

SERVICE MANUAL AND PART LIST

for the

SIX-20 'BROWNIE'

ALL-METAL WELDED BODY

Kodak

**EQUIPMENT
SERVICES**

JANUARY 1959

SERVICE MANUAL AND PART LIST
for the
SIX-20 'BROWNIE'

ALL-METAL WELDED BODY

MODELS COVERED BY THIS MANUAL ARE

- 'Brownie' Camera Model I**
- 'Brownie' Flash II Camera**
- 'Brownie' Flash III Camera**
- 'Brownie' Flash IV Camera**
- 'Brownie' Flash B Camera**

Made by Kodak Limited in Great Britain

THE CONTENTS OF THIS FOLDER CAN BE REMOVED AND FILED IF DESIRED IN A 3-RING NATIONAL BINDER OBTAINABLE FROM MOST STATIONERS

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Section I – INTRODUCTION

This range of 'Brownie' cameras supersedes the 'Brownie' Models C, D, E and F.

The constructional differences of these later models are as follows:-

Model I - This is similar to the 'Brownie' Model C camera. It is the simplest of the box type cameras and is not fitted with flash contacts. The case and back are covered with black leather cloth, the bright metal parts being nickel plated. The exposed metal parts on the front and back are enamelled black.

Flash II - This is the simplest flash camera. It is basically similar to the Model I, but has the following additions:-

1. Built-in flash contacts on the side of the camera.
2. Built-in portrait lens.
3. Tripod bush fitted to the bottom of the box.

(This applies only to Flash II cameras manufactured before January 1958. The later type of Flash II camera is not fitted with a tripod bush.)

Flash III - Manufacture of the Flash III camera is now discontinued. It is similar to the early model Flash II with the following additions:-

1. Built-in yellow gelatine (cloud) filter operated by a separate slide.
2. Socket on the side of the camera for a taper thread cable release.
3. Manual shutter lock to prevent accidental firing of the shutter.

4. The bright metal parts are chromium plated instead of nickel plated.

Flash IV

- Manufacture of the Flash IV camera is now discontinued. It is a de-luxe model of the Flash III camera. The case and back are covered with beige mottled leather cloth and exposed metal parts are enamelled brown with plated gold coloured fittings. The shutter push pin and winding key are moulded in ivory Polystyrene and the carrying handle is of brown synthetic leather.

Flash B

- This is similar to the Model IV but with the following differences:-
 1. A two-speed shutter is fitted, giving exposures of 1/40th and 1/80th second and Brief Time.
 2. An exposure-guide plate is fitted on the side of the camera. The information thereon is for Kodak 'Tri-X', 'Verichrome' Pan and 'Panatomic-X' roll film.
 3. The tripod bush, shutter lock and cable release socket are not fitted.

Section II - TOOLS

For the servicing outlined in this manual, the following tools and supplies are required:-

STANDARD TOOLS

4 oz. hammer
4½ in. pliers, flat nose
4½ in. pliers, snipe nose
Tweezers, watchmaker's "A. A"
3/16 in. screwdriver
Flat-headed punch
'Turn-over' rivet punch
'Selvyt' cloth
Camel-hair brush
'Kodak' Lens Cleaning Fluid
Dry powdered graphite
Cellulose dead-black paint
Hand drill with assorted small gauge drills
(Nos. 41, 50 and 1/16 in.)
'Secotine' or similar glue

SPECIAL TOOLS

In addition to the standard tools and supplies listed above, the following special equipment is required:-

Winding key jig, Code No. T. 12
Angle rivet punch, Code No. T. 16

These are available from:-

KODAK LIMITED,
Equipment Services,
WEALDSTONE,
HARROW,
MIDDLESEX.

Section III – SERVICING

This section contains instructions for removing defective parts, fitting replacements and testing assemblies after repair.

FRONT ASSEMBLY

The assembly consists of the front (D3007) and finder boxes (D3028), camera lens (D3390 or D14715) and front plate (D19117, D19118, D19119, D19120 or D21201).

1. Removing the front assembly

Hold the camera body firmly in one hand with the shutter push pin (D10500 or D14692) underneath. Grasp the camera front with the other hand and ease off the complete front assembly, freeing the uppermost edge of the front first.

2. Camera lens

Removal - Lay the assembly, front downwards, on a dust-free surface and using a suitable hand tool, lift the securing lugs of the lens mount assembly (D3390 or D14715). With the lugs straightened, withdraw the lens and mount. This will also release the front plate.

Replacement - Replace the front plate and insert the new camera lens and mount, guiding the lugs of the mount into their slots in the front. Bend over the lugs to secure the mount using a screwdriver or suitable hand tool. Make sure that the front plate is correctly centred.

3. Viewfinder mirror

Removal - Insert a screwdriver into the top of the finder box (D3028) and carefully lift the two mirror retaining lugs, thus freeing the mirror (D3027). Remove the mirror.

Replacement - Fit a new mirror, turning down the retaining lugs and flattening them with the aid of a screwdriver.

4. **Viewfinder box**

Removal - Remove the camera lens and front plate as in Operation 2; the four lugs securing each box can be seen projecting through the front. Taking care not to drop the front finder lens (D3026), lift the lugs, straighten them, and withdraw the viewfinder box.

Replacement - Fit a new box, securing the lens in position and flattening the retaining lugs.

5. **Front finder lens**

Removal - Remove the viewfinder box as in Operation 4. This automatically releases the lens.

Replacement - Insert a new lens and secure it in position by fastening down the viewfinder box lugs.

Note: The front finder lenses are reversible and can be fitted either way round.

6. **Cleaning the lenses and mirrors**

First remove any surface dust or grit using a soft clean camel-hair brush. Polish the lenses with a soft lintless cloth such as a 'Selvyt' cloth using a light rotary motion avoiding unnecessary pressure. If the lens surfaces are very dirty, use a little 'Kodak' Lens Cleaning Solution on the cloth.

7. **Replacing the front assembly**

Reverse the procedure described in Operation 1.

SHUTTER BRACKET ASSEMBLY

8. Removing the shutter bracket assembly

- (a) All models - Remove the front assembly as in Operation 1.
- (b) Models Flash II, III and IV only - Remove