP switch (27, fig 3-2)	Replace lamp assembly (para 3-8e) Repair wiring (fig 3-1) Replace LAMP switch (para 3-8f and g)
3	Projection lamp lights but does not give enough light	Defective lamp assembly (24, fig 3-2) Defective transformer (51, fig 3-2).	Replace lamp assembly (para 3-8e) Replace transformer (para 3-5 through j)
4	Dark, irregular black streaks, spots, smudges, or lines on screen without film being projected	Dirt or dust on optical components A cracked or broken optical component	Clean carefully (para 3-9) Replace defective component

Item No.	Recognizing symptom	Probable cause	Checks and corrective measures
7	Film stops, wobbles, or goes out of focus with either film strip mechanism or slide carrier being used	Loosened or broken heat filter (33, fig 3-2)	Replace the heat filter (para 3-8g)
8	Projected image from either film strip mechanism or slide carrier is not square on screen	Turret not set correctly	Loosen the turret lock screw and adjust the turret
7	Dark spots, smudges, or streaks discernible in projected image with use of film strip mechanism	Glass on aperture plate holder (1, 2, fig 3-3) broken	Replace defective aperture plate holder
4	Film does not advance when film advance knob of film strip mechanism is rotated	Film perforations not pressed against sprocket teeth	Realign film in film strip mechanism
9	Film take-up spool of film strip mechanism does not wind up film	Film take-up spool drive spring (18, fig 3-3) is out of position Film take-up spool drive spring (18, fig 3-3) broken	Place the film take-up spool drive spring in the grooves of the film take-up spool and knob and shaft assembly Repair or replace the film take-up spool drive spring (para 3-11)

3-6. DC Resistances

The resistance checks are made with the equipment disconnected from its source of power, using a multi-meter TS-352 B

a. Transformer T1

Terminals	Resistance (ohms)
1-2	1
2-3	2
1-3	13

b. Motor B1

Motor	Terminals	Resistance (ohms)
B1	1-2	180
	2-3	180
	1-3	200

Section III. DISASSEMBLY, REASSEMBLY, AND ADJUSTMENTS

3-7. Precautions

Most of the parts in Projector, Still Picture AP-42A can be easily removed and replaced without special procedures. The following precautions apply:

WARNING

Before working on the projector, turn off the projection lamp and operate the fan for two minutes to cool off the lamp.

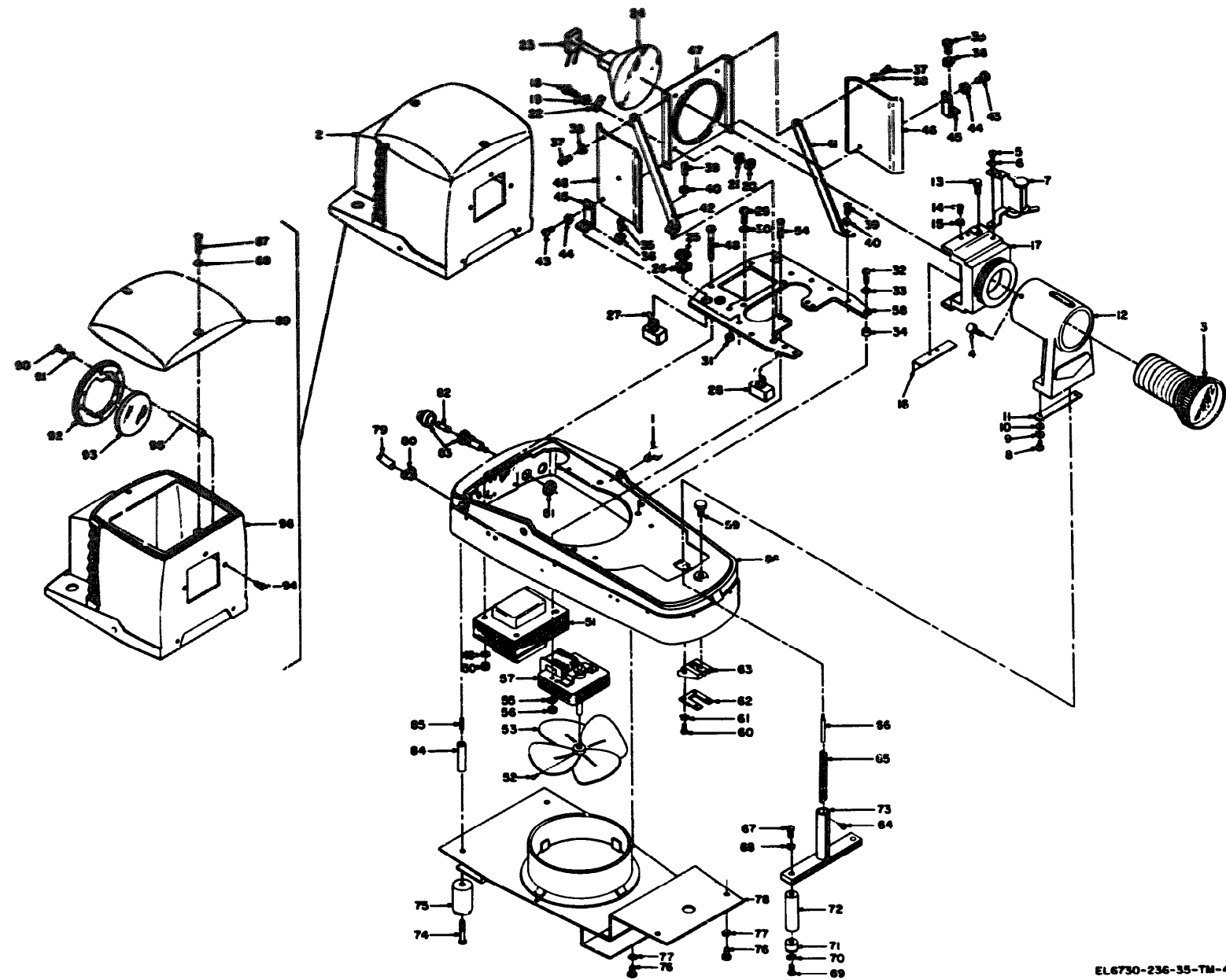
a. Do not attempt to disassemble the projection lens assembly (3, fig 3-2)

b. The bracket subassembly (36, fig 3-3) on the film strip mechanism assembly is riveted and should not be disassembled.

3-8. Disassembly of Projector (fig 3-2)

NOTE

To prevent the loss of screws, washers, and nuts after two or more parts have been disassembled, replace them in the holes from which they have been removed without reassembling the parts.



EL6730-236-35-TM-4

Figure 3-2. Projector exploded view

LEGEND FOR FIGURE 3 2

1 Housing release screw (2) (A1MP1H2)	33 Lockwasher (2) (A1MP34H4)	65 Spring (A1MP21H1)
2 Housing assembly (A1A4)	34 Spacer (2) (A1MP41)	66 Spring guide and stud (A1MP21H1)
3 Projection lens (A1MP27)	35 Screw (2) (A1MP10H4)	67 Screw (2) (A1MP21H2)
4 Turret locking screw (A1MP46H2)	36 Lockwasher (2) (A1MP10H4)	68 Lockwasher (2) (A1MP21H2)
5 Screw (2) (A1MP46H2)	37 Screw (2) (A1MPX2H2)	69 Screw (2) (A1MP14H2)
6 Lockwasher (2) (A1MP46H2)	38 Lockwasher (2) (A1MPX2H2)	70 Lockwasher (2) (A1MP14H2)
7 Film cradle (A1A2)	39 Screw (2) (A1MP6H2)	71 Bumper (2) (A1MP14)
8 Screw (2) (A1MP22H2)	40 Lockwasher (2) (A1MP6H2)	72 Spacer (2) (A1MP40)
9 Lockwasher (2) (A1MP32H2)	41 Left lamp holder bracket (A1MP6)	73 Front leg (A1MP21)
10 Washer (2) (A1MP22H2)	42 Right lamp holder bracket (A1MP6)	74 Screw (2) (A1MP15H2)
11 Spacer bracket (A1MP32H1)	43 Screw (2) (A1MP10H2)	75 Spacer (2) (A1MP15)
12 Nose piece (A1MP32)	44 Lockwasher (2) (A1MP10H2)	76 Screw (4) (A1A7H4)
13 Slide carrier and film strip mechanism locking screw (A1MP46H2)	45 Support bracket (2) (A1MP10)	77 Lockwasher (4) (A1A7H4)
14 Screw (4) (A1MP12H4)	46 Shield (2) (A1E2)	78 Plate and fan guard (A1A7)
15 Lockwasher (4) (A1MP12H4)	47 Lamp holder (A1X2)	79 Line cord (A1W1)
16 Bracket (2) (A1MP12)	48 Screw (4) (A1MP34H4)	80 Bushing (A1MP36H1)
17 Turret (A1MP46)	49 Lockwasher (4) (A1MP34H4)	81 Nut (2) (A1F2H2)
18 Screw (4) (A1X2H4)	50 Nut (4) (A1MP34H4)	82 Fuse (2) (A1F2)
19 Lockwasher (4) (A1X2H4)	51 Transformer (A1T1)	83 Fuse holder (2) (A1X3)
20 Nut (4) (A1X2H4)	52 Set screw (A1MP4H1)	84 Spacer (2) (A1MP38)
21 Lockwasher (4) (A1X2H4)	53 Fan blade (A1MP4)	85 Stud (2) (A1MP38H2)
22 Spring clip (4) (A1X2H4)	54 Screw (4) (A1B1H4)	86 Base (A1MP3)
23 Plug (A1X3)	55 Lockwasher (4) (A1B1H4)	87 Screw (2) (A1A4MP15H2)
24 Lamp assembly (A1DS2)	56 Nut (4) (A1B1H4)	88 Lockwasher (2) (A1A4MP15H2)
25 Nut (2) (A1DS2H2)	57 Motor (A1B1)	89 Housing cover (A1A4MP15)
26 Lockwasher (2) (A1S1H2, A1S2H2)	58 Mounting plate (A1MP34)	90 Screw (3) (A1A4A1MP4H3)
27 Switch (LAMP) (A1S2)	59 Tilt locking knob (A1MP43)	91 Lockwasher (3) (A1A4AMP4H3)
28 Switch (FAN) (A1S1)	60 Screw (4) (A1A5H4)	92 Heat filter holder (A1A4AMP4)
29 Screw (2) (A1MP34H2)	61 Lockwasher (4) (A1A5H4)	93 Heat filter (A1A4A1FL1)
30 Lockwasher (2) (A1MP34H6)	62 Retainer (A1A5H1)	94 Screw (3) (A1A4AMP12H3)
31 Spacer (4) (A1MP41)	63 Lever and shoe assembly (A1A5)	95 Spacer (3) (A1A4MP11)
32 Screw (4) (A1MP34H4)	64 Screw (A1MP21H1)	96 Housing (A1A4MP3)

a Remove housing (2) by withdrawing two housing release screws (1) and lifting straight up

b Remove projection lens (3) and place it where it will not become scratched or dirty.

c Remove turret locking screw (4) and revolve turret (17) to a horizontal position. Remove screw (5) and lockwasher (6) from both sides of turret, and remove film cradle (7) from turret

d Turret is machined casting and normally will not require repair. If necessary, it may be removed from nose piece (12). If turret is removed, be careful to protect external threads. Slide holder bracket (16) may be removed by unscrewing self-tapping screws (14) and lockwashers (15). If slide holder bracket must be removed while turret is attached to nose piece, rotate turret to vertical position. Spacer bracket (11) and nose piece (12) may be removed by withdrawing two screws (8), lockwashers (9), and washers (10). Slide carrier and film strip mechanism locking screw (13) may be withdrawn if required

e Remove lamp assembly (24) when it has cooled enough to handle. Lamp is secured to lamp holder (47) by four spring clips (22) and may be removed by rotating springs withdrawing plug (23). If any spring is defective, it may be removed by withdrawing screw (18), lockwashers (19, 21), and nut (20).

f Remove nut (25) and lockwasher (26) from each switch (27, 28). Six screws secure mounting plate (58) with most of electrical components mounted on it. Most electrical repair can be done by removing mounting plate. Remove four screws (29), lockwashers (30), and spacers (31). Remove two screws (32), lockwashers

(33), and spacers (34). Remove two screws and lockwashers (35, 36). Lift mounting plate straight up until fan is clear of fan duct

CAUTION

Be careful not to bend fan blades when removing mounting plate

g Switches (27, 28) will only be connected by their wires. Place tag on each wire indicating to which terminal and which switch it is to be connected

h Tag and disconnect wires to motor and transformer, indicating on each wire to which terminal and which component it is to be connected. Remove mounting plate (58) with fan and motor. Installed

i Remove screws (37) and lockwashers (38), and screws (39) and lockwashers (40) securing left and right lamp holder brackets (41, 42). Remove left and right lamp support brackets (45) by removing screws (43) and lockwashers (44). Shields (46) and lamp holder (47) are free

j Remove four screws (48), lockwashers (49), and nuts (50) securing transformer (51) to mounting plate (58). When transformer is removed, install hardware through transformer mounting holes in four corners of transformer to keep laminations from separating. (If new transformer is subsequently required to replace the one which has been removed, it comes with its own hardware.)

k Remove set screw (52) securing fan blade (53) to motor (57). Remove four screws (54), lockwashers (55), and nuts (56) securing motor (57) to mounting plate (58)

Remove nut locking knob (59) from base (86). Turn base over and remove two screws (60) and lock washers (61) securing retainer (62). Remove retainer (62) and lever and shoe assembly (63). To remove front leg (73), remove screw (64), spring (65), and spring guide and stud (66). Remove two screws (67) and lockwashers (68). Remove two screws (69) and lockwashers (70) to disassemble two bumpers (71) and spacers (72).

