CAMERAS

KS-14776 L1 AND L2

(TRAFFIC REGISTER CAMERAS)

PIECE-PART DATA AND REPLACEMENT PROCEDURES

1. GENERAL

1.01 This section covers the information necessary for ordering parts to be used in the maintenance of the KS-14776 L1 and L2 traffic register cameras. It also covers approved procedures for replacing these parts. The KS-14776 L1 camera is arranged for mounting on 19-inch mounting plates and the L2 camera on 23-inch mounting plates. Otherwise, the L1 and L2 cameras are the same. The KS-14776 camera includes the KS-16007 camera.

1.02 The section is reissued to:

- Add information on the KS-19438 L3 shutter
- Add new Fig. 15.

1.03 Part 2 of this section covers the piece-part numbers of the parts which it is practicable to replace in the field in the maintenance of the camera. No attempt should be made to replace parts not designated. Part 2 also contains explanatory figures showing the parts.

1.04 Part 3 of this section covers the approved procedures for the replacement of parts listed in Part 2.

1.05 In replacing parts of the KS-14776 camera, do not disturb the lens-shutter assembly or the mirror mounting pan and its mounting screws. If replacement of these parts appears necessary, refer the matter to the supervisor since consideration should be given to returning the camera to the Western Electric Company.

1.06 The camera serial number is located at the left end of the designation strip holder in the hood and may be read by opening the hood cover. The serial number may also be found on the cover of the KS-16007 camera.

1.07 A locking device was originally provided at the end of each leg of both mounting handles of cameras with serial numbers 1 through 3850. The locking device was eliminated on subsequent cameras. On handles with the locking device, the locking bolt may be removed, if desired, by removing the locking bolt setscrew and withdrawing the bolt from the sleeve.

1.08 All cameras manufactured after September 1972 will have a B-993576 terminal insulator added to the chassis assembly (Fig. 1) to prevent short-circuiting. This insulator should be installed under the terminal block of units presently in the field only when field repair of the unit is attempted.

2. PIECE-PART DATA

2.01 The figures included in this part show the various piece parts in their proper relation to other parts of the camera. The piece-part numbers of the various parts are given together with the names of the parts listed by the Western Electric Merchandise Department.

2.02 Information enclosed by parentheses is not ordering information. This information may be references to notes, parts referred to in other portions of the section and not considered replaceable, or part names in general use in the field if these names differ from those assigned by the manufacturer.

2.03 When ordering parts for replacement purposes, proceed as follows.

(a) If a part is identified by a code, specification, or piece-part number, give both the number and name of the part; for example, 186A network, KS-19346 L1 guard, or P-182193 screw.

(b) If a part is identified by a drawing number and name or by a commercial designation, give this information and, in addition, give the

specification number and name of the apparatus for which the part is required; for example, B-124534 clamp for the KS-14776 L1 camera, B-124347 Item 74 plug for the KS-16007 camera, or No. 4 x 1/8 RH tapping STL screw Parker Kalon type F for KS-19346 L1 guard.

(c) If the manufacturer's name is given in connection with the ordering information, include this when ordering the part.

(d) Do not refer to the BSP number or to information shown in parentheses following the piece-part number.

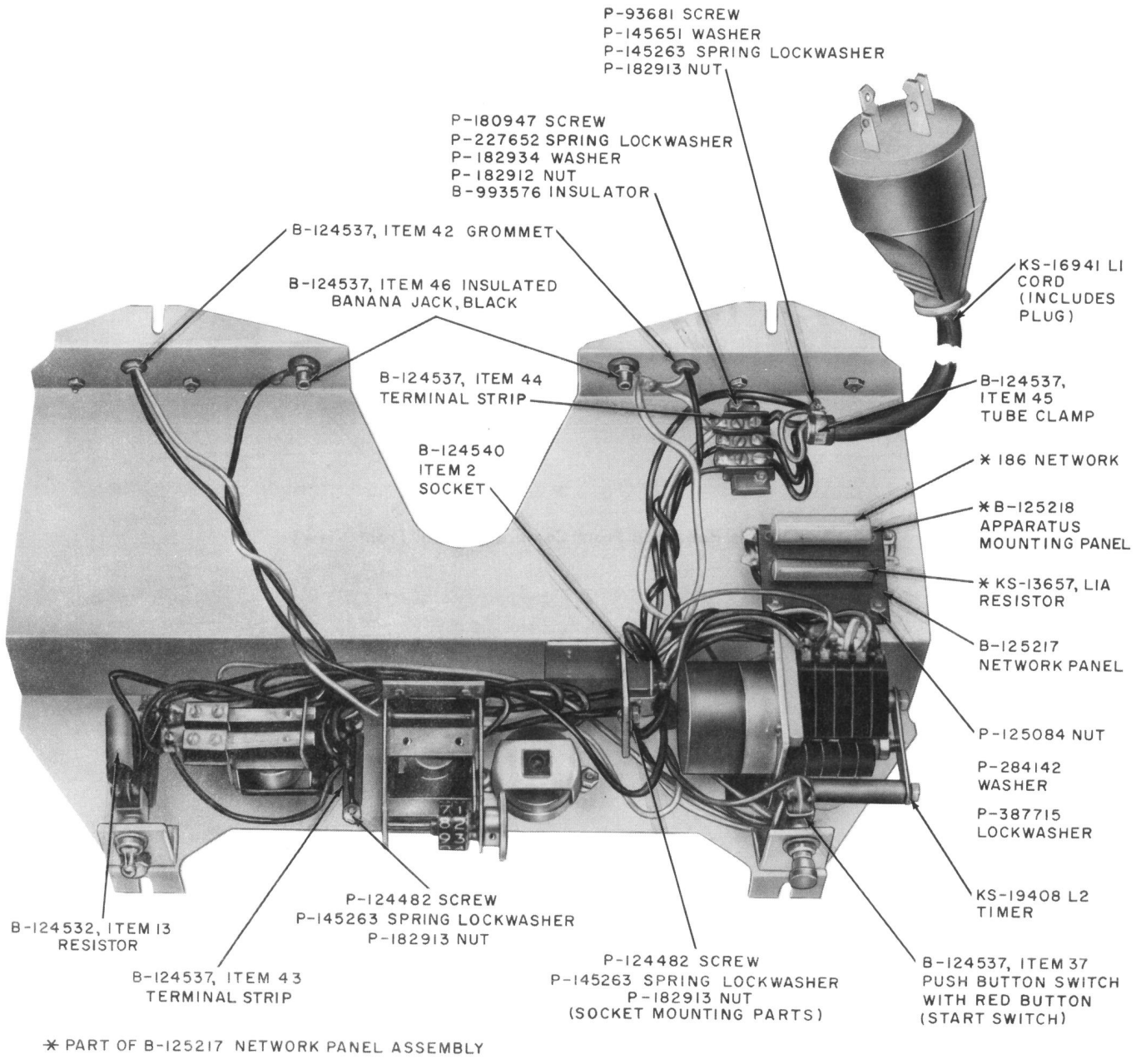


Fig. 1—Chassis Removed From Camera (Top View)

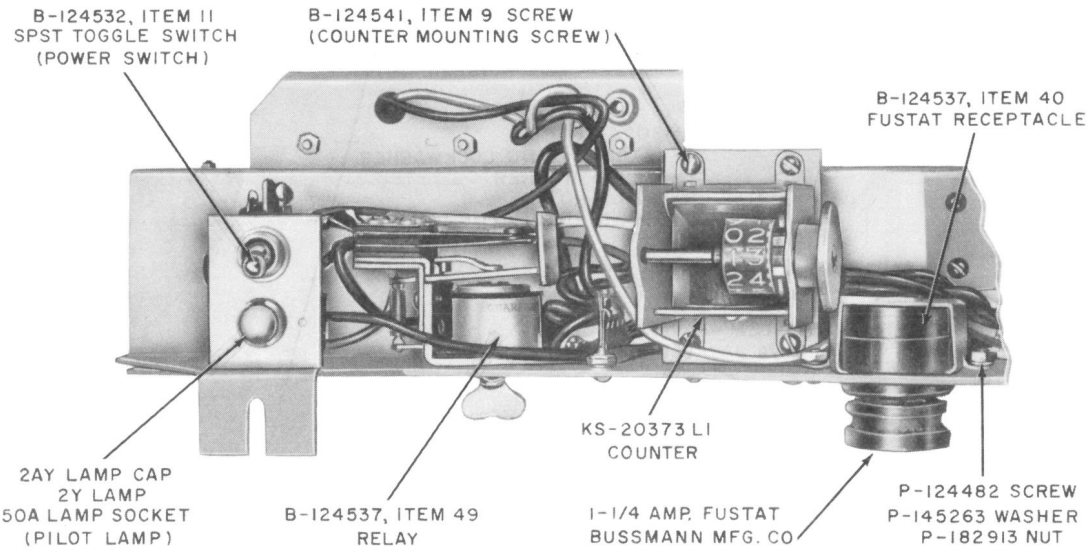


Fig. 2—Chassis Removed From Camera (Partial Front View)

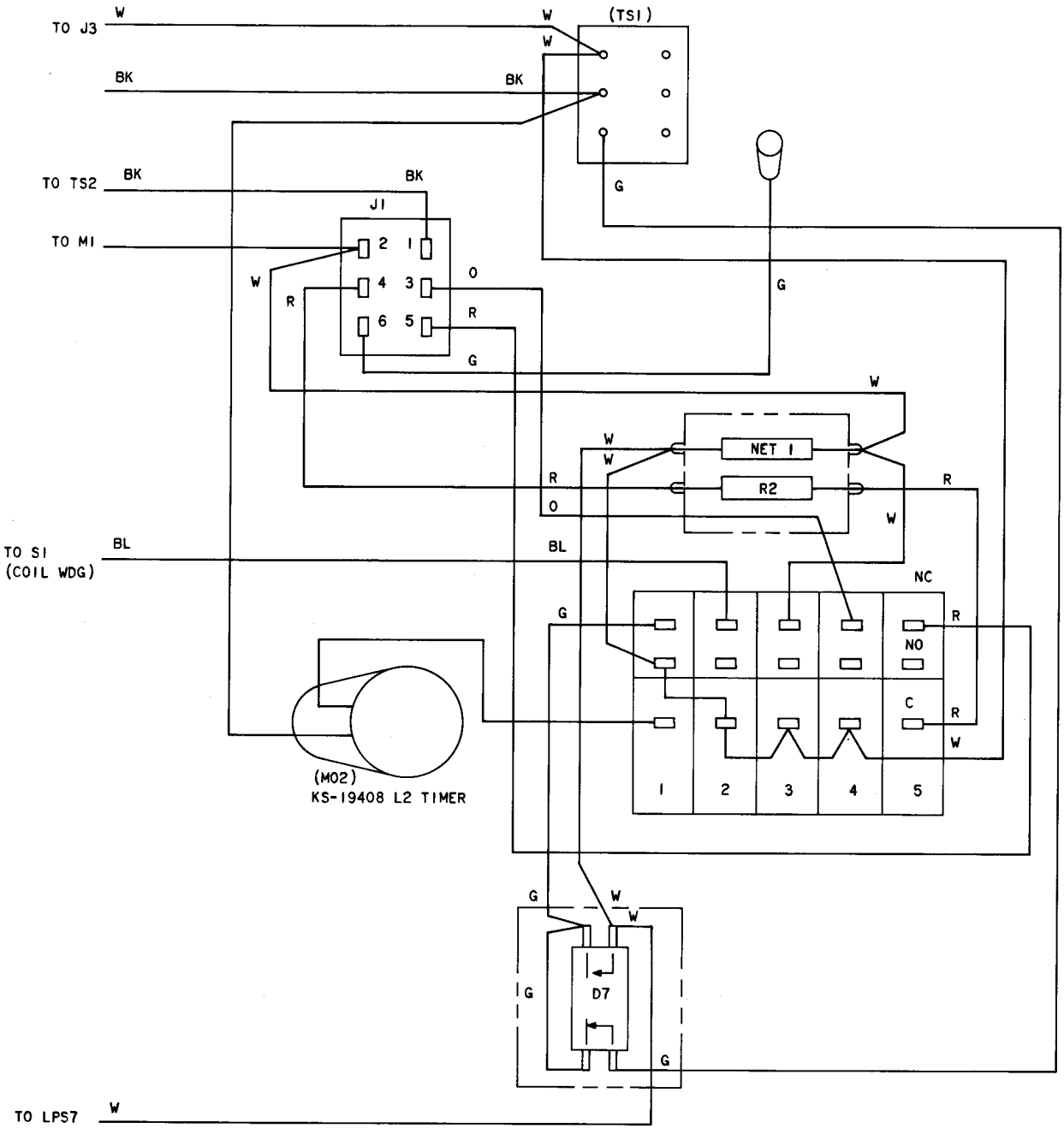


Fig. 3—KS-19408 L2 Timer—Wiring Diagram

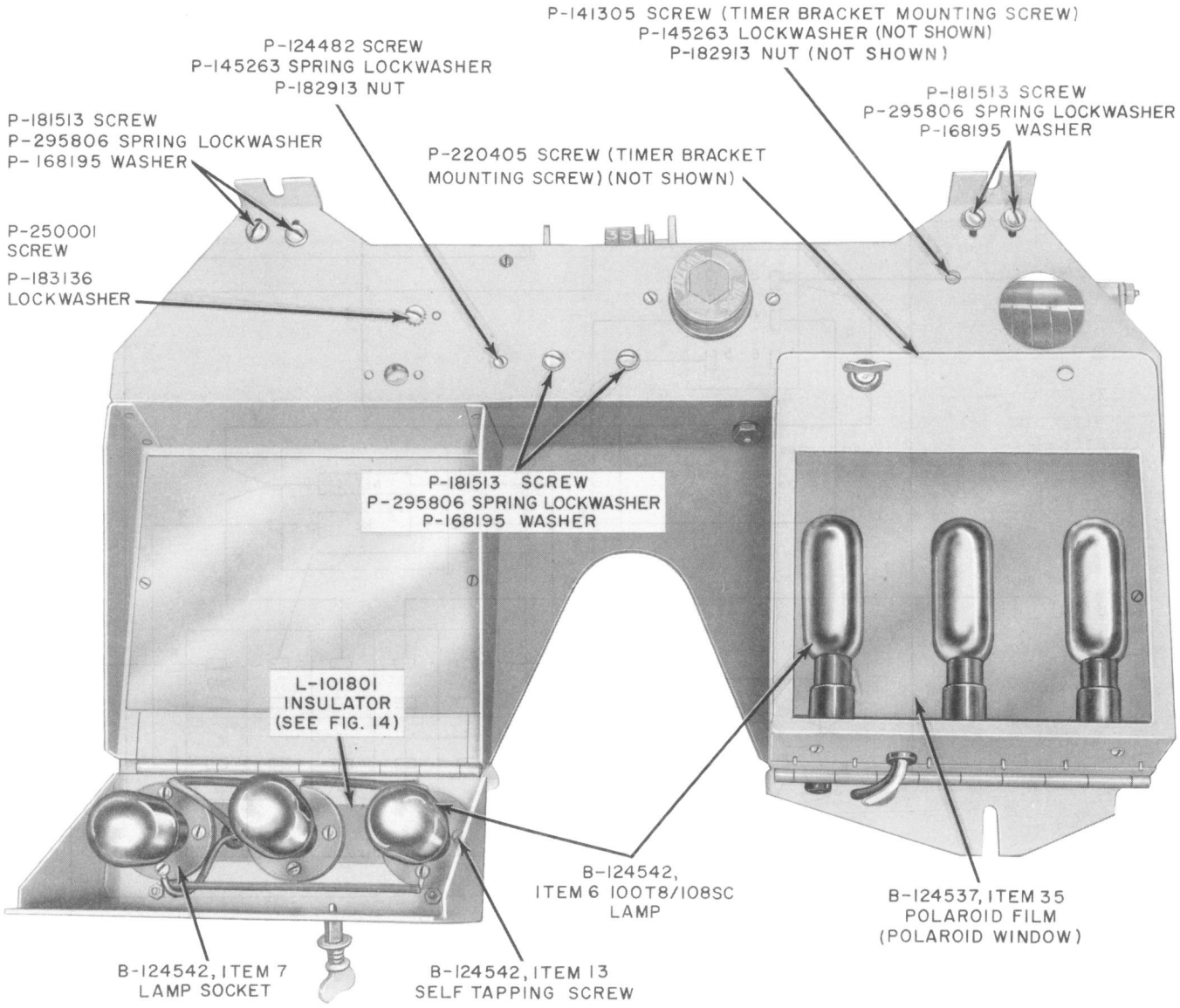


Fig. 4—Chassis Removed From Camera (Bottom View)