Remove two screws (74) and spacers (75). Remove screws (76) and lockwashers (77) attaching plate and fan guard (78) to base (86). Remove plate and fan guard.

Disconnect remaining wire to two fuse holders (83) and pull out line cord (79). Remove strain relief bushing (80), nut (81) and fuseholders (83). Fuses (82) need only be removed if defective.

Remove base plate spacers (84). Studs (85) in base (86) need only be replaced if damaged.

Disassemble housing assembly, if required, as follows:

(1) Remove two housing cover screw (Xi) and lockwashers (88). Remove housing cover (89).

(2) Remove three screws (90) and lockwashers (91). Remove heat filter holder (92) and heat filter (93). Filter normally does not require removal. If necessary, bend holder tabs to remove filter.

(3) On outside of housing (96), remove three screws (94) and remove three spacers (95) from inside of housing.

3-9. Cleaning and Inspection of Projector

(fig 3-2)

a Clean all parts (except ac motor) with cleaning compound to remove dust and dirt. Dry with lint-free cloth.

b Inspect rubber bumpers (71) replace if rubber is dry or cracked.

c Inspect all polished metal parts in housing. Replace corroded parts.

d Inspect motor (57). If 2,000 hours have elapsed since last overhaul, lubricate bearings with 1 or 2 drops of Oil Lubricating Preservative Special (PL Special). Inspect fan blade (53) and fan guard (78), and replace if dented or deformed.

e Inspect lamp assembly (24) for excessive blackening. Replace if necessary.

f Inspect front leg spring (65), replace if free length is not $5\frac{9}{16} \pm \frac{1}{8}$ inches.

g Inspect all remaining parts for wear and damage. Replace parts as required.

3-10. Reassembly of Projector

(fig. 3-2)

a To reassemble the housing assembly, proceed as follows:

(1) Install three spacers (95) with three screws (94) from outside of housing. Tighten screws so no light leaks through.

(2) Install heat filter (93) in holder (92). Bend tabs on holder to secure filter.

(3) Secure holder and filter to housing with three screws (90) and lockwashers (91).

(4) Install housing cover (89), and secure with two screws (87) and lockwashers (88).

b If stud (85) was removed from base (86) for damage, press new one in place. Be careful not to damage or crack base.

c Remove four screws (48), lockwashers (49), and nuts (50) from transformer (51). Install transformer on mounting plate (58) and secure it with screws, lockwashers, and nuts. Tighten screws until transformer is firmly in place and all laminations are tight. When energized, excessive humming will indicate loose laminations.

d Install motor (57) on mounting plate (58) with four screws (54), lockwashers (55), and nuts (56). Tighten screws to hold motor firmly in place.

e Assemble lamp holder (47), left lamp holder bracket (41), right lamp holder bracket (42), left and right lamp shields (46), and left and right support brackets (45). Use two screws (37), and lockwasher (38) at top, and two screws (39) and lockwashers (40) at the bottom. Mount lamp holder and shield assembly on mounting plate (58) using two screws (35) and lockwashers (36), and two screws (43) and lockwashers (44).

f Insert LAMP switch (27) and FAN switch (28) through holes in mounting plate (58) and secure each with nut (25) and lockwasher (26).

g Insert wires for plug (23) through bushing (80). Leave enough slack to permit easy installation of lamp assembly.

h Install mounting plate assembly on base (86) using four screws (29), lockwashers (30), spacers (31), and two screws (32), lockwashers (33), and spacers (34). Spacers (31, 34) are installed as standoffs between mounting plate assembly and base.

i Insert line cord into new strain relief bushing (80). Install in base (86). Install two fuse holders (83) and secure with nuts (81).

j Install fan blade (53) on motor shaft and secure with setscrew (52).

k Turn base assembly over and connect wiring as tagged during disassembly. Install two base plate spacers (84).

l Assemble base assembly and plate and fan guard assembly (78). Make sure that fan blade revolves freely in fan duct. Install two spacers (75) using screws (74). Install four screws (76) and lockwashers (77). Tighten screws to secure base assembly.

m. Assemble nose piece (12) and nose piece spacer bracket (11) on base and secure them with two screws (8), lockwashers (9), and flat washers (10).

n. If either slide holder bracket (16) has been removed from turret (17), install it using two screws (14) and lockwashers (15). Screw turret (17) on to nose piece (12) and install film cradle assembly (7). Secure it with two screws (5) and lockwashers (6). Install turret locking screw (4) and slide carrier and film strip mechanism locking screw (13).

o. Mount lamp assembly (24) on lamp holder (17) by placing lamp against lamp holder and rotating four spring clips (22). If these have been removed, remount each with one screw (18), nut (20), lockwasher (19), and

lockwasher (21). Mate plug (23) with lamp assembly pins.

p. Assemble front leg. If two bumpers (71) and spacers (72) have been removed, secure each with screw (69) and lockwasher (70). Attach assembly to leg with two screws (67) and lockwashers (68). Insert spring (65) and spring guide stud (65) into leg and secure them with screw (64).

q. Assemble front leg, lever and shoe assembly (63) and retainer (62). Secure parts to base with four screws (60), lockwashers (61), and tilt locking knob (59).

r. Install housing assembly (2) and secure it with two housing release screws (1).

3-11. Disassembly of Film Strip Mechanism
(fig 3-3)

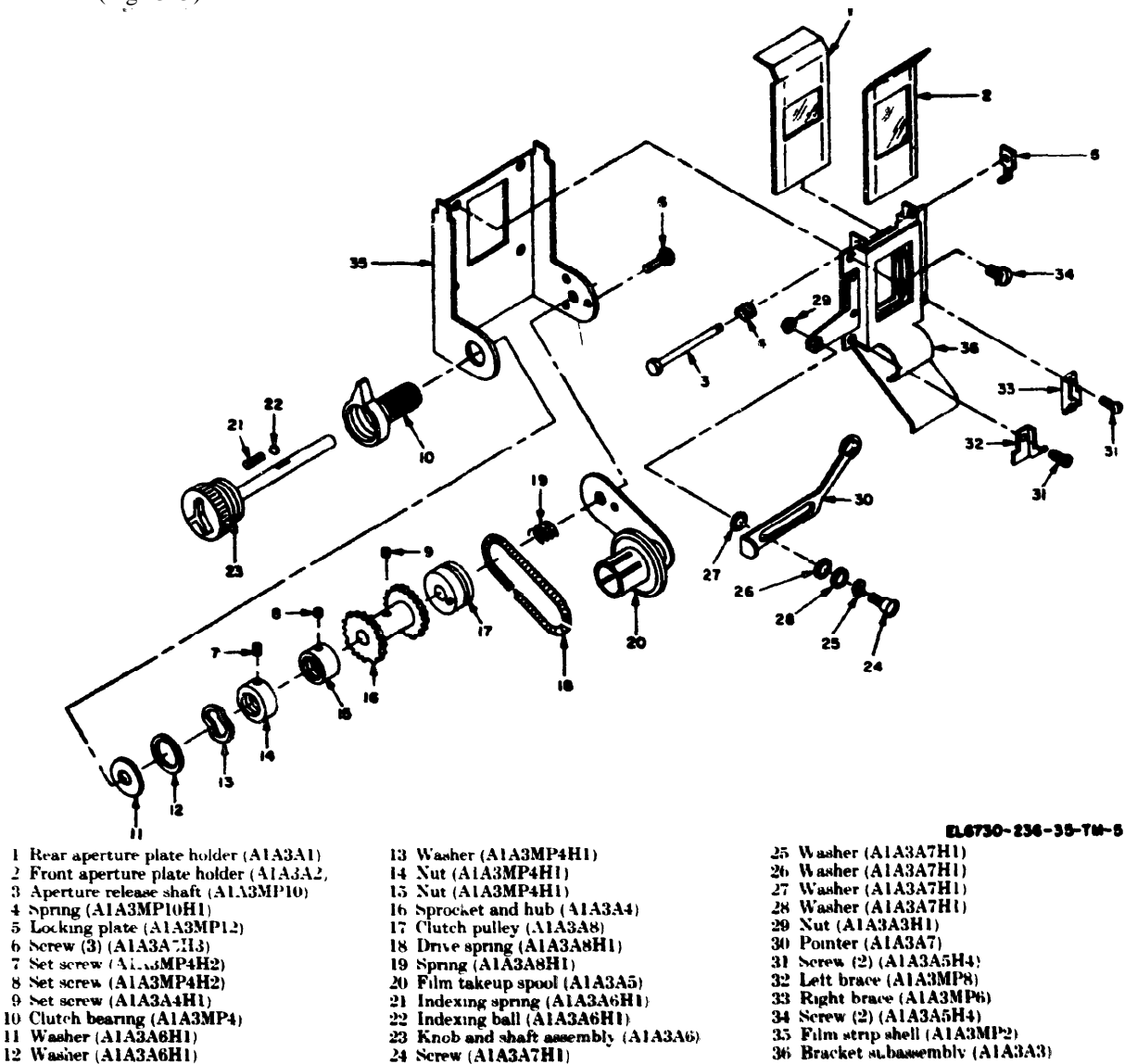


Figure 3-3. Film strip mechanism exploded view

a Depress aperture release shaft (3). Remove rear aperture plate holder (1) and front aperture plate holder (2).

b Unscrew aperture release shaft (3) and remove shaft, spring (4), and locking plate (5).

c Remove drive spring (18) from film takeup spool (20).

d Deleted

e Remove set screws (7, 8, 9) and unscrew clutch bearing (10).

f Pull out knob and shaft assembly (23). Washers (11, 12, 13), nuts (14, 15), sprocket and hub (16), clutch pulley (17), drive spring (18), spring (19), and film takeup spool (20) are now loose and may be removed. Remove indexing spring (21) and indexing ball (22) from knob and shaft (23) assembly.

g Remove screw (24), washers (25, 26, 27, 28), and nut (29) to release pointer (30).

h Remove two screws (31) and left and right braces (32, 33).

i Remove two screws (34) and film strip shell (35) from cover plate and bracket subassembly (36).

3-12. Cleaning and inspection of Film Strip Mechanism

(fig 3-3)

a Clean glass of aperture plate holders (1, 2), with lens cleaning tissue.

b Clean all metal parts with cleaning compound to remove dirt and dust, and dry with lint-free cloth.

c Inspect drive spring (18). Free length must be $3\frac{1}{2}$ inches. Replace if necessary.

d Inspect all parts to be sure they are not deformed or otherwise damaged. Replace defective parts.

3-13. Reassembly of Film Strip Mechanism

(fig 3-3)

a Replace film strip shell (35) on bracket subassembly (36) with two screws (34).

b Mount left and right brace (32, 33) with one screw each (31).

c Mount pointer (30) with nut (29), washers (25, 26, 27, 28), and screw (24).

d Replace indexing ball (22) and indexing spring (21) in knob and shaft assembly (23). Insert knob and shaft assembly (23) and clutch bearing (10) into right-hand hole of film strip shell, part way toward left-hand side.

e Slide spring (19), clutch pulley (17), sprocket and hub (16), nuts (14, 15), and washers (11, 12, 13) onto knob and shaft assembly (23).

f Insert clutch bearing (10), and tighten set screws (7, 8, 9).

g Mount film takeup spool (20) with three screws (6).

h Mount drive spring (18) on film takeup spool (20).

i Inspect aperture release shaft (3), spring (4), and locking plate (5).

j Reinsert aperture plate holders (1, 2).

CHAPTER 4
TESTING PROCEDURES

4-1. General

a. Testing procedures are prepared for use by Signal Field Maintenance Shops and Signal Service Organizations responsible for general support maintenance of signal equipment, to determine the acceptability of repaired signal equipment. These procedures set forth specific requirements that repaired signal equipment must meet before being returned to the using organization.

b. Perform each test in sequence. Do not vary the sequence. For each step, perform all actions in the

Test equipment and Equipment under test columns; then perform each specific test procedure and verify it against its performance standard.

4-2. Modification Work Orders

The performance standards listed in the charts (para 4-3, 4-4 and 4-5) assume that all applicable work orders have been performed. A listing of current modification work orders will be found in DA Pam 310-7.