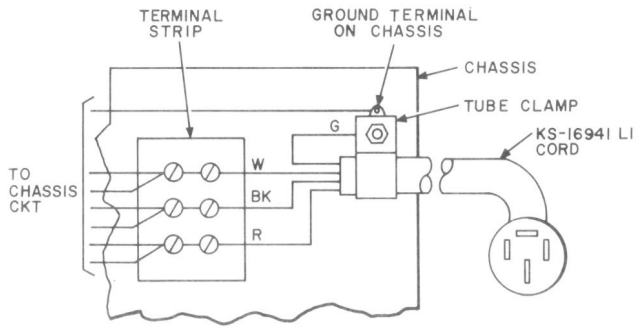


Fig. 5—KS-16941 L1 Cord Wiring Schematic

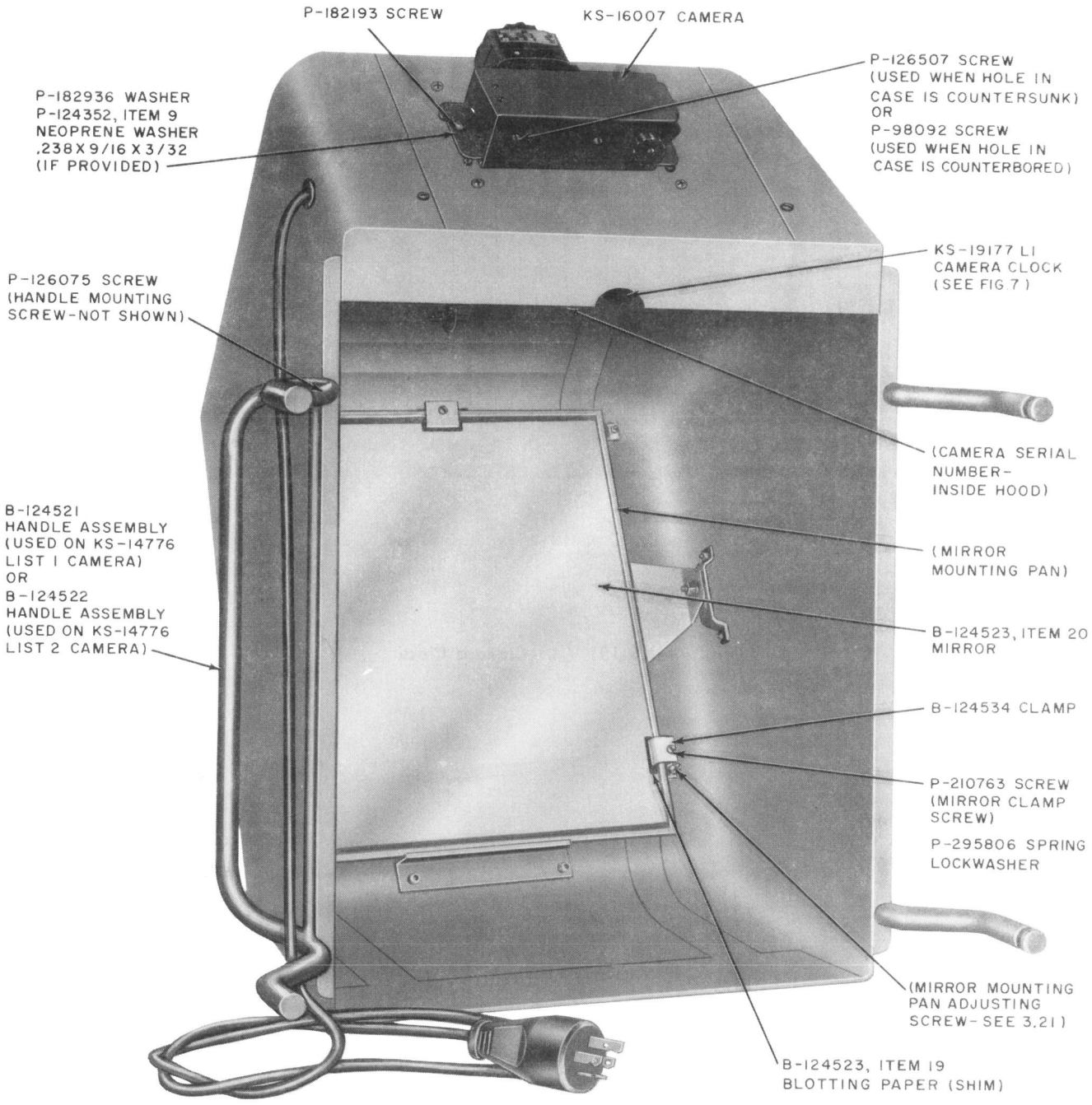


Fig. 6—KS-14776 Camera

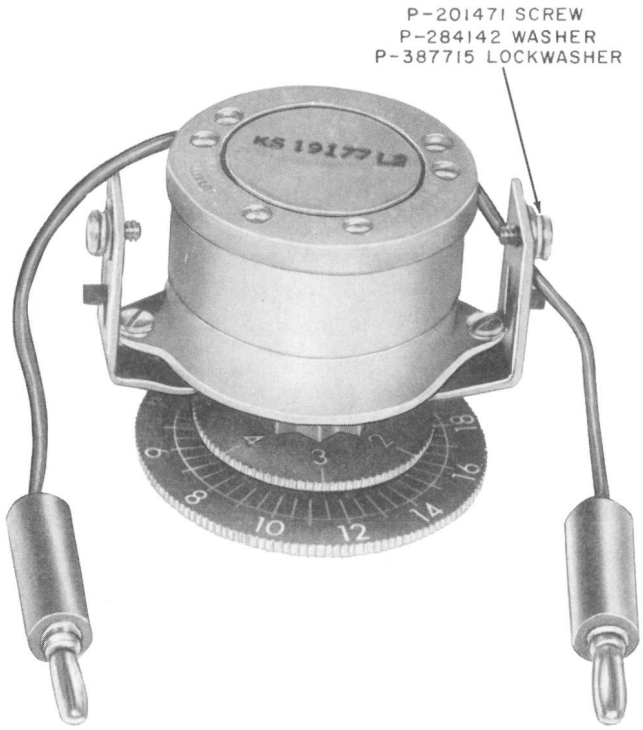


Fig. 7—KS-19177 L1 Camera Clock