4-3. Physical Tests and Inspection

Step No	Test equipment control setting	Equipment under test control setting	Test procedure	Performance standard
1	N/A	Controls may be in any position	a. Inspect noth switches for loose or missing nuts b. Inspect plug for looseness and damage c. Insrect exterior for damage, missing parts, and condition of finish <i>Note:</i> Touchup painting is recommended in lieu of re finishing whenever practicable. Screw heads, binding posts, receptacles and plated fastener parts will not be painted or polished with abrasives	a. Nuts must be tight none missing b. No looseness or damage evident c. No damage or missing parts evident External surface intended to be painted must not show bare metal
2	N/A	N/A	Rotate turret 90 degrees	Turret should move freely and easily and snap into place
3	N/A	N/A	Inspect electrical wiring for broken, burned, or damaged wires and insulation	There should be no sign of damage electrical wiring and insulation
4	N/A	N/A	Inspect electrical connections for security	Electrical connections should be secure
5	N/A	N/A	Inspect cable for fraying, kinks, and other signs of damage	Cable should not be frayed, kinked, show other signs of damage
6	N/A	N/A	Inspect film advance knob and spools for freedom of movement	Film advance knob and spools should move freely
7	N/A	N/A	Inspect lens for damage	Lens is not damaged
8	N/A	N/A	Operate tilt locking knob	Tilt locking knob secures unit in a desired tilt position

4-4. Operational Test

a. Teat Equipment and Materials

- (1) Film strip or or slide
- (2) Screen

b. Test Connections and Conditions. Connect the projector to 115-volt, ac, 60-cycle, power source

c. Procedure

Step No	Test equipment control setting	Equipment under test control setting	Test procedure	Performance standard
1	N/A	FAN switch off	Set FAN switch to ON	Fan motor on and cool air exhausted from top rear of housing
2	N/A	FAN switch ON	Set LAMP switch to ON	Lamp on
3	N/A	LAMP and FAN ON	Load film strip or slide. Adjust lens for sharp image	Displayed image is good facsimile of film strip or slide
4	N/A	LAMP and FAN switches ON	Set FAN switch to OFF	Fan and lamp off

4-5. Illumination Test

a. Test Equipment Foot Candle Photoelectric Meter ME 86/U

1. Procedure

Step No.	Test equipment used	Setting of equipment under test	Test procedure	Performance standard
1	N/A	FAN and lamp switches ON Projector approximately 12.5 feet from screen positioned to fill area approximately 40 by 28 inches	Check illuminated area	Illuminated area free from masks, color rings or bands, dirt marks, and foreign matter Dark line indicates cracked optical element spots and smudges indicate dirt in optics
2	N/A	Same as step 1	a. Check intensity of illumination at center of screen b. Check uniformity of illumination	a. 125 foot candles ± 5 percent b. Average of four corners of screen not less than 75 percent of center lowest corner reading not less than 65 percent of center
3	N/A	Insert film strip using film strip mechanism	Project image onto screen and focus projector	Projected image is clear, sharp, and evenly illuminated
4	N/A	Insert slide, using slide carrier	Project image onto screen and focus projector	Projected image is clear, sharp, and evenly illuminated

CHAPTER 5
DEPOT OVERHAUL STANDARDS

5-1. General

The depot overhaul standard tests given in this chapter are to be performed on repaired or overhauled equipment to insure that they meet required performance standards before restock or reissue.

5-2. Test Procedures

a. Operation Within Supply Line Voltage and Frequency Variation Limits.

(1) Equipment required.

(a) Variac with accurate meter.

(b) Variable frequency power supply.

(2) Procedure.

Fan motor and lamp must operate satisfactorily at —

- 129 volts, 65 Hz.
- 118 volts, 60 Hz.
- 105 volts, 50 Hz.

(a), Calibrate variac at each of the three voltage settings progressively and check both motor and lamp.

(b), Put FAN switch ON first at each of the three voltage levels. Then put LAMP switch ON and hold for at least 5 seconds.

(c) Put LAMP switch off first, then FAN switch

(3) Limits. Lamp and motor must operate at all three voltage and frequency levels

b. uniformity of Screen Illumination.

(1) Equipment required.

(a) Screen (fig. 5-1).

(b) Light Meter, calibrated in foot-candles (using a double photocell, one cell blocked off).

(c) Variac or voltage controlled line to run test at 118 volts, 60 Hz.

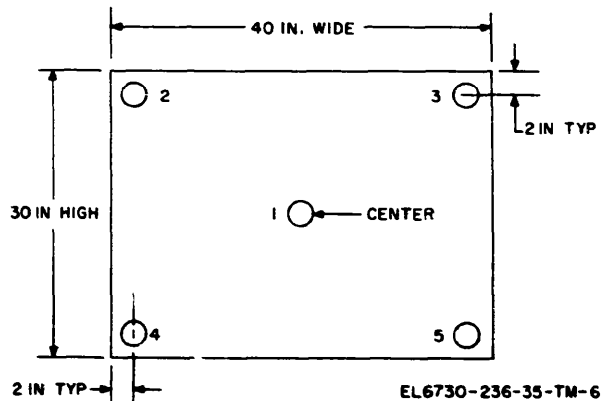


Figure 5-1. Uniformity of illumination test screen

EL6730-236-35-TM-6

(2) Procedure.

(a) Set up projector equipped with filmstrip mechanism, without film.

(b) Adjust (focus) lens for sharpest image outline at edges of aperture on screen.

(c) Adjust lamp for minimum difference of light meter reading between 2 and 3; 4 and 5 and 1.

(d) The difference in foot-candle readings between 2 and 4 and 3 and 5 must also be minimal.

(e) Record readings.

(3) Limits.

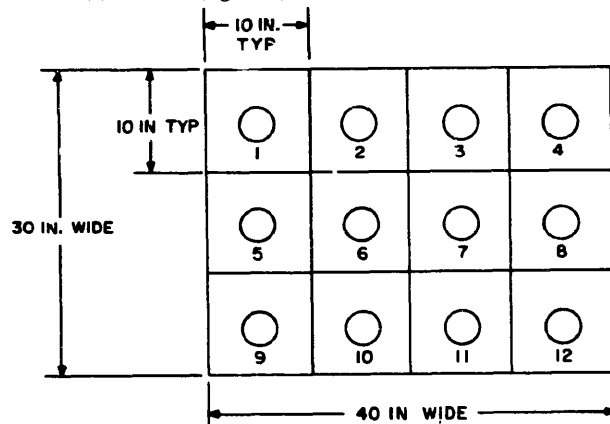
(a) Average of 4 corners, 75% of center.

(b) Lowest corner not less than 65% of center.

c. Light Output.

(1) Equipment required.

(a) Screen (fig. 5-2).



EL6730-236-35-TM-7

Figure 5-2. Light output test screen

(b) Variac or regulated line voltage for 118 volts.

(c) Light meter calibrated in foot-candles.

(2) Procedure.

(a) Set up projector equipped with filmstrip mechanism without film.

(b) Turn projector on and move entire projector to fill screen.

(c) Focus lens for sharpest image outline at edge of screen.

(d) Record 12 readings.

(e) Calculate average of 12 readings.

(f) Multiply average by 8.33.

(3) Calculations Average of 12 readings (foot-candles) x 8.33 = lumens.

(4) Limits. Light output must not be less than 650 lumens.

d. Resolving Power.

(1) *Equipment required.*

(a) **Buck Bee Mears Resolution Test Film** mounted in 2 x 2 slide Test film per ASA PH.3.16 (1947).

(b) *Slide carrier.*

(2) *Procedure (fig. 5-3).*

(a) Set projector at required distance from screen to enlarge the single frame (17.5 x 23mm) image to 40 inches wide.

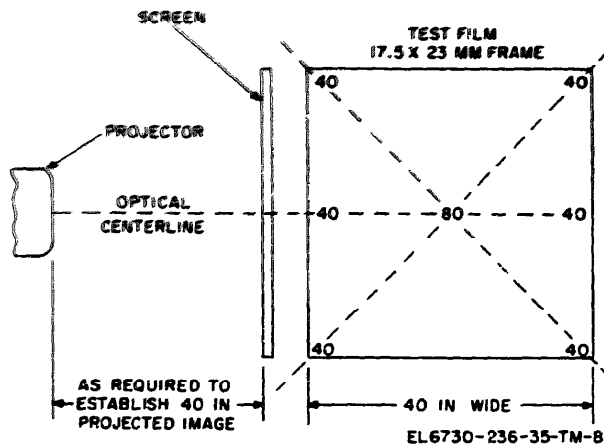


Figure 5-3. Resolving power test setup

(b) Level projector to hold optical centerline horizontal.

(c) Adjust projector so that focus of image is equal at right and left side and top and bottom.

(d) Focus lens to the center target.

(3) Calculation. The resolving power of the lens at any point on the screen is the largest number of lines per millimeter in the test object that an observer, close to the screen, can easily count in both radial and tangential directions in the projected image on the screen.

(4) *Limits.* Resolving power at center of picture area should not be less than 80 lines per millimeter. Minimum resolving power elsewhere should not be less than 40 lines per millimeter.

NOTE

Do not move projector until next test is completed, as same distance from screen is required.

e. *Dielectric Strength and Insulation Resistance.*

(1) Equipment required. **Model P2 Voltage Breakdown Tester**, Industrial Instruments, Inc.

(2) Procedure (fig. 5-4).

(a) Connect one side of Hi-Pot Tester across both terminals on plug of line cord from projector.

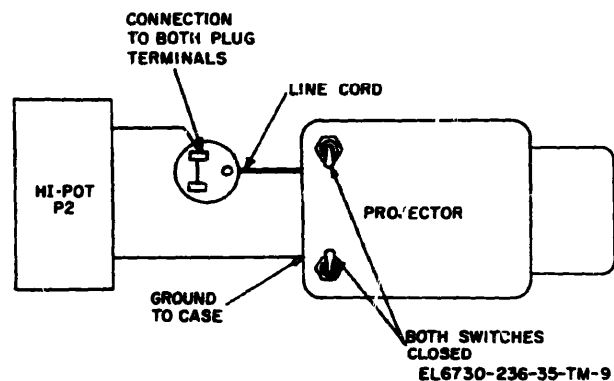


Figure 5-4. Dielectric strength and insulation resistance test setup

(b) Connect other side of Hi-Pot Tester to projector case (same as ground).

(c) Close both motor and lamp switches.

(d) Slowly increase voltage to 900 volts ac and hold for 1 minute

(e) Slowly decrease voltage to zero, disconnect Hi-Pot Tester and open switches.

(3) Limits. There should be no breakdown or indication of arc during test.

APPENDIX A
REFERENCES

<p>DA Pam 310-4 DA Pam 310-7 TM 11-6025-306-15 TM 11-6730-236-12 TM 11-6730-236-20P TM 38-750 TM 750-5-5</p>	<p>Index of Technical Manuals, Technical Bulletins, Supply Manuals (types 7, 8, and 9), Supply Bulletins, and Lubrication Orders U S Army Equipment Index of Modification Work Orders Organizational DS, GS, and Depot Maintenance Manual Multimeter TS-352B, C. Operator and Organizational Maintenance Manual, Projector, Still Picture AP-42A. Organizational Repair Parts and Special Tools Lists for Projector, Still Picture AP-42A. The Army Maintenance Management System (TAMMS) Photographic Equipment Data Sheets</p>
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ARNG None

USAR None

For explanation of abbreviations used, see AR 310-50

APPENDIX B
DIRECT SUPPORT, GENERAL SUPPORT, AND
DEPOT MAINTENANCE PARTS AND SPECIAL TOOLS LIST

Section I. INTRODUCTION

B-1. Scope

This appendix lists repair parts required for the performance of direct support, general support, and depot maintenance of the AP-42A. This appendix is current as of 5 March 1973.

B-2. General

This repair parts list is divided into the following sections.

a Repair Parts List—Section II A list of repair parts authorized at the direct support, general support, and depot levels for the performance of maintenance. The list also includes parts which must be removed for replacement of the authorized parts. Parts lists are in figure and item number sequence.

b Special Tools List—Section III Not applicable.

c Federal Stock Number and Reference Number Index—Section IV A list, in ascending numerical sequence, of all Federal stock numbers appearing in the listings, followed by a list, in alphanumeric sequence, of all reference numbers appearing in the listings. Federal stock numbers and reference numbers are cross-referenced to each illustration figure and item number appearance.

B-3. Explanation of Columns

The following provides an explanation of columns found in the tabular listings.

a Source, Maintenance, and Recoverability Codes (SMR)

(1) *Source code* This code indicates the manner of acquiring support items for maintenance, repair, or overhaul of end items. Source codes are:

Code	Explanation
PA	Item procured and stocked for anticipated or known usage.
PB	Item procured and stocked for inventory purposes because essential it dictates that a minimum quantity be available in the supply system.
PC	Items procured and stocked and which either will or will be coded PA except that use is determined on a unit-by-unit basis.
PD	Support items including support equipment procured for initial support activities and stock items for the support of additional items. Source code PD items are subject to automatic replenishment.
PE	Support equipment procured and stocked for a specific support activity to provide maintenance of a specific item.
PF	Support equipment which is not to be used for a specific support activity but which may be used for other support activities.