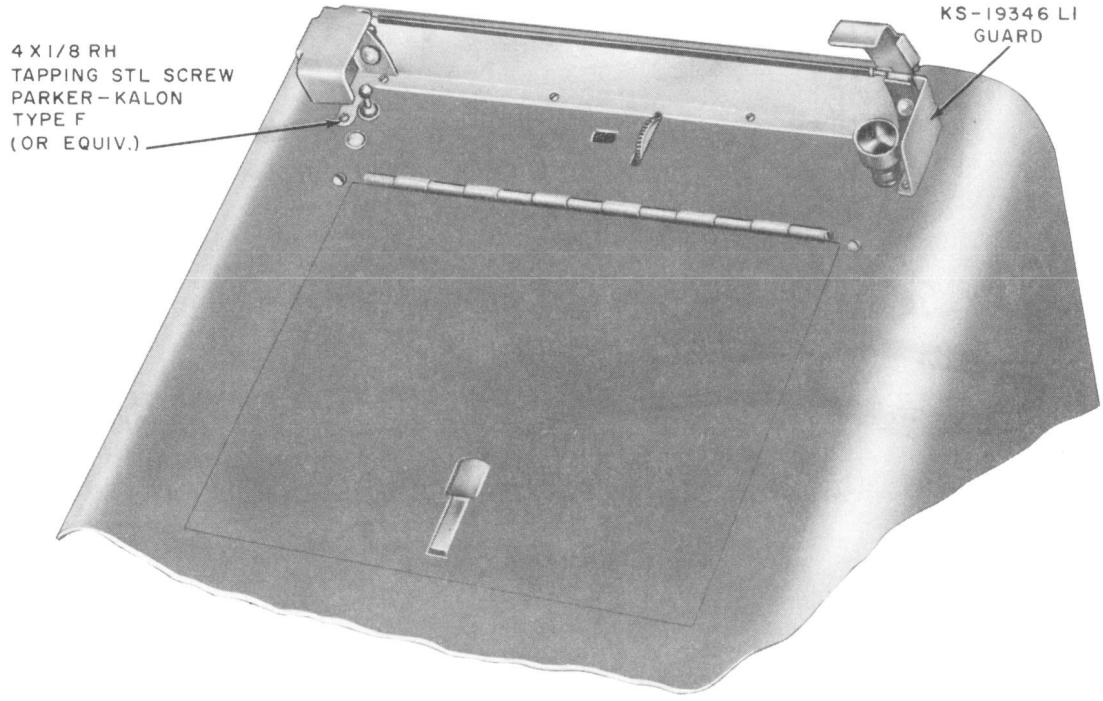


Fig. 8—KS-19346 L1 Guard

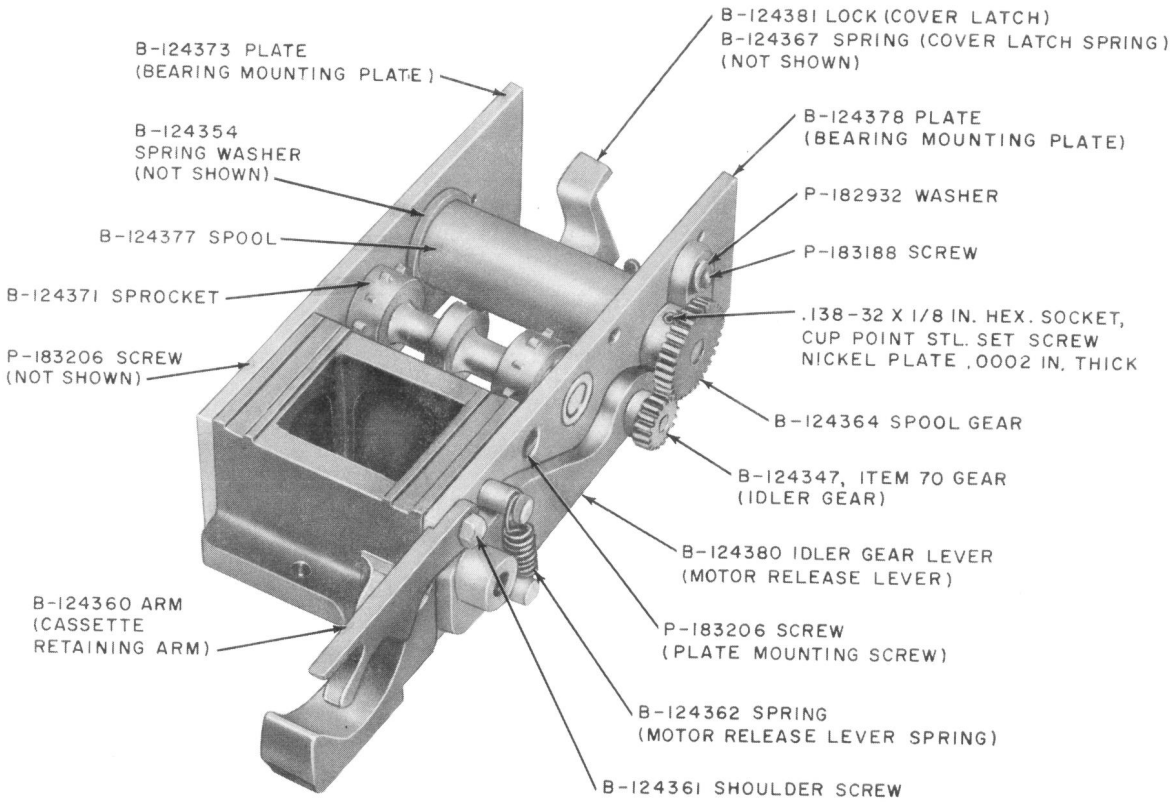


Fig. 9—Sprocket and Associated Parts

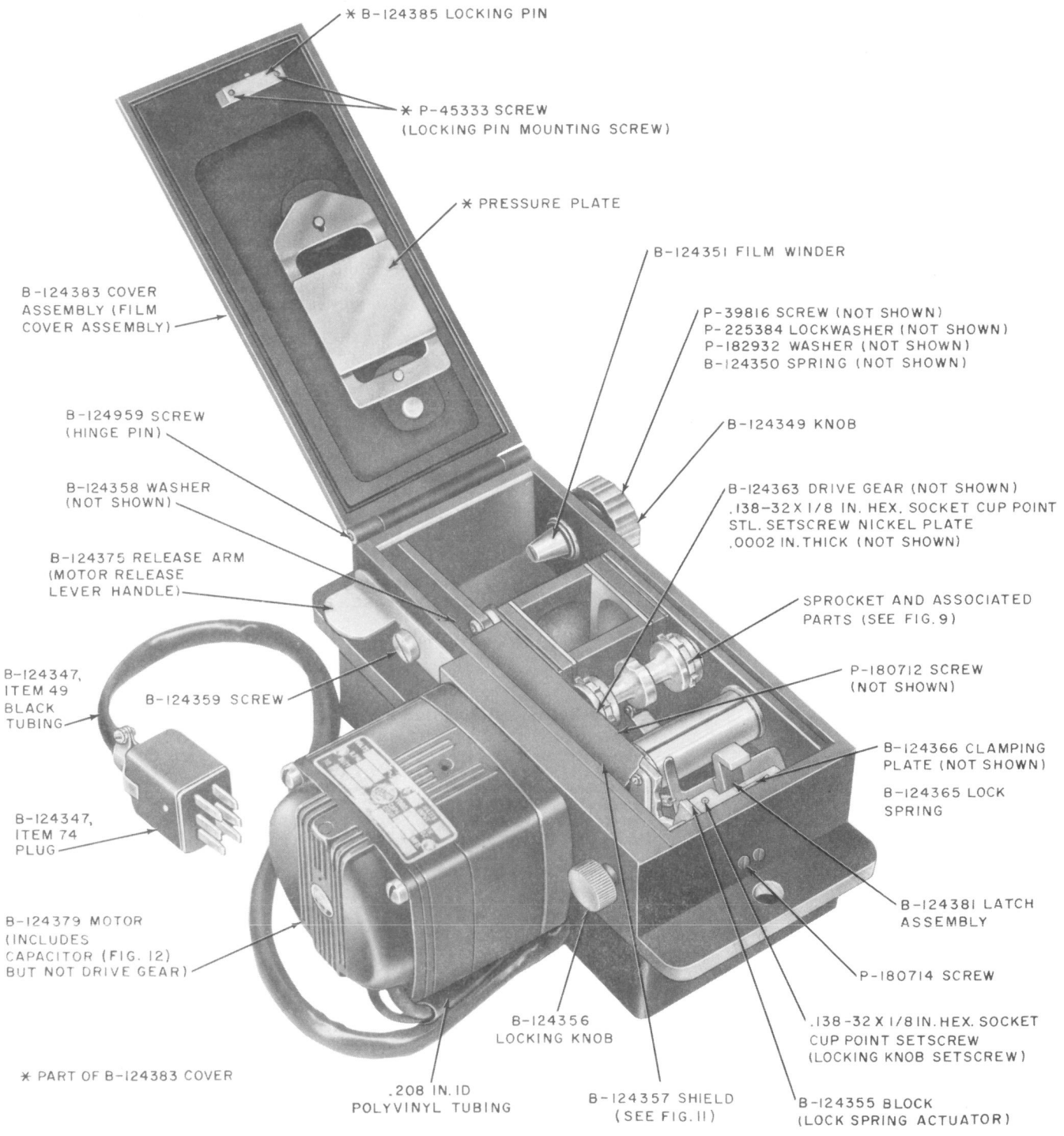
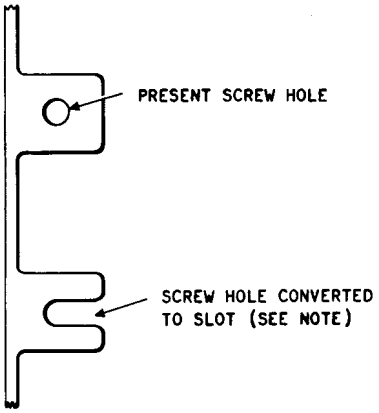