Code	Explanation
PG	Items procured and stocked to provide for sustained support for the life of the equipment. It is applied to an item peculiar to the equipment which because of probable discontinuance or shutdown of production facilities would prove uneconomical to reproduce at a later time.
KD	Item of depot overhaul/repair kit and not purchased separately. Depot kit is defined as a kit that provides items required at the time of overhaul or repair.
KE	An item of a maintenance kit and not purchased separately. Maintenance kit is defined as a kit that provides an item that can be replaced at organizational direct support or general support levels of maintenance.
KB	Item included in both a depot overhaul/repair kit and a maintenance kit.
MO	Item to be manufactured or fabricated at the organizational level.
ME	Item to be manufactured or fabricated at the direct support maintenance level.
MH	Item to be manufactured or fabricated at the general support maintenance level.
MD	Item to be manufactured or fabricated at the depot maintenance level.
AO	Item to be assembled at the organizational level.
AE	Item to be assembled at the direct support maintenance level.
AH	Item to be assembled at the general support maintenance level.
AD	Item to be assembled at the depot maintenance level.
NA	Item is not procured or stocked because the requirements for the item will result in the replacement of the next higher assembly.
NB	Item is not procured or stocked. If it is not available through salvage requisitioning.
NE	Installation drawing, diagram, instruction, or other field service drawing that is identified by a manufacturer's part number.
ND	Support items listed in this RPSTL are assigned maintenance and recoverability codes and no source code can be repositioned with modification.

NOTE

Combination of support items may be used as a source of supply for an item—source coded above except those coded NB and those support items identified by AR code.

(2) *Maintenance code* Maintenance codes are assigned to indicate the levels of maintenance authorized to use and repair support items. The maintenance codes are entered in the third and fourth positions of the uniform SMR code format as follows:

(a) *Use third position:* The maintenance code

entered in the third position indicates the lowest maintenance level authorized to remove, replace, and use the support item. The maintenance code entered in the third position indicates one of the following levels of maintenance

Code	Application/Explanation
O	Support item is removed replaced and used at the organizational level of maintenance NOTE A code C may be used in this position to denote crew or operator maintenance performed within organizational maintenance
F	Support item is removed replaced and used at the direct support maintenance level
H	Support item is removed replaced and used at the general support maintenance
D	Support items that are removed, replaced and used at depot only

(b) Repair (fourth position) The maintenance code entered in the fourth position indicates whether the item is to be repaired and identifies the lowest maintenance level with the capability to perform complete repair (i.e., all authorized maintenance functions) When a maintenance code is not used, a dash (-) sign is entered For multiservice equipment/systems, or when a code is entered, this position will contain one of the following maintenance codes as assigned by the service(s) that require the code:

Code	Application/Explanation
O	The lowest maintenance level capable of complete repair of the support item is the organizational level
F	The lowest maintenance level capable of complete repair of the support item is direct support
H	The lowest maintenance level capable of complete repair of the support item is general support
D	The lowest maintenance level capable of complete repair of the support item is the depot level
L	Repair restricted to a designated specialized repair activity
Z	Nonrepairable no repair is authorized
B	No repair is authorized. The item may be reconditioned by adjusting, lubricating, etc., at the user level. No parts or special tools are procured for the maintenance of this item

(3) Recoverability code Recoverability codes are assigned to support items to indicate the disposition action on unserviceable items. The recoverability code is entered in the fifth position of the uniform SMR code format as follows:

Code	Remarks
Z	Nonrepairable item. When unserviceable, condemn it and dispose of it at the level indicated in the first digit of the maintenance code.
O	Repairable item. When uneconomically repairable, condemn it and dispose of it at organizational level.
F	Repairable item. When uneconomically repairable, condemn it and dispose of it at the direct support level.

Code	Explanation
H	Repairable item. When uneconomically repairable, condemn it and dispose of it at the general support level.
D	Repairable item. When beyond lower level repair capability, return it to depot. Condemnation and disposal are not authorized below depot level.
L	Repairable item. Repair, condemnation, and disposal are not authorized below/specialized repair activity level.
A	Item requires special handling of condemnation procedures because of specific reason (i.e., precious metal content, high-dollar value, critical material or hazardous material).

b. Federal Stock Number. This column indicates the Federal stock number assigned to the item which will be used for requisitioning purposes.

c. Description. This column indicates the Federal item name and a minimum description required to identify the item. The last line indicates the reference number Mowed by the applicable Federal supply code for manufacturer (FSCM) in parentheses. The FSCM is used as an element in item identification to designate the manufacturer, distributor, or Government agency, etc., and is identified in SB 708-42.

d. Unit of Measure (U/M). This column indicates the standard or basic quantity by which the listed item is used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation: e.g., ea, in, pr, etc. When the unit of measure differs from the unit of issue, the lowest unit of issue that will satisfy the required units of measure will be requisitioned.

e. Quantity Incorporated in Unit. This column indicates the quantity of the item used in the breakout shown on the illustration figure, which is prepared for an assembly.

f. 30-Day DS/GS Maintenance Allowances. The repair parts indicated by asterisk entries in separate allowance columns for DS and GS represent those authorized for use at that category of maintenance to be requisitioned on an as-required basis.

g. 1-Year Allowances Per 100 Equipments/Contingency Planning Purposes. This column is intentionally left blank.

h. Depot Maintenance Allowance Per 100 Equipments. This column indicates that the items identified with an asterisk are authorized to be requisitioned as required.

i. Illustration. This column is divided as follows:

(1) Figure number. This column indicates the figure number of the illustration on which the item is shown.

(2) Item number. This column indicates the number used to reference the item on the illustration.

B-4. Special Information

Not applicable

B-5. Location of Repair Parts

a. This appendix contains one cross reference index (section IV) to be used to locate a repair part when either the Federal stock number or reference number (manufacturer's part number) is known. The first column in the index is prepared in numerical or alphanumeric sequence in ascending order. The reference numbers (manufacturer's part numbers) are listed immediately following the last listed Federal stock number in the index of Federal stock numbers.

b. When the Federal stock number or reference number is known, follow the procedures given in (1) and (2) below.

(1) Refer to the index of Federal stock numbers (section IV) and locate the Federal stock number or reference number. The FSN and reference number are cross-referenced to the applicable figure and item number.

(2) Refer to the repair parts list (section II) and locate the figure number (column (10)(a)) and item number (column (10)(b)) as noted in the FSN index.

c. When the figure and item number are known, scrutinize columns (10)(a) and (10)(b) of the repair parts list (section II) until the item is located.

d. When the FSN, reference number, figure number, and item number are not known, scrutinize column (3) of the repair parts list (section II).

B-6. Abbreviations

Not applicable.

SECTION II REPAIR PARTS FOR DIRECT SUPPORT, GENERAL SUPPORT, AND DEPOT MAINTENANCE

(1) SR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REFERENCE NUMBER & MFR. CODE USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY GS MAINT ALLOWANCE			(7) 30-DAY GS MAINT ALLOWANCE			(8) 1 YR ALW PER EQUIP CNTGCTY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATIONS	
					(a)	(b)	(c)	(a)	(b)	(c)			(a) FIG NO.	(b) ITEM NO. OR REFERENCE DESIGNATION
					1-20	21-50	51-100	1-20	21-50	51-100				
	6730-450-67423	PROJECTOR, STILL PICTURE AP-42A (THIS ITEM IS NONEXPENDABLE)											B-1	
XAOFD		PROJECTOR ASSEMBLY G3130-01 (82394)	EA	1									B-2	
XDFZZ		SCREW, LOCKING 20-0833 02 (82394)	EA	2									B-3	1
XDFZZ		HOUSING ASSEMBLY 90-0843-00 (82394)	EA	1									B-3	2
PAOZZ	6730-167-1133	LENS, PROJECTION 30-0002-05 (82394)	EA	1	*	*	*	*	*	*	*	*	B-3	3
XDFZZ		SCREW, LOCKING, TURRET 20-0785-02 (82394)	EA	1									B-3	4
PAFZZ	5305-054-6655	SCREW, MACHINE MS5195T-31 (96906)	EA	2	*	*	*	*	*	*	*	*	B-3	5
PAFZZ	5310-209-088	WASHER, LOCK MS35335 30 (96906)	EA	2	*	*	*	*	*	*	*	*	B-3	6
XDFZZ		CRADLE ASSEMBLY, FILM 90-0422-00 (82394)	EA	1									B-3	7
XDFZZ		SCREW, MACHINE MS35216-40 (96906)	EA	2									B-3	8
XDFZZ		WASHER, LOCK MS35335-59 (96906)	EA	2									B-3	9
XDFZZ		WASHER, FLAT MS15795-308 (96906)	EA	2									B-3	10
XDFZZ		SHIM, NOSE PIECE 20-0784-00 (82394)	EA	1									B-3	11
XDFZZ		NOSE PIECE 10-0039-03 (82394)	EA	1									B-3	12
XDFZZ		SCREW, LOCKING, TURRET 20-0785-02 (82394)	EA	1									B-3	13
PAFZZ	5305-282-6733	SCREW, MACHINE AN519C3-3 (86044)	EA	4	*	*	*	*	*	*	*	*	B-3	14
PAFZZ	5310-616-3554	WASHER, LOCK MS15135-25 (96906)	EA	4	*	*	*	*	*	*	*	*	B-3	15
XDFZZ		BRACKET, SLIDE HOLDER 20-0786-02 (82394)	EA	1									B-3	16
XDFZZ		TURRET 10-0039-01 (82394)	EA	1									B-3	17
PAFZZ	6240-	SOCKET, LAMP 40X-2 (08805)	EA	1	*	*	*	*	*	*	*	*	B-3	18
PAOZZ	6240-194-4025	LAMP, INCANDESCENT, PROJECTION 52-1012-06 (82394)	EA	1	*	*	*	*	*	*	*	*	B-3	19
XDFZZ		W T, HEV 0510 (73559)	EA	1									B-3	20
XDFZZ		WASHER, LOCK MS35335 30 (96906)	EA	1									B-3	21
PAFZZ	644-	SWITCH, TOGGLE, LAMP 20-0785-02 (82394)	EA	1	*	*	*	*	*	*	*	*	B-3	22
XDFZZ		W T, HEV 0510 (73559)	EA	1									B-3	23
XDFZZ		WASHER, LOCK MS35335 30 (96906)	EA	1									B-3	24
PAFZZ		SWITCH, TOGGLE, LAMP 20-0785-02 (82394)	EA	1	*	*	*	*	*	*	*	*	B-3	25
PAFZZ		SCREW, MACHINE MS5195T-31 (96906)	EA	1	*	*	*	*	*	*	*	*	B-3	26

(1) SIC CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY QS MAINT ALLOWANCE			(7) 30-DAY GS MAINT ALLOWANCE			(8) 1 YR ALY PER EQUIP CNTGTY	(9) DEPOT MAINT ALY PER 100 EQUIP	(10) ILLUSTRATIONS	
					(a) 1-20	(b) 21-50	(c) 51-100	(a) 1-20	(b) 21-50	(c) 51-100			(a) FIG NO.	(b) ITEM NO. OR REFERENCE DESIGNATION
XDFZZ		WASHER, LOCK MB35335-60 (96906)	EA	2								B-3	30	
XDFZZ		SPACER, MOUNTING 67-6093-00 (82394)	EA	2								B-3	31	
XDFZZ		SCREW, MACHINE MB35216-29 (96906)	EA	4								D-3	32	
XDFZZ		WASHER, LOCK MB35335-58 (96906)	EA	4								B-3	33	
XDFZZ		SPACER, MOUNTING 67-6091-00 (82394)	EA	4								B-3	34	
PAFZZ	5305-054-6652	SCREW, MACHINE MS51957-28 (96906)	EA	2	*	*	*	*	*	*	*	B-3	35	
PAFZZ	5310-209-1366	WASHER, LOCK MB35335-58 (96906)	EA	2	*	*	*	*	*	*	*	B-3	36	
XDFZZ		SCREW, MACHINE MS35216-24 (96906)	EA	2								B-3	37	
XDFZZ		WASHER, LOCK MS35335-58 (96906)	EA	2								B-3	38	
PAFZZ	5305-054-6652	SCREW, MACHINE MS51957-28 (96906)	EA	2	*	*	*	*	*	*	*	B-3	39	
PAFZZ	5310-209-1366	WASHER, LOCK MS35335-58 (96906)	EA	2	*	*	*	*	*	*	*	B-3	40	
XDFZZ		BRACKET, LAMP HOLDER, LH 20-1690-02 (82394)	EA	1								B-3	41	
XDFZZ		BRACKET, LAMP HOLDER, RH 20-1689-02 (82394)	EA	1								B-3	42	
PAFZZ	5305-054-6652	SCREW, MACHINE MS51957-28 (96906)	EA	2	*	*	*	*	*	*	*	B-3	43	
PAFZZ	5310-209-1366	WASHER, LOCK MB35335-58 (96906)	EA	2	*	*	*	*	*	*	*	B-3	44	
XDFZZ		BRACKET, LAMP, SUPPORT 20-1685-02 (82394)	EA	2								B-3	45	
XDFZZ		SHIELD, LAMP 20-1696-02 (82394)	EA	2								B-3	46	
XDFZZ		HOLDER, LAMP 20-1682-02 (82394)	EA	1								B-3	47	
PAFZZ	5305-059-3666	SCREW, MACHINE MS51958-70 (96906)	EA	4	*	*	*	*	*	*	*	B-3	48	
PAFZZ	5310-209-1239	WASHER, LOCK MB35335-60 (96906)	EA	4	*	*	*	*	*	*	*	B-3	49	
PAFZZ	5310-934-965	WIRE, PLAIN, MESH MB35650-304 (96906)	EA	4	*	*	*	*	*	*	*	B-3	50	
PAFZZ	5950-	TRANSFORMER B-51-KL2A (21394)	EA	1	*	*	*	*	*	*	*	B-3	51	
XDFZZ		SCREW MS51963-27 (96906)	EA	1								B-3	52	
XDFZZ		BLADE, FAN 40-5001-00 (82394)	EA	1								B-3	53	
PAFZZ	5305-054-6608	SCREW, MACHINE MS51957-34 (96906)	EA	4	*	*	*	*	*	*	*	B-3	54	
PAFZZ	5310-289-0708	WASHER, LOCK MB35335-50 (96906)	EA	4	*	*	*	*	*	*	*	B-3	55	
PAFZZ	5310-034-4760	WIRE, PLAIN, MESH MB35649-44 (96906)	EA	4	*	*	*	*	*	*	*	B-3	56	
PAFZZ	6105-	WIRE, FAN MS51964-52 (18076)	EA	1	*	*	*	*	*	*	*	B-3	57	
PAFZZ		BLADE, MOUNTING 20-1711-00 (82394)	EA	1								B-3	58	