Fig. 10—KS-16007 Camera



NOTE:
A MODIFICATION IS SUGGESTED TO CHANGE THE HOLES IN THE GEAR SHIELD TO OPEN-ENDED SLOTS, SO THAT THE SHIELD CAN BE REMOVED BY LOOSENING THE SCREWS AND SLIDING IT OUT. REMOVE THE SHIELD USING THE KS-6854 SCREWDRIVER AND A SMALL MAGNET TO PREVENT THE SCREWS FROM DROPPING INTO THE CAMERA. DIAGONAL PLIERS CAN BE USED TO CONVERT THE HOLES IN THE SOFT METAL INTO SLOTS. CARE SHOULD BE TAKEN WHEN CUTTING THE SLOTS TO AVOID TOO LARGE AN OPENING. THE WIDTH OF THE SLOT SHOULD BE THE SAME SIZE AS THE PRESENT HOLE IN THE SHIELD. GEAR SHIELDS ON NEW CAMERAS WILL HAVE THE MODIFICATION.

Fig. 11—B-124357 Gear Shield

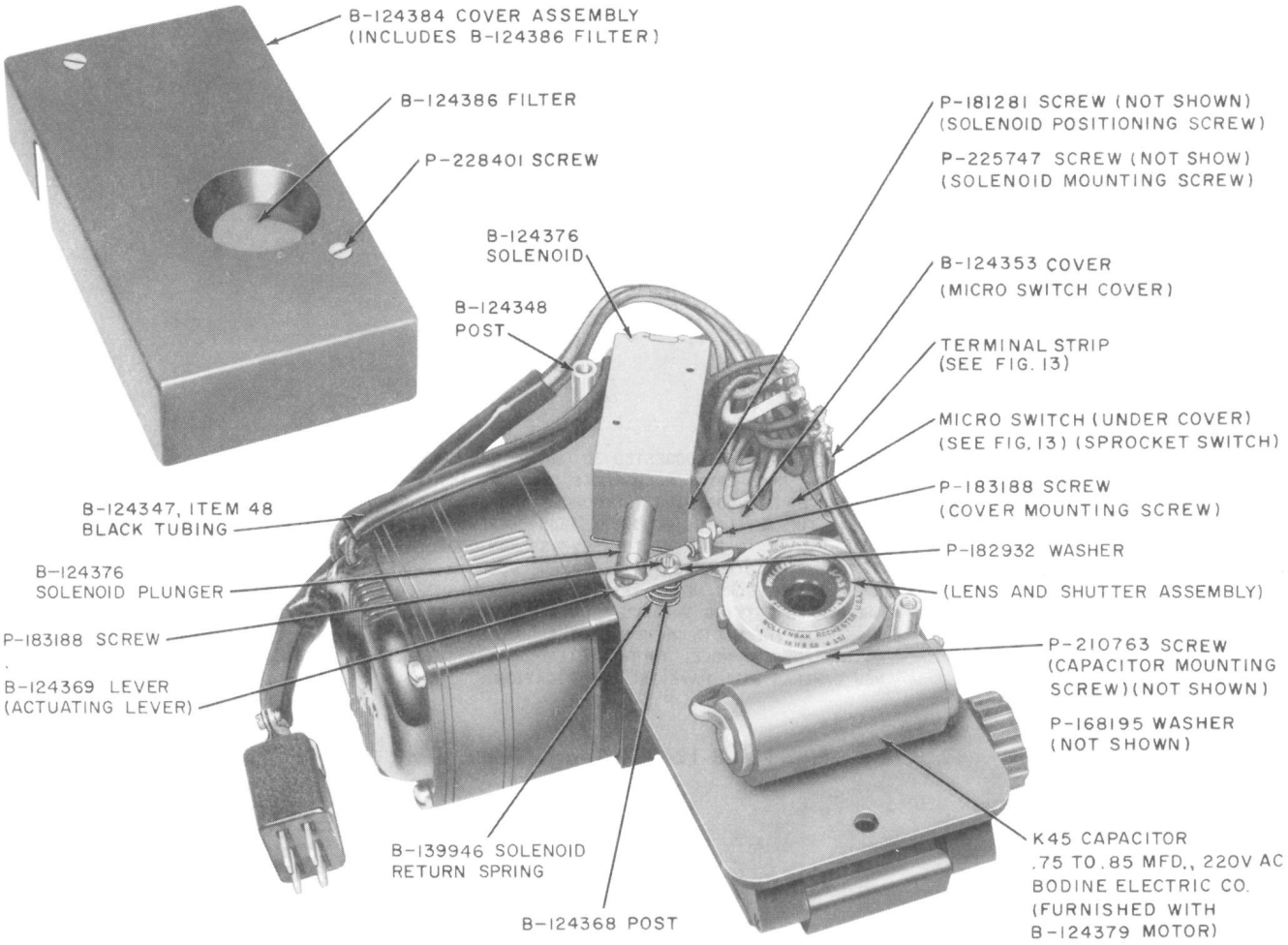


Fig. 12—KS-16007 Camera With B-124384 Cover Assembly Removed From Camera

3. REPLACEMENT PROCEDURES

3.01 *List of Tools and Test Apparatus*

CODE OR SPEC NO.	DESCRIPTION
TOOLS	
33	11/32-inch hex. single-end socket wrench
319B	Lamp cap extractor
417A	1/4- and 3/8-inch hex. open double-end flat wrench
418A	5/16- and 7/32-inch hex. open double-end flat wrench
474A	3/16- and 1/4-inch hex. open double-end flat wrench
553A	Lamp extractor
KS-6320	Orange stick
KS-6854	Screwdriver
KS-8511	Tweezers
R-1102	Fiber spudger
R-2959	1/16-inch Allen wrench

CODE OR SPEC NO.	DESCRIPTION
TOOLS	
—	B long-nose pliers
—	Combinations pliers
—	Combination pliers
—	3-inch C screwdriver
—	4-inch E screwdriver
—	5-inch E screwdriver
—	5-inch diagonal pliers
—	No. 2012 Stanley screwdriver
—	Small magnet
TEST APPARATUS	
81A	Test set
141	Cord tips (four required)
360	Tools (four required)
893	Cords (two required)

3.02 After making any replacement of parts of the KS-14776 camera, the part or parts replaced shall meet the readjust requirements involved as specified in Section 030-302-701. Other parts, the adjustments of which may have been disturbed by the replacing operations, shall be checked to the readjust requirements, and an overall operation check of the KS-14776 camera shall be made.

3.03 No replacement procedures are specified for screws or parts if the replacement procedure consists of a simple operation.

KS-14776 Camera Excluding KS-16007 Camera

3.04 ***General:*** To replace all parts under this heading except those listed below, it is necessary to remove the chassis from the hood.

Pilot Lamp and Lamp Cap—3.18

KS-19177 L1 Clock—3.19

Polaroid Window—3.20

Mirror—3.21

KS-19346 L1 Guard—3.22

To remove the chassis, proceed as follows.

(1) Make sure that power is removed from the camera.

(2) Using the 5-inch E screwdriver, remove the two screws which mount the KS-16007 camera on the hood.

(3) Lift the camera from the hood, and remove the plug on the camera cord from the socket inside the hood. Place the KS-16007 camera where it will not be damaged.

(4) Protect the mirror in the hood from damage by placing several layers of paper or cloth over it.

(5) Remove the knob from the start switch by pulling outward on it.

(6) Remove the plugs on the clock cords from the jacks in the hood.

(7) Using the 4-inch E screwdriver, remove the two chassis mounting screws and associated nuts and washers at the front of the hood.

(8) While holding the chassis in position, remove the two chassis mounting screws and associated nuts and washers at the rear of the hood. Gradually lower the chassis while feeding the power cord into the hood, and then remove the chassis from the hood.

(9) If it is desired to completely disassociate the chassis from the hood, disconnect the power cord at the terminal block with the 3-inch C screwdriver.

(10) After completing replacement of parts, remount the chassis and KS-16007 camera in the reverse order of removal.

3.05 ***Start Switch:*** Fig. 1—Tag and unsolder the leads from the switch terminals. Remove the knurled nut using the combination pliers and remove the switch. Set the hexagonal nut of the new switch at approximately the same position on the switch mounting stud as that of the nut on

the switch being replaced. Mount the new switch, and securely tighten the knurled nut with the combination pliers. Connect and solder the leads to the proper terminals.

3.06 ***Power Switch:*** Fig. 2—Tag and unsolder the leads and the resistor from the switch terminals. Remove the knurled nut using the combination pliers and remove the switch. Set the hexagonal nut of the new switch at approximately the same position on the switch mounting stud as that of the nut on the switch being replaced. Mount the new switch, and securely tighten the knurled nut with the combination pliers. Connect and solder the leads and resistor to the proper terminals of the switch.

3.07 ***Socket of Pilot Lamp:*** Fig. 2—Using the 5-inch E screwdriver, remove the left-hand screw from the pilot lamp mounting bracket and slightly loosen the other screw. Swing the bracket so that the terminals are accessible, and then unsolder the resistor and leads from the lamp terminals. Swing the mounting bracket further to gain access to the lamp socket mounting screw, and remove the socket using the 3-inch C screwdriver. Mount the new socket, and solder the leads and resistor to the terminals. Swing the mounting bracket back in position. Securely tighten the mounting screws.

3.08 ***Counter:*** Fig. 2—Remove the counter mounting screws with the 3-inch C screwdriver. Unsolder the leads. Connect and solder the leads of the new counter to the proper terminals. Mount the new counter on the mounting bracket, and securely tighten the screws.

3.09 ***Relay:*** Fig. 2—Using the 4-inch E screwdriver, remove the relay mounting screw and associated lockwasher. Tag and unsolder the leads from the relay terminals. Connect and solder the leads to the proper terminals of the new relay. Mount the relay, making sure that the lockwasher is on the screw and the screw is securely tightened.

3.10 ***KS-19408 L2 Timer:*** Fig. 1

(1) ***General:*** The timer originally furnished and the KS-19408 L1 timer have been superseded by the KS-19408 L2 timer. When a timer or any parts thereof require replacement, the entire timer should be replaced by a KS-19408 L2 timer as covered in (2).

(2) ***Timer:*** To replace the timer, tag and disconnect the timer leads. Unlatch and swing open the lamp mounting frame at the timer end of the chassis. Using the 5-inch E screwdriver, remove the flathead timer bracket mounting screw. Remove the other timer mounting screw, lockwasher, and nut. Mount the new timer in reverse order of removal, and connect the timer leads as shown in Fig. 3.

3.11 ***Network Panel:*** Fig. 1—Using the 33 socket wrench, remove the panel mounting nuts, washers, and lockwashers. Tag and unsolder the leads to the panel terminal. Solder the leads to the proper terminals on the new panel, and mount the panel making sure that the washers and lockwashers are under the nuts.

3.12 ***Resistor and Network:*** Fig. 3—Using the 33 socket wrench, remove the panel mounting nuts, washers, and lockwashers. Unsolder the connections to the part to be replaced. Substitute the new part and solder the connections. Remount the panel.

3.13 ***Fustat Receptacle:*** Fig. 2—Remove the Fustat. Using the 4-inch E screwdriver, remove the Fustat receptacle mounting screws and associated nuts and washers. Note the terminals to which the Fustat receptacle leads are connected, and then unsolder the leads. Connect and solder the leads of the new receptacle to the proper terminals, and mount the receptacle and Fustat.

3.14 ***Socket:*** Fig. 1—Remove the mounting bracket screws and associated nuts and washers using the 4-inch E screwdriver. Move the bracket to a position convenient for disconnecting the leads to the socket. Tag and unsolder the leads. Using the 4-inch E screwdriver, remove the socket mounting screws and associated nuts and washers. Mount the new socket on the bracket with terminals 1 and 2 at the top, and securely tighten the mounting screws. Connect and solder the leads to the proper terminals of the socket. Remount the bracket on the chassis, and securely tighten the screws.

3.15 ***Banana Jack:*** Fig. 1—Remove the jack mounting nut with the 417A wrench. Remove the terminal and insulating washer. Remove the jack. Substitute the new jack, and place the insulating washer on the jack with the shoulder of the washer in the mounting hole. Place

the terminal and nut on the jack, and securely tighten the nut.

3.16 ***Lamp Socket:*** Fig. 4—Unlatch and swing open the lamp mounting frame. Remove the lamp from the socket. Using the 3-inch C screwdriver, disconnect the leads from the socket and remove the socket mounting screws. Remove the socket. Using the 81A test set and two 893 cords with 360A tools and 141 cord tips at each end, determine which terminal screw of the new socket is connected to the shell of the socket. Mount the socket with this terminal screw adjacent to the lamp frame hinge. Reconnect the leads to the socket.

3.17 ***KS-1694 L1 Cord:*** Fig. 1—Remove the tube clamp mounting nut with the 418A wrench while holding the clamp mounting screw with the 3-inch C screwdriver from the rear of the panel. Remove the washers and clamp. Remove the green cord conductor from the tube clamp mounting screw. Disconnect the three cord conductors from the terminal strip using the 3-inch C screwdriver. Transfer the tube clamp to the new cord. Connect the red, white, and black conductors of the new cord to the terminal strip as shown in Fig. 5. Form a loop in the green conductor, and then hook the loop around the tube clamp mounting screw. Remount the clamp, washers, and clamp mounting nut. Securely tighten the mounting nut.

3.18 ***Pilot Lamp and Lamp Cap:*** Fig. 2—Remove the lamp cap with the 319B lamp cap extractor. If the lamp is to be replaced, remove it with the 553A lamp extractor and mount the new lamp in the socket. Remount or replace the lamp cap as required.

3.19 ***KS-19177 L1 Clock:*** Fig. 6 and 7

(1) ***General:*** The film identifier (clock) originally furnished has been superseded by the KS-19177 L1 clock. Where a film identifier as originally furnished or parts thereof require replacement, replace the identifier with a KS-19177 L1 clock as covered in (2) through (5). When a motor or any part of a KS-19177 L1 clock requires replacement, the entire clock should be replaced by a new unit as covered in (2) through (5).

(2) Remove ac power from camera.

(3) Before removing the clock, protect the mirror in the hood with several layers of paper or cloth.

(4) Remove the plugs on the clock leads from the jacks in the hood. Using the No. 2012 Stanley screwdriver, loosen the mounting screws and slide the clock from the mounting bracket.

(5) Mount the clock in the hood, making sure that the washers and lockwashers on the screws are on the outside of the mounting bracket in the hood and that the hour dial mounting screw clears the adjacent surface of the hood by at least 1/64 inch. Securely tighten the screws with the No. 2012 Stanley screwdriver.

3.20 ***Polaroid Window:*** Fig. 4—Unlatch and swing open the lamp mounting frame. Remove the three lamps. Apply sufficient inward pressure at the center of the vertical edges of the window to spring the window out of the slots in the frame. Insert the new window in the bottom slot, and spring the window into place in the top slot. Remount the lamps.

3.21 ***Mirror:*** Fig. 6

Caution: Do not disturb the four mirror mounting pan adjusting screws when replacing the mirror.

(1) Using the 3-inch C screwdriver, remove the three mirror clamp screws. Remove the clamps and blotting paper shims. Remove the mirror and the blotting paper under the mirror from the mirror mounting. If the blotting paper or blotting paper shims are torn or otherwise damaged, replace them.

(2) Before mounting the new mirror, check the mirror mounting pan for flatness using the straight edge of a ruler. If the mounting is unsatisfactory, refer the matter to the supervisor since consideration should be given to returning the camera to the Western Electric Company. Also make sure that the top and bottom edges of the new mirror are covered with dull-surfaced black tape.

(3) Place the blotting paper on the mirror mounting and the mirror on the blotting paper. Remount the clamps and tighten the clamp screws.

(4) Insert as many blotting paper shims as possible between the mirror and each clamp. Then loosen the clamp screws, and insert one additional blotting paper shim under each clamp. Tighten the clamp screws.

3.22 ***KS-19346 L1 Guard:*** Fig. 8—Open the switch guards at each end of the KS-19346 L1 guard. Remove the guard mounting screws using the 3-inch C screwdriver. Mount the new guard in reverse order of removal.