(1) SR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REFERENCE NUMBER & MFR. CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE			(7) 30-DAY GS MAINT ALLOWANCE			(8) 1 YR ALM PER EQUIP CATGY	(9) DEPOT MAINT ALM PER 100 EQUIP	(10) ILLUSTRATIONS	
					(a) 1-20	(b) 21-50	(c) 51-100	(a) 1-20	(b) 21-50	(c) 51-100			(a) FIG NO.	(b) ITEM NO. OR REFERENCE DESIGNATION
XDFZZ		SCREW, LOCKING, THUMB 20-0258-02 (82394)	EA	1								B-3	59	
XDFZZ		SCREW, MACHINE ANS1505-6 (88044)	EA	4								B-3	60	
XDFZZ		WASHER, LOCK MS35335-30 (96906)	EA	4								B-3	61	
XDFZZ		REMAINDER 20-0835-02 (82394)	EA	1								B-3	62	
XDFZZ		LEVER AND SHOE ASSEMBLY 90-0796-00 (82394)	EA	1								B-3	63	
XDFZZ		SCREW, MACHINE ANS1505-3 (88044)	EA	1								B-3	64	
XDFZZ		SPRING, LEG 67-1029-00 (82394)	EA	1								B-3	65	
XDFZZ		STUD, SPRING GUIDE 20-0832-02 (82394)	EA	1								B-3	66	
YDFZZ		SCREW, MACHINE MS35216-27 (96906)	EA	2								B-3	67	
XDFZZ		WASHER, LOCK MS35335-58 (96906)	EA	2								B-3	68	
PAOZZ	5305-054-6654	SCREW, MACHINE MS51957-30 (96906)	EA	2	*	*	*	*	*	*	*	B-3	69	
PAOZZ	5310-209-1366	WASHER, LOCK MS35335-58 (96906)	EA	2	*	*	*	*	*	*	*	B-3	70	
XDOZZ		BUMPER, ELEVATOR, LEG 67-3402-00 (82394)	EA	2								B-3	71	
XDFZZ		SPACER, ELEVATOR LEG 20-1739-02 (82394)	EA	2								B-3	72	
XDFZZ		LEG, ELEVATOR 10-0040-05 (82394)	EA	1								B-3	73	
PAOZZ	5305-054-6659	SCREW, MACHINE MS51957-35 (96906)	EA	2	*	*	*	*	*	*	*	B-3	74	
XDOZZ		BUMPER, REAR 67-3420-00 (82394)	EA	2								B-3	75	
XDFZZ		SCREW, MACHINE MS-216-26 (96906)	EA	4								B-3	76	
XDFZZ		WASHER, LOCK MS35335-58 (96906)	EA	4								B-3	77	
XDFZZ		PLATE AND PAB GUARD ASSEMBLY 67-0106-02 (82394)	EA	1								B-3	78	
XDFZZ		LINE CORD M.L.-0-0-0-0-0 (82394)	EA	1								B-3	79	
PAFZZ	5305-054-6662	BUSHING, TYPAIN RELIEF SHTPE (82394)	EA	1	*	*	*	*	*	*	*	B-3	80	
PAFZZ	5305-054-6717	WRENCH, AMP. SPARE 112005 (79612)	EA	1	*	*	*	*	*	*	*	B-3	81	
PAFZZ	5305-054-6626	WRENCH, AMP. SPARE 112005 (79612)	EA	1	*	*	*	*	*	*	*	B-3	82	
XDFZZ		SPACER, ELEVATOR 20-1739-02 (82394)	EA	1								B-3	83	
XDFZZ		SPRING, LEG 67-1029-00 (82394)	EA	1								B-3	84	
XDFZZ		WASHER, LOCK MS35335-58 (96906)	EA	1								B-3	85	

(1) SFR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REFERENCE NUMBER & MFR. CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE			(7) 30-DAY GS MAINT ALLOWANCE			(8) 1 YR ALW PER EQUIP CNTGTY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATIONS	
					(a)	(b)	(c)	(a)	(b)	(c)			(a) FIG NO.	(b) ITEM NO. OR REFERENCE DESIGNATION
					1-20	21-50	51-100	1-20	21-50	51-100				
XAFZZ		POOL AND MOUNTING PLATE ASSEMBLY 90-0791-00 (82394)	EA	1								B-4	20	
XAFZZ		SPRING, INDEX KNOB 67-1302-00 (82394)	EA	-								B-4	21	
XAFZZ		BALL, INDEX KNOB 24-0200-00 (82394)	EA	-								B-4	22	
XAFZZ		KNOB AND CHAMF ASSEMBLY 90-0410-00 (82394)	EA	1								B-4	23	
XAFZZ		STUD, POINTER 90-0760-00 (82394)	EA	1								B-4	24	
XDFLL		WASHER, SPRING 7-7121-00 (82394)	EA	-								B-4	25	
XDFZZ		WASHER, FLAT MIL-0000-00 (82394)	EA	1								B-4	26	
XDFZZ		WASHER, FLAT 65-0000-00 (82394)	EA	-								B-4	27	
XDFZZ		WASHER, FLAT 65-0000-00 (82394)	EA	-								B-4	28	
XDFZZ		WASHER, FLAT MIL-0000-00 (82394)	EA	-								B-4	29	
XDFZZ		POINTER 90-0760-00 (82394)	EA	-								B-4	30	
XDFLL		CREW MACHINE AM-0000-00 (82394)	EA	-								B-4	31	
XDFZZ		BRACKET, FILM HOE, LEFT HAND 90-0760-00 (82394)	EA	-								B-4	32	
XDFZZ		BRACKET, FILM HOE, RIGHT HAND 90-0760-00 (82394)	EA	-								B-4	33	
XDFLL		CREW MACHINE AM-0000-00 (82394)	EA	-								B-4	34	
XDFLL		BRACKET, FILM HOE 90-0760-00 (82394)	EA	-								B-4	35	
XDFLL		BRACKET, FILM HOE 90-0760-00 (82394)	EA	-								B-4	36	
XDFLL		BRACKET, FILM HOE 90-0760-00 (82394)	EA	-								B-4	37	
XDFLL		BRACKET, FILM HOE 90-0760-00 (82394)	EA	-								B-4	38	
XDFLL		BRACKET, FILM HOE 90-0760-00 (82394)	EA	-								B-4	39	
XDFLL		BRACKET, FILM HOE 90-0760-00 (82394)	EA	-								B-4	40	
XDFLL		BRACKET, FILM HOE 90-0760-00 (82394)	EA	-								B-4	41	
XDFLL		BRACKET, FILM HOE 90-0760-00 (82394)	EA	-								B-4	42	
XDFLL		BRACKET, FILM HOE 90-0760-00 (82394)	EA	-								B-4	43	
XDFLL		BRACKET, FILM HOE 90-0760-00 (82394)	EA	-								B-4	44	
XDFLL		BRACKET, FILM HOE 90-0760-00 (82394)	EA	-								B-4	45	
XDFLL		BRACKET, FILM HOE 90-0760-00 (82394)	EA	-								B-4	46	
XDFLL		BRACKET, FILM HOE 90-0760-00 (82394)	EA	-								B-4	47	
XDFLL		BRACKET, FILM HOE 90-0760-00 (82394)	EA	-								B-4	48	
XDFLL		BRACKET, FILM HOE 90-0760-00 (82394)	EA	-								B-4	49	
XDFLL		BRACKET, FILM HOE 90-0760-00 (82394)	EA	-								B-4	50	

SECTION IV. FEDERAL STOCK NUMBER AND REFERENCE NUMBER INDEX

FEDERAL STOCK NUMBER	FIGURE NUMBER	ITEM NUMBER OR REF. DESIGNATION	REFERENCE NO	MFG. CODE	FIG NO.	ITEM NUMBER OR REF. DESIGNATION
5305-054-5649	B-3	90	AN50504-6	88044	B-3	94
5305-054-6652	B-3	35	AN51503-3	88044	B-3	14
5305-054-6652	B-3	39	AN51505-3	88044	B-3	64
5305-054-6652	B-3	43	AN51505-3	88044	B-4	6
5305-054-6654	B-3	69	AN51505-3	88044	B-4	31
5305-054-6655	B-3	5	AN51505-3	88044	B-4	34
5305-054-6658	B-3	54	AN51505-6	88044	B-3	60
5305-054-6659	B-3	74	AN51508-16	88044	B-3	87
5305-059-3666	B-3	48	A550	82394	B-5	6
5305-282-6733	B-3	14	MIL-0-3432D	81349	B-3	79
5310-209-0788	B-3	6	MS15795-308	96906	B-3	10
5310-209-0788	B-3	55	MS15795-808	96906	B-4	26
5310-209-1239	B-3	49	MS24679-2	96906	B-4	29
5310-209-1366	B-3	36	MS35059-22	96906	B-3	28
5310-209-1366	B-3	40	MS35216-24	96906	B-3	37
5310-209-1366	B-3	44	MS35216-24	96906	B-3	76
5310-209-1366	B-3	70	MS35216-27	96906	B-3	87
5310-616-3554	B-3	13	MS35216-39	96906	B-3	32
5310-616-3554	B-3	91	MS35216-40	96906	B-3	4
5310-134-1761	B-3	36	MS 35216-37	96906	B-3	84
5310-134-1763	B-3	30	MS 35216-38	96906	B-3	13
5305-054-6654	B-4	18	MS 35216-25	96906	B-3	12
5310-209-0788	B-3	82	MS 35216-30	96906	B-3	6
5310-209-0788	B-3	2	MS 35216-30	96906	B-3	15
5310-209-0788	B-3	83	MS 35216-30	96906	B-3	93
5310-209-0788	B-3	40	MS 35216-30	96906	B-3	5
5310-209-0788	B-3	26	MS 35216-30	96906	B-3	18
5310-209-0788	B-3	9	MS 35216-30	96906	B-3	38
5310-209-0788	B-3	1	MS 35216-30	96906	B-3	1
5310-209-0788	B-3	11	MS 35216-30	96906	B-3	11
5310-209-0788	B-3	12	MS 35216-30	96906	B-3	12
5310-209-0788	B-3	13	MS 35216-30	96906	B-3	13
5310-209-0788	B-3	14	MS 35216-30	96906	B-3	14
5310-209-0788	B-3	15	MS 35216-30	96906	B-3	15
5310-209-0788	B-3	16	MS 35216-30	96906	B-3	16
5310-209-0788	B-3	17	MS 35216-30	96906	B-3	17
5310-209-0788	B-3	18	MS 35216-30	96906	B-3	18
5310-209-0788	B-3	19	MS 35216-30	96906	B-3	19
5310-209-0788	B-3	20	MS 35216-30	96906	B-3	20