KS-16007 Camera

3.23 ***General***

(1) To replace parts in the KS-16007 camera, remove the camera from the hood as follows. Using the 5-inch E screwdriver, remove the two screws mounting the camera on the hood. Lift the camera from the hood, and remove the plug on the camera cord from the socket inside the hood.

(2) To replace all parts of the KS-16007 camera except those listed below, it is necessary to remove the film-driving mechanism from the camera case.

Motor and Drive Gear—3.31

Plug—3.32

Capacitor—3.33 ◗L1 and L2 Only◖

Sprocket Switch and Actuator—3.34 ◗L1 and L2 Only◖

Solenoid—3.35 ◗L1 and L2 Only◖

Film Winder, Spring, and Knob—3.36

◗KS-16007 Camera With KS-19438 L3 Shutter—3.37◖

Remove the film-driving mechanism as covered in (3) through (8). After replacement of parts, remount the mechanism as covered in (9) through (12).

(3) Remove the cover containing the filter using a 3-inch C screwdriver. Unlatch and open the hinged cover. Remove the gear shield with the screwdriver.

(4) If the drive gear setscrew is not accessible, rotate the gear by pressing the end of the R-1102 fiber spudger against a gear tooth until the setscrew is accessible. With the Allen wrench, loosen the drive gear and locking knob setscrew. Remove the knob and the lock spring actuator.

(5) Back out the two motor mounting screws at the top of the motor using the 4-inch E screwdriver. Remove the motor from its mounting, and lift out the film-driving mechanism.

(6) Using the 4-inch E screwdriver, remove the motor release lever handle. Remove the washer associated with the motor release lever on the inside of the case using the KS-8511 tweezers.

(7) On cameras with serial numbers 1 through 896, remove the two screws from the outside of the case and one screw from the inside (cassette end) with the 3-inch C screwdriver. The screws fasten the film-driving mechanism to the case.

(8) On cameras with serial numbers 897 and higher, remove the screw from the outside of the case and the three screws adjacent to the rectangular mask on the inside of the case. These screws fasten the film-driving mechanism to the case.

(9) To remount the film-driving mechanism, first position the mechanism in the camera case.

(10) On cameras with serial numbers 1 through 896, if the mounting screws on the outside of the case are flathead countersunk screws, tighten these screws first; then tighten the inside (cassette end) mounting screw. If the mounting screws on the outside of the case are buttonhead screws located in counterbored recesses, tighten the inside screw first; then, while holding the latch end of the film-driving mechanism firmly against the bottom of the camera, tighten the screws on the outside of the case.

(11) On cameras with serial numbers 897 and higher, first tighten the three inside mounting screws; then tighten the outside mounting screw.

(12) Remount other parts in reverse order of removal.

3.24 ***Idler Gear:*** Fig. 9—Manually slide the gear from the shaft, and replace it with the new gear.

3.25 ***Spool Gear:*** Fig. 9—Loosen the gear setscrew with the Allen wrench, and remove the gear. Place the new gear on the shaft so that the point of the setscrew will contact the flat part of the shaft. Properly position the gear on the shaft, and securely tighten the setscrew.

3.26 ***Motor Release Lever Spring:*** Fig. 9—Using the B long-nose pliers, unhook and remove the spring from the spring studs. Place the new spring on the studs with the pliers, making sure that the hooks at the ends of the spring are in the grooves in the studs.

3.27 ***Motor Release Lever:*** Fig. 9—Remove the motor release spring as described in 3.26. Remove the lever mounting screw and washer using the 3-inch C screwdriver. Mount the new lever, making sure that the washer is under the screw. Remount the release lever spring.

3.28 ***Cover Latch Spring:*** Fig. 9—Using the KS-8511 tweezers, disengage the spring from the spring stud, and then unhook the other end of the spring from the latch. Hook the new spring in the hole in the latch, and then using the KS-8511 tweezers, hook the other end of the spring in the groove in the spring stud.

3.29 ***Bearing Mounting Plates:*** Fig. 9

(1) ***Mounting Plate Adjacent to Gears:*** Remove the idler gear from the motor release lever. Remove the motor release lever and cover latch springs as described in 3.27 and 3.28. Using the proper size Allen socket screw wrench, loosen the spool gear setscrew and remove the gear. Place the film-driving mechanism so that the plate being replaced is upward. Remove the motor release lever mounting screw using the KS-6854 screwdriver and remove the lever. Remove the cassette retaining arm mounting screw with the 474A wrench and remove the arm. Using the 3-inch C screwdriver, remove the three plate mounting screws and remove the plate. Mount the new plate and securely tighten the mounting screws. Mount the other parts in the reverse order of removal, substituting new parts if necessary.

(2) ***Mounting Plate on Side Opposite Gears:*** Place the film-driving mechanism with the plate to be replaced upward. Remove the plate mounting screws with the 3-inch C screwdriver and remove the plate. Mount the new plate and securely tighten the screws.

3.30 ***Spool, Sprocket, and Cover Latch:*** Fig. 9—If the spool is to be replaced, loosen the spool gear setscrew with the proper size Allen socket screw wrench and remove the gear. If the cover latch is to be replaced, disengage the spring from the latch as described in 3.28. Place the flim-driving mechanism so it rests on the motor release lever. Remove the bearing mounting plate using the 3-inch C screwdriver. Substitute new parts as required and remount the plate, securely tightening the screws. Remount other parts which were removed.

3.31 ***Motor and Drive Gear:*** Fig. 9

(1) Remove the cover containing the filter using the 4-inch E screwdriver. If the motor is to be replaced, note the terminals to which each motor lead is connected and unsolder the leads. Open the hinged cover of the camera. Remove the gear cover using the KS-6854 screwdriver (Fig. 1). If the drive gear setscrew is not accessible, rotate the gear by applying the R-1102 fiber spudger to a gear tooth. Loosen the setscrew with the Allen wrench. Loosen the mounting screws at the top of the motor using the 4-inch E screwdriver, and remove the motor.

(2) Remove the nuts on the mounting screws of the new motor by turning the mounting screws with the 4-inch E screwdriver. Rotate the motor shaft so that the flat is at the top. Using the KS-8511 tweezers, position the drive gear in the case with the setscrew uppermost. Insert the motor shaft in the hole in the gear, and mount the motor on the case, securely tightening the mounting screws. Properly position the drive gear and tighten the setscrew. Connect and solder the motor leads to the proper terminals. Position the motor and plug leads between the solenoid and the cover mounting stud. Remount the cover.

(3) If the drive gear is to be replaced, proceed as covered in (1) except do not disconnect the motor leads.

3.32 ***Plug:*** Fig. 10

(1) Remove the cord clamp screws using the KS-6854 screwdriver and remove the clamp. Push on the small end of the plug pin with one of the tips of the B long-nose pliers to start the pin from the hole; then grasping the head of the pin with the combination pliers, remove it with a rotating motion. Slide the shell of the plug back on the cord. Tag and disconnect the leads from the plug terminals. Remove the plug shell, and replace the tubing over the leads if necessary.

(2) Remove the shell from the new plug as described in (1). Slide the shell of the plug on the camera cord. Connect and solder the leads to the proper terminals of the plug. Mount the shell on the plug. Then mount the plug pin using the combination pliers, turning the pin to facilitate mounting it. Mount the cord clamp.

3.33 ***Capacitor ▶L1 and L2 Only:*** ◀ Fig. 12—Remove the cover containing the filter using the 4-inch E screwdriver. Unsolder the leads at the capacitor. Using the 4-inch E screwdriver, loosen the capacitor mounting screw and remove the capacitor. Substitute a new capacitor, and securely tighten the mounting screw. Connect and solder the leads.

3.34. ***Sprocket Switch and Actuator ▶L1 and L2 Only:*** ◀ Fig. 13

(1) Remove the cover containing the filter using the 4-inch E screwdriver. Remove the switch cover using the KS-6854 screwdriver. Remove the switch mounting bracket screws using the KS-6854 screwdriver. Lift the bracket with the switch out of the camera.

(2) Remove the bracket from the switch with the KS-6854 screwdriver. Mount the new switch and actuator on the bracket using the screws and lockwashers from the switch being replaced. Transfer the leads to the terminals of the new switch. Mount the bracket and switch in the camera.

(3) Position the switch so the operation of the film motor meets the operation test requirement covered in Section 030-302-701. Mount the switch cover and the cover containing the filter.

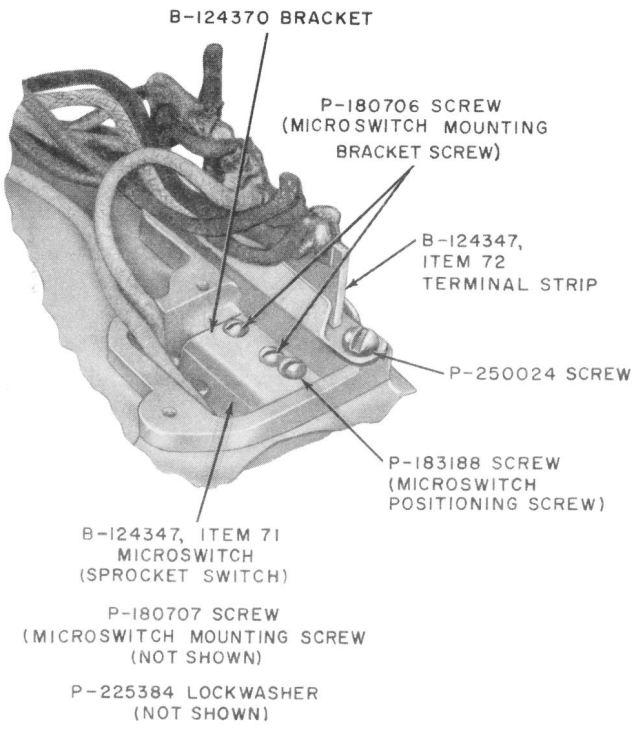
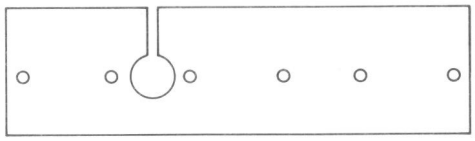


Fig. 13—Sprocket Switch and Terminal Strip



NOTE:
THE KS-14776 CAMERA ASSEMBLY IS EQUIPPED WITH SIX LAMPS; THREE ON EACH SIDE OF THE CHASSIS. TO ELIMINATE A PROBABLE SAFETY HAZARD A L-101801 INSULATOR SHOULD BE INSTALLED UNDER EACH GROUP OF THREE LAMPS. TO INSTALL, DISCONNECT THE POWER, REMOVE THE THREE SOCKETS, INSERT THE INSULATOR BETWEEN THE SOCKETS AND THE FRAME, AND THEN REMOUNT THE SOCKETS. THE L-101801 INSULATOR IS AVAILABLE FROM THE BULOVA WATCH COMPANY, ELECTRONICS DIVISION, WOODSIDE, NEW YORK. ALL NEW CAMERAS WILL BE EQUIPPED WITH THE INSULATOR.

Fig. 14—L-101801 Insulator

3.35 ***Solenoid ▶L1 and L2 Only:*** ◀ Fig. 12

(1) Remove the cover containing the filter using the 4-inch E screwdriver. Unsolder and disconnect the solenoid leads. Turn the camera

over and open the hinged cover. Using the 3-inch C screwdriver, disengage the solenoid mounting screw from the solenoid. This screw is located between the cover latch and spool.

(2) Transfer the positioning screw to the new solenoid. Position the solenoid so that the plunger pin engages the actuating lever and the locating screw is in the associated hole in the case. Securely tighten the mounting screw. Connect and solder the solenoid leads to the proper terminals. Remount the cover containing the filter.

3.36 ***Film Winder, Spring, and Knob:*** Fig. 10—To replace any of these parts, proceed as follows. Open the hinged cover. Using the KS-6854 screwdriver, remove the screw, washer, and lockwasher at the center of the knob. Remove the knob, spring, and winder. Substitute new parts as required. Mount the parts in the reverse order of removal.

3.37 ***KS-16007 Camera With KS-19438 L3 Shutter:*** The KS-16007 camera equipped with the KS-19438 L3 shutter is an electronically operated, fixed, focus camera. If the KS-19438 L3 shutter fails to operate properly, replacement of the shutter in the field should not be attempted. The camera should be returned to the Western Electric Company or Bulova Watch Company, Woodside, New York. Figure 15 shows the KS-16007 camera with the KS-19438 L3 shutter.

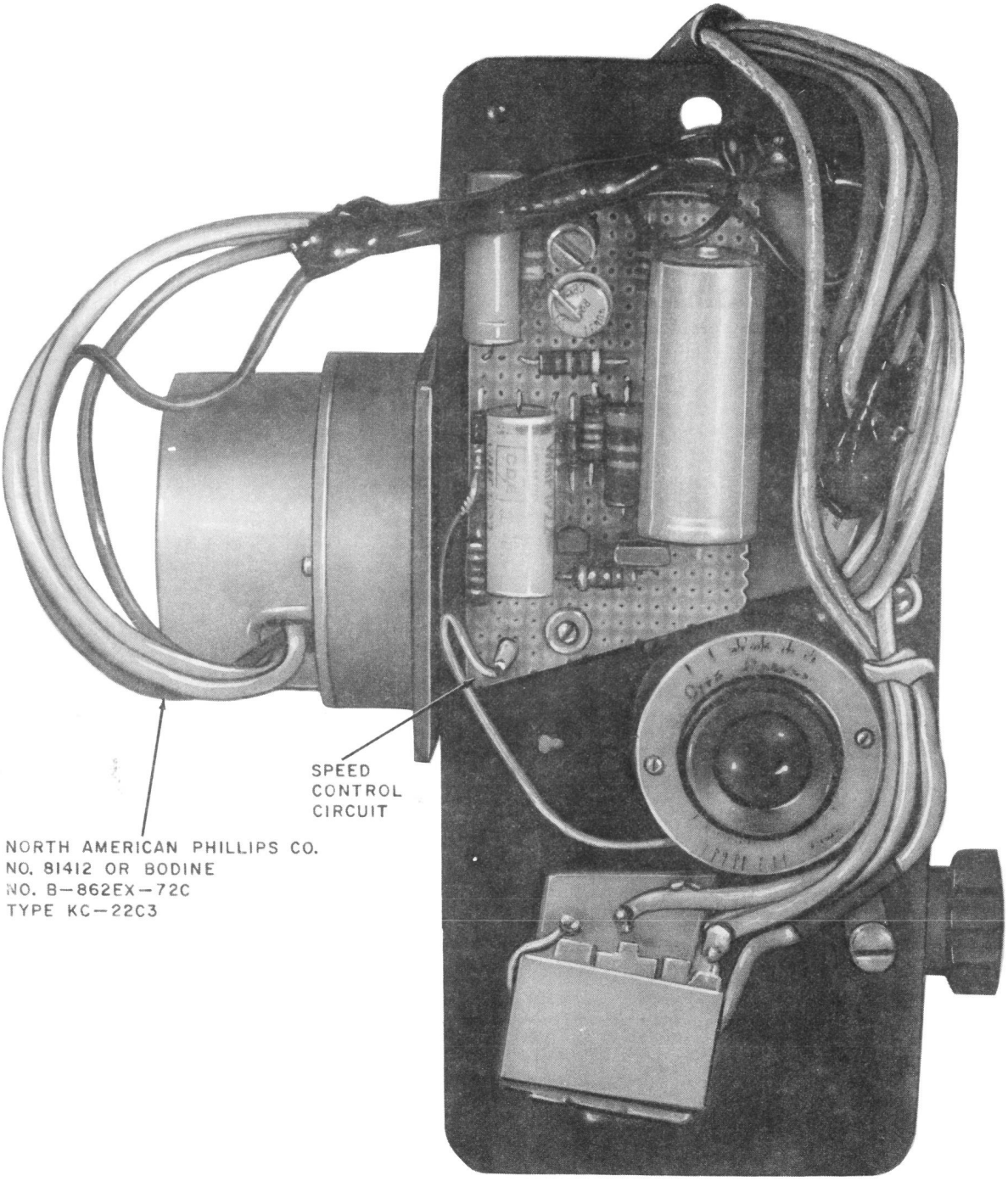


Fig. 15—KS-16007 Camera With KS-19438 L3 Shutter