<u>REFERENCE</u> <u>N O .</u>	<u>MFG.</u> <u>CODE</u>	<u>FIG</u> <u>NO</u>	<u>ITEM NUMBER OR</u> <u>REF DESIGNATION</u>	<u>REFERENCE</u> <u>N O .</u>	<u>MFG.</u> <u>CODE</u>	<u>FIG</u> <u>NO</u>	<u>ITEM NUMBER OR</u> <u>REF. DESIGNATION</u>
MS35335-60	96906	B-3	30	20-0108-00	82394	B-4	22
MS35335-60	96906	B-3	49	20-0109-02	82394	B-4	14
MS35335-65	96906	B-3	26	20-0258-02	82394	B-3	59
MS35335-65	96906	B-3	26	20-0351	82394	B-4	3
MS35338-58	96906	B-3	77	20-0352-02	82394	B-4	5
MS35649-64	96906	B-3	56	20-0650-02	82394	B-4	15
MS35650-304	96906	B-3	50	20-0722-03	82394	B-4	33
MS51957-15	96906	B-3	90	20-0722-04	82394	B-4	32
MS51957-28	96906	B-3	35	20-0736-02	82394	B-4	35
MS51957-28	96906	B-3	39	20-0738-02	82394	B-4	30
MS51957-28	96906	B-3	43	20-0740-02	82394	B-4	24
MS51957-30	96906	B-3	60	20-0784-00	82394	B-3	14
MS51957-31	96906	B-3	3	20-0785-02	82394	B-3	4
MS51957-34	96906	B-3	54	20-0785-02	82394	B-3	13
MS51957-35	96906	B-3	74	20-0785-02	82394	B-3	4
MS51958-70	96906	B-3	47	20-0785-02	82394	B-3	66
MS51963-27	96906	B-3	4	20-0785-02	82394	B-3	2
MS51963-27	96906	B-3	4	20-0785-02	82394	B-3	10
MS51963-33	96906	B-4	6	20-0785-02	82394	B-3	4
MS51963-34	96906	B-4	7	20-0785-02	82394	B-3	1
MS51963-36	96906	B-4	1	20-0785-02	82394	B-3	7
GCK-3	00040	B-1		20-0785-02	82394	B-3	8
EMB339-37	00063	B-5		20-0785-02	82394	B-3	14
SP57CON125OMAL52	10070			20-0785-02	82394	B-3	15
JRTRQ	20020	B-1		20-0785-02	82394	B-3	20
TL11-16-63	13550	B-1	17	20-0785-02	82394	B-3	18
U5J6	73559	B-1		20-0785-02	82394	B-3	19
1-0626-02	5-0044	B-1		20-0785-02	82394	B-3	21
1-0626-04	131014	B-1	16	20-0785-02	82394	B-3	22
1-0626-06	131014	B-1		20-0785-02	82394	B-3	23
1-0626-08	131014	B-1		20-0785-02	82394	B-3	24
1-0626-10	131014	B-1		20-0785-02	82394	B-3	25
1-0626-12	131014	B-1		20-0785-02	82394	B-3	26
1-0626-14	131014	B-1		20-0785-02	82394	B-3	27
1-0626-16	131014	B-1		20-0785-02	82394	B-3	28
1-0626-18	131014	B-1		20-0785-02	82394	B-3	29
1-0626-20	131014	B-1		20-0785-02	82394	B-3	30
1-0626-22	131014	B-1		20-0785-02	82394	B-3	31
1-0626-24	131014	B-1		20-0785-02	82394	B-3	32
1-0626-26	131014	B-1		20-0785-02	82394	B-3	33
1-0626-28	131014	B-1		20-0785-02	82394	B-3	34
1-0626-30	131014	B-1		20-0785-02	82394	B-3	35

REFERENCE NO	MFG. CODE	FIG NO	ITEM NUMBER OR REF DESIGNATION	REFERENCE NO	MFG. CODE	FIG NO	ITEM NUMBER OR REF DESIGNATION
40-5001-00	82394	B-3	53				
65-0020-00	82394	B-4	28				
65-0087-00	82394	B-4	27				
65-0139-00	82394	B-4	12				
65-0140-00	82394	B-4	11				
67-1002-02	82394	B-4	22				
67-1024-02	82394	B-4	19				
67-1029-00	82394	B-3	65				
67-1412-02	82394	B-4	4				
67-1413-00	82394	B-4	10				
67-3402-00	82394	B-3	71				
67-3420-00	82394	B-3	79				
67-5109-00	82394	B-3	4				
67-5111-00	82394	B-3	4				
67-6091-00	82394	B-3	37				
67-6093-00	82394	B-3	72				
7752	76104	B-3					
81-1-1012A	82394	B-3	1				
81-0325	82394	B-3					
81-0326	82394	B-3					
81-0327	82394	B-3					
81-0328	82394	B-3					
81-0329	82394	B-3					
81-0330	82394	B-3					
81-0331	82394	B-3					
81-0332	82394	B-3					
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81-0396	82394	B-3					
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81-0399	82394	B-3					
81-0400	82394	B-3					

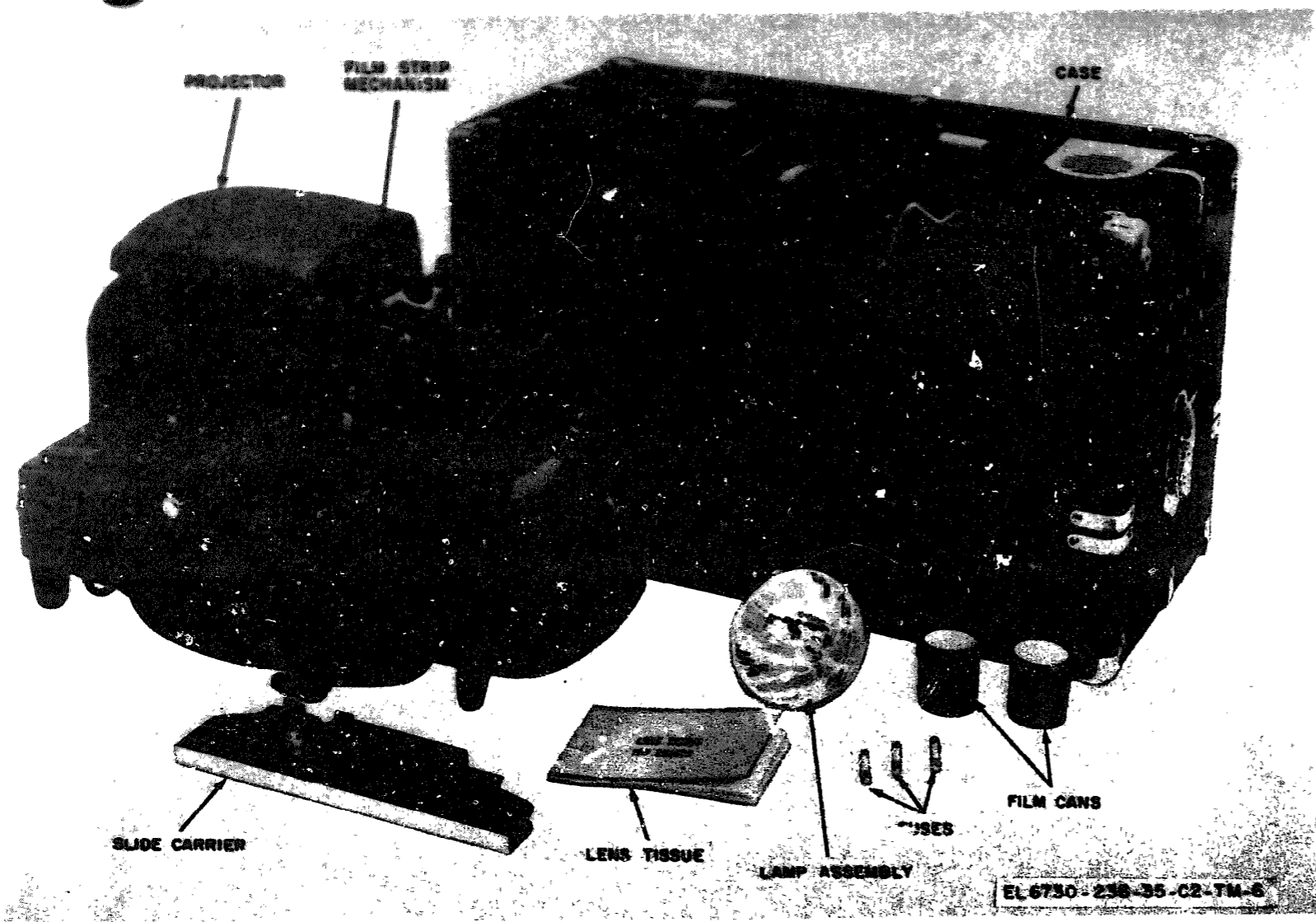
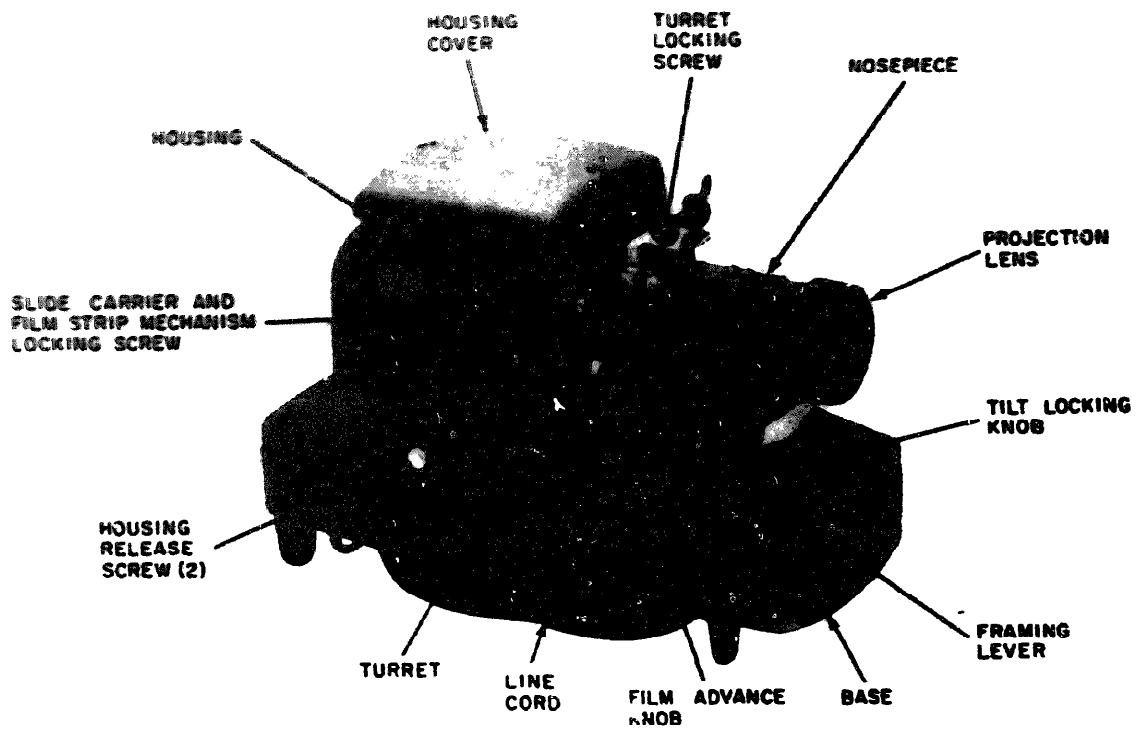


Figure B-1. Projector Still Picture AP-42A



EL 6730-236-35-C2-TM-7

Figure B-2. Projector assembly

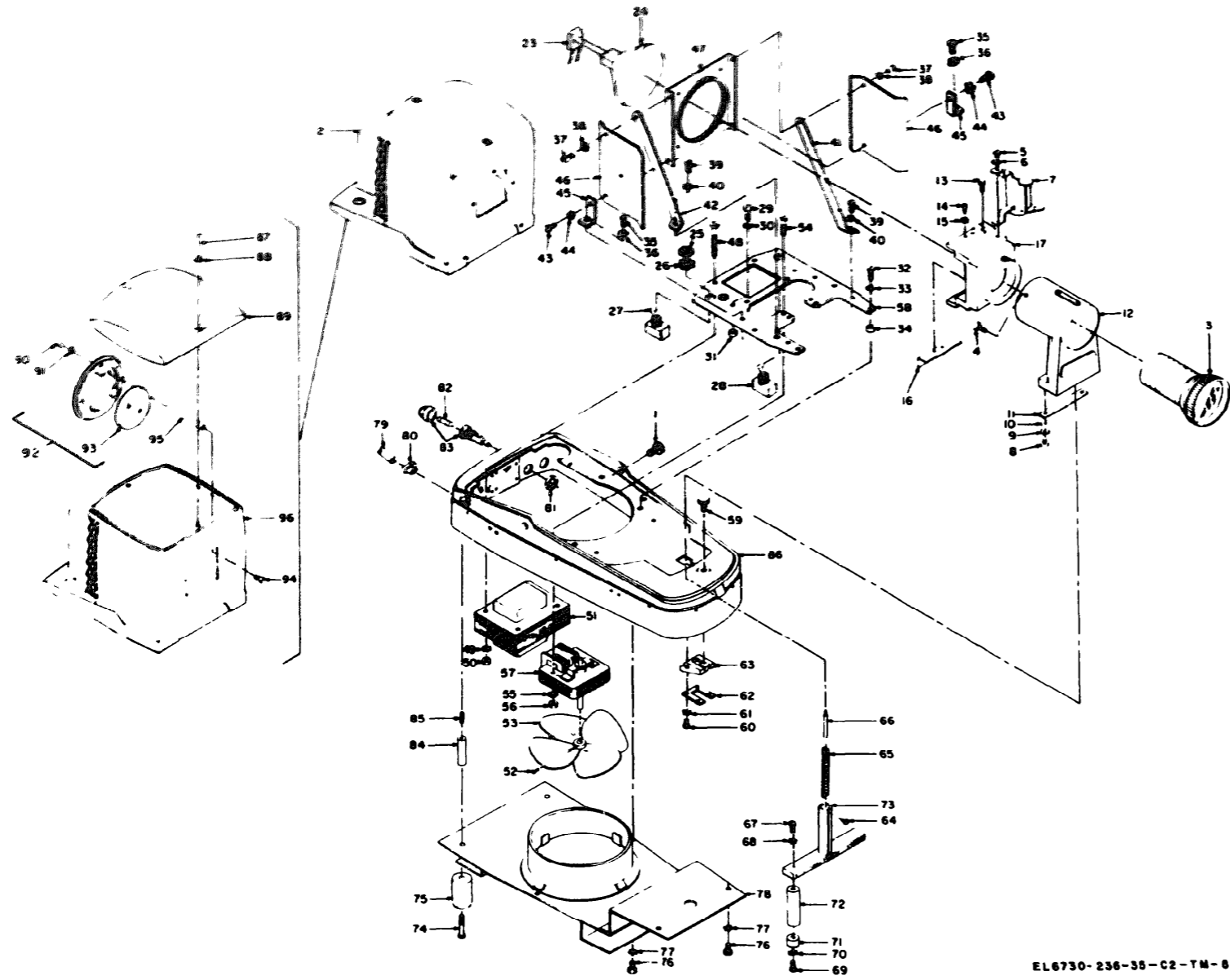


Figure B-3. Projector assembly-exploded view

EL 6730-236-35-C2-TM-8

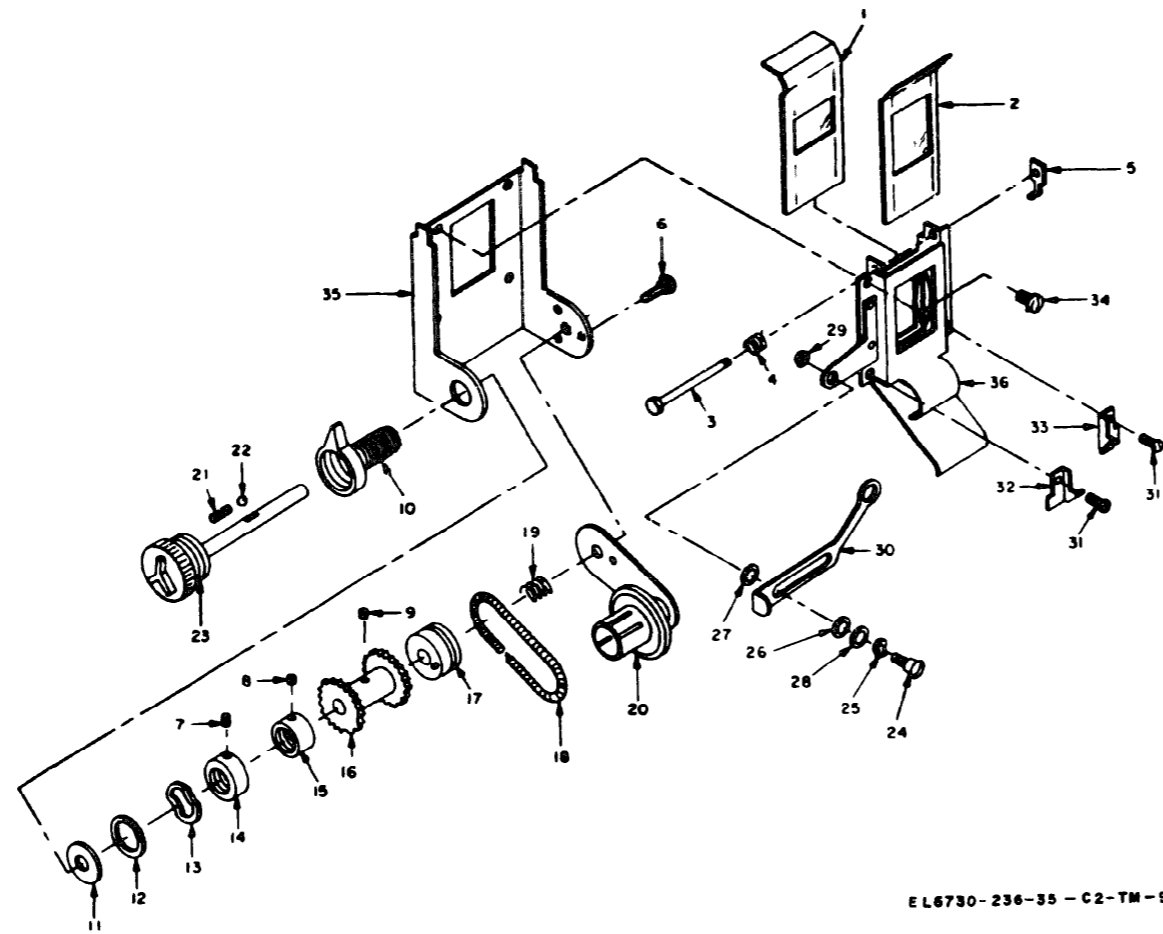
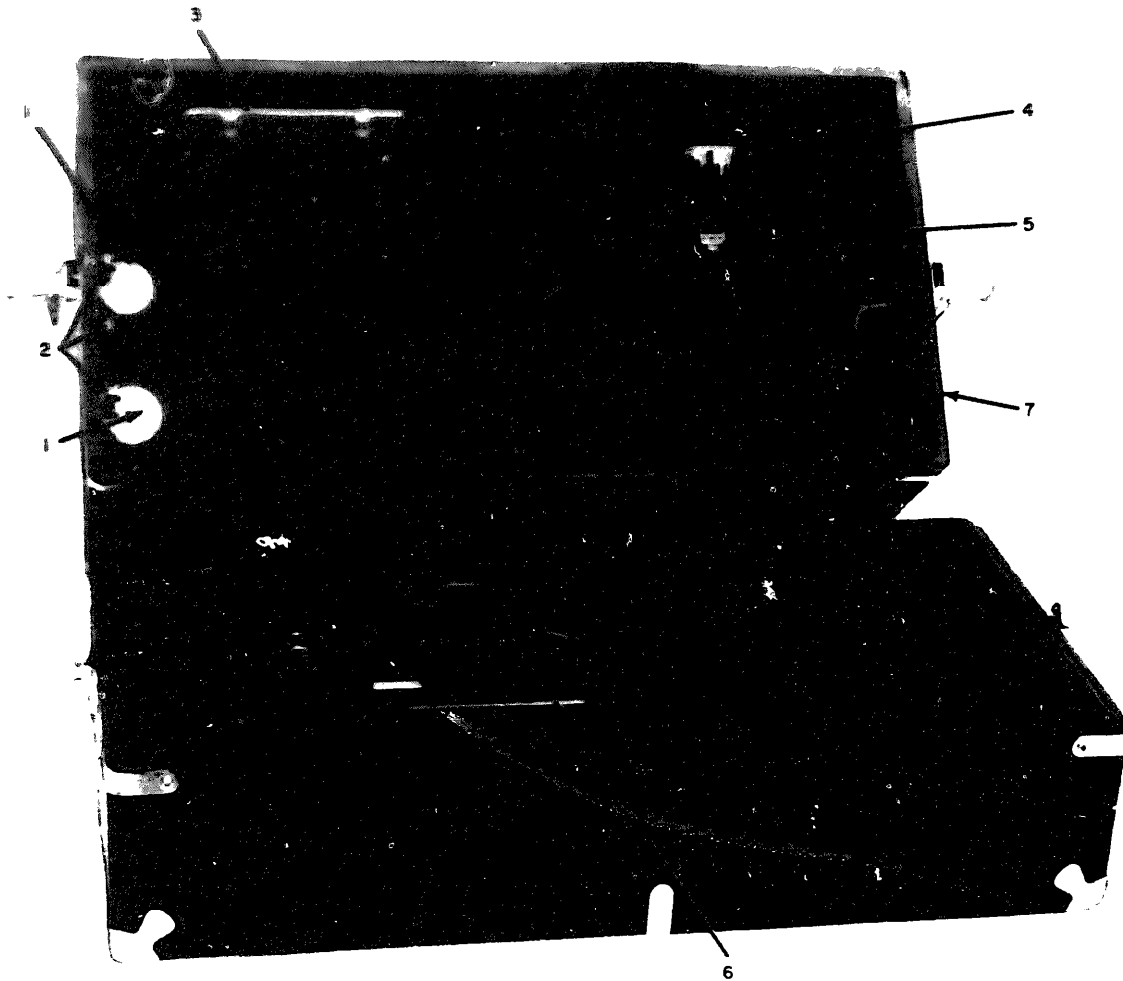


Figure B-4. *Film strip mechanism assembly - exploded view*



EL 6730-236-35-C2-TM-10

Figure B-5. Case photograph equipment.

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ARNG None

USAR None

For explanation of abbreviations used, see AR 310-50

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11-216
11-226
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11-500 (AA-AO FJ-FL RK)
29-134

NG None

USAR None

For explanation of abbreviations used, see AR 110-4

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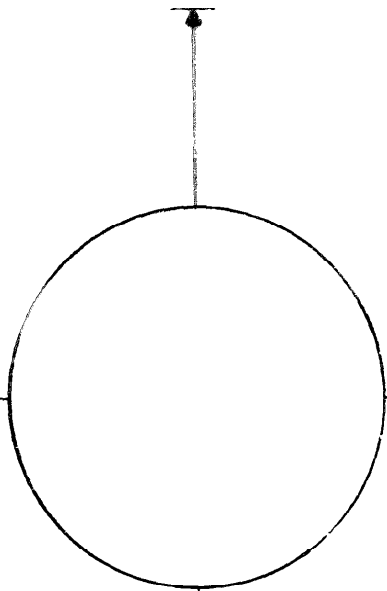
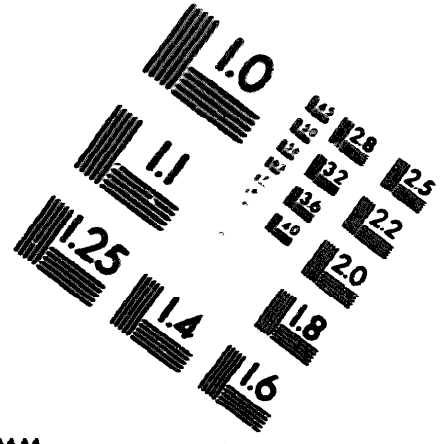
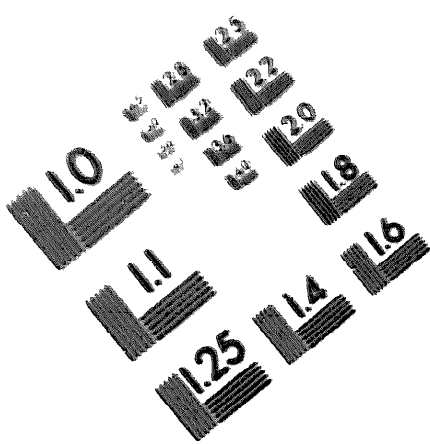
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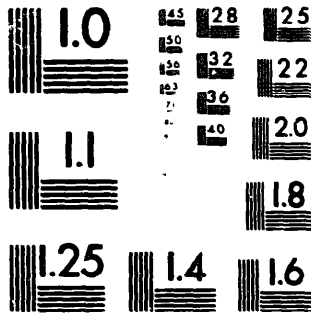
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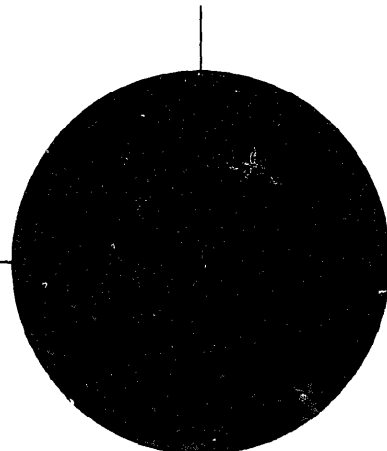
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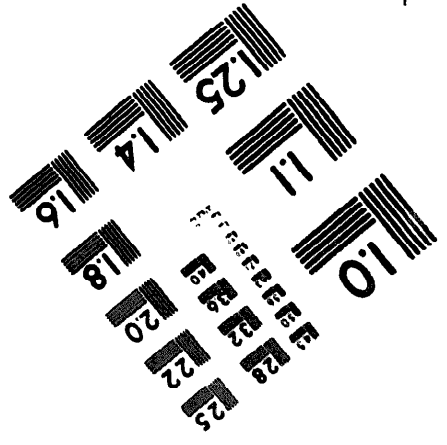
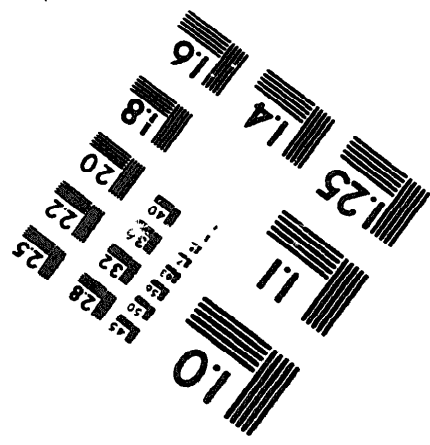
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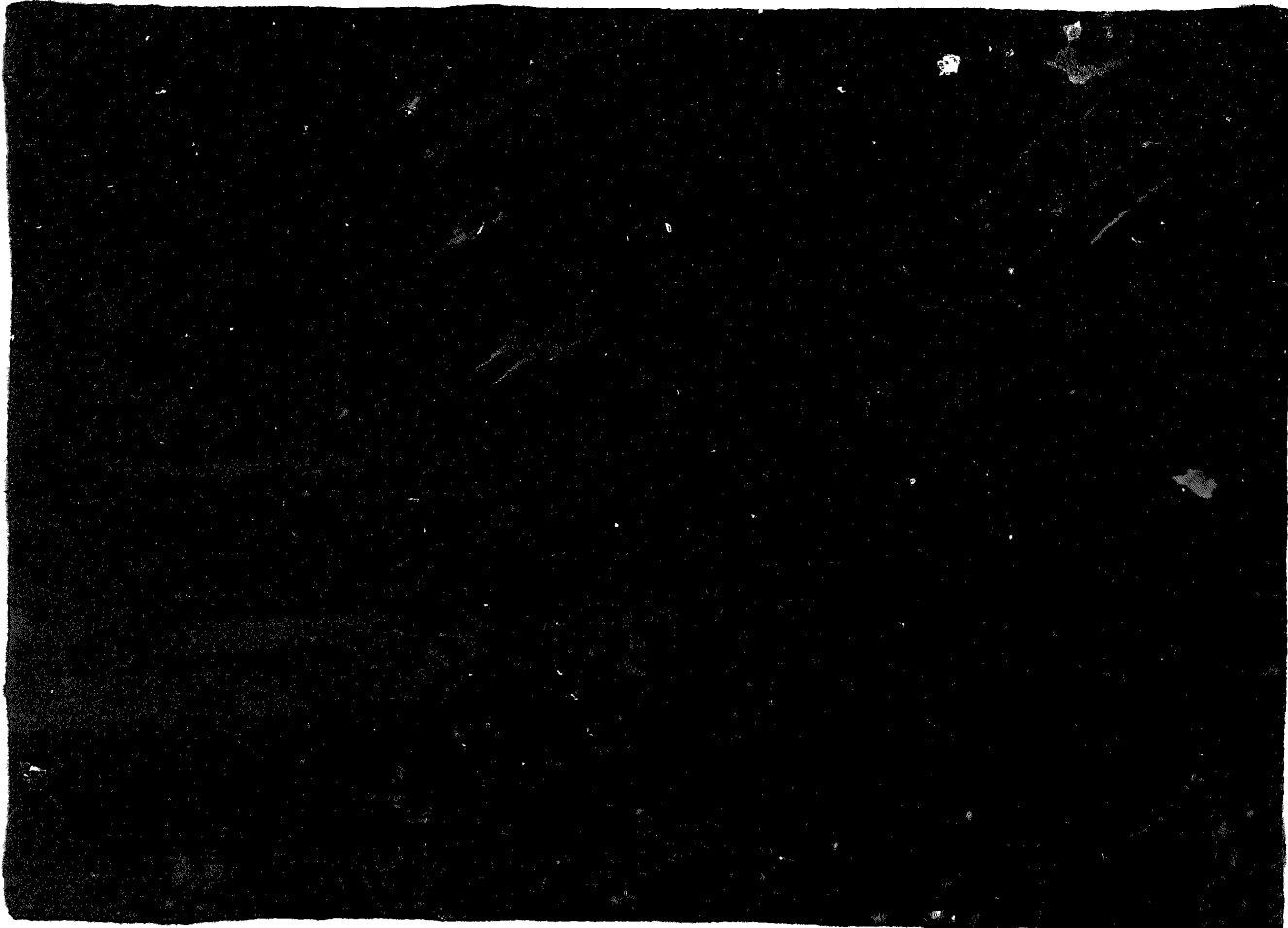
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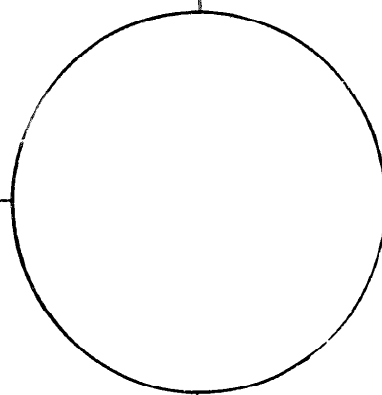
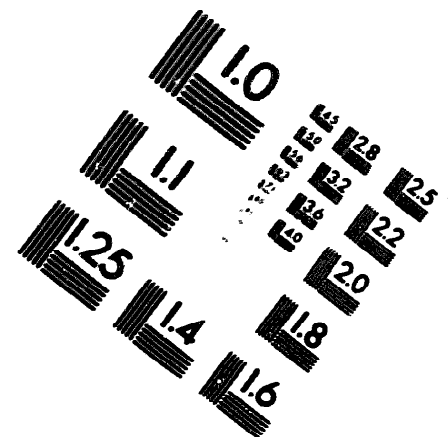
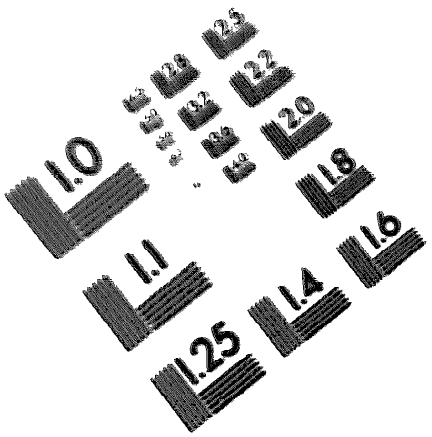
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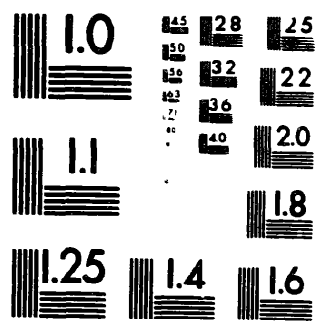
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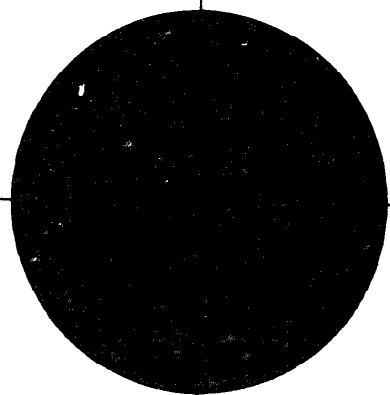
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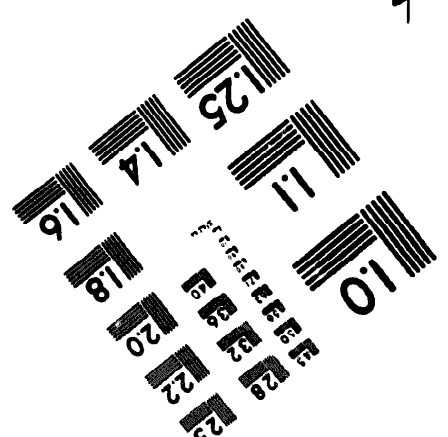
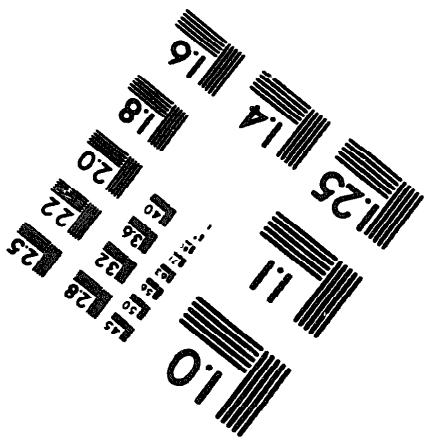
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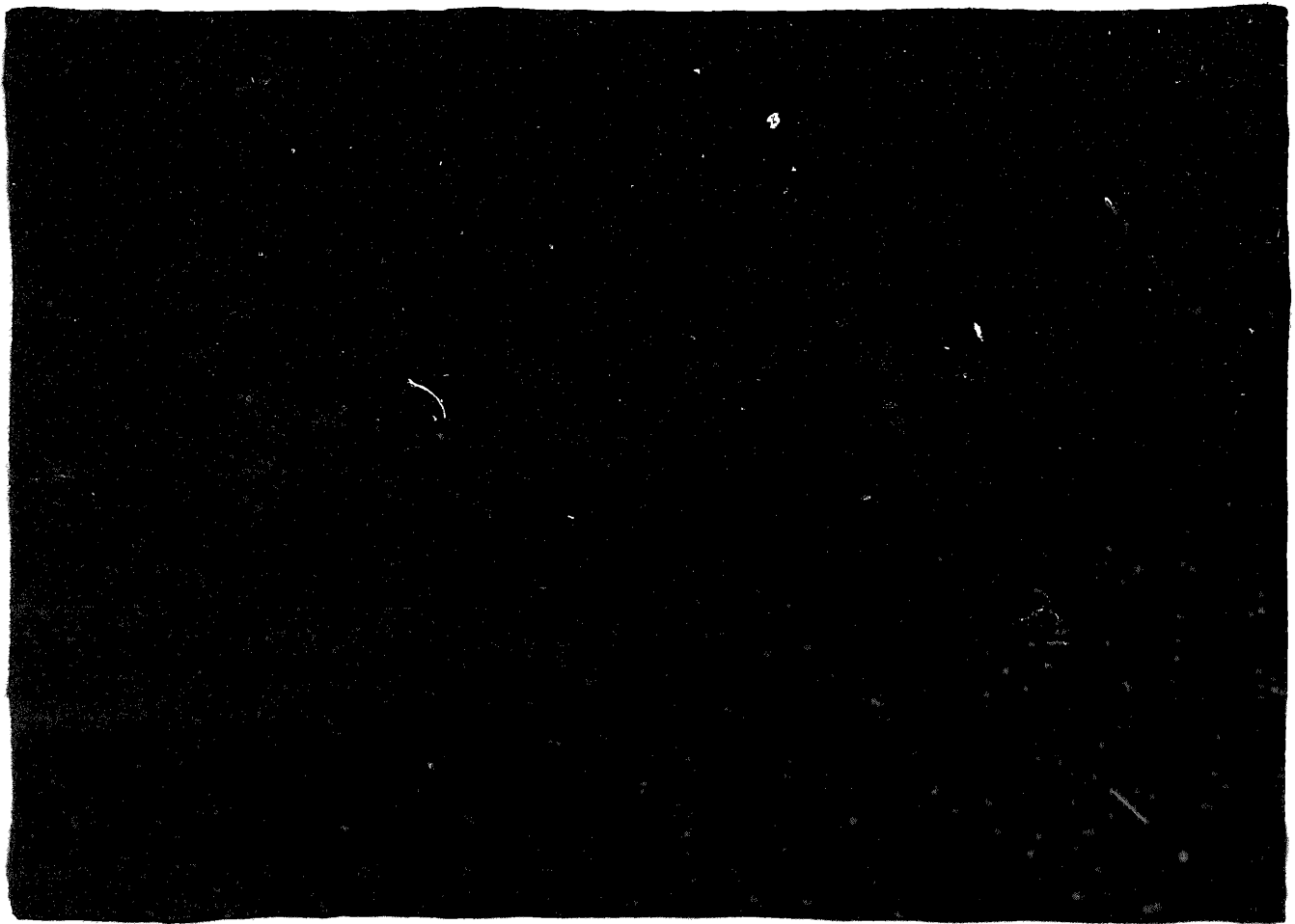
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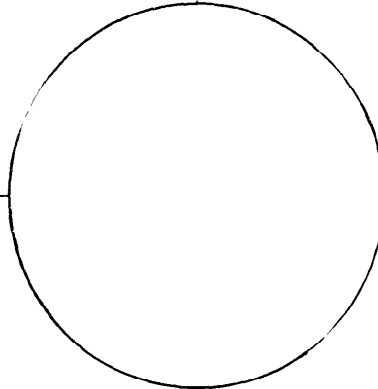
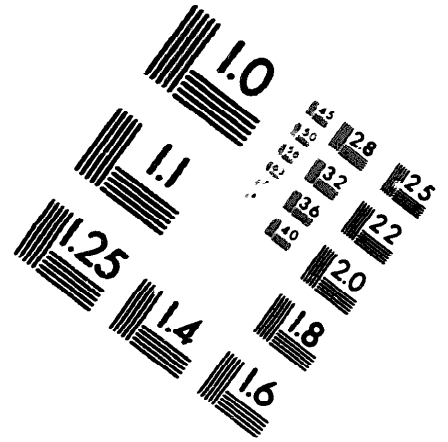
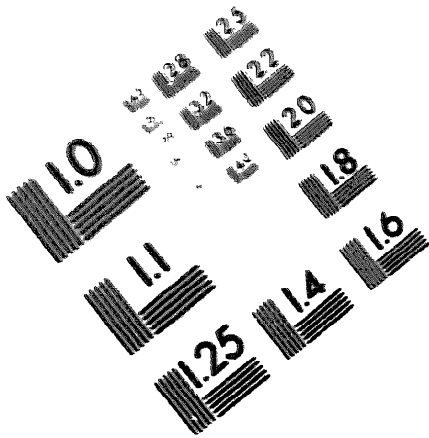
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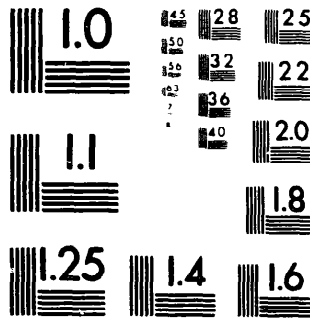
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200 MM

250 MM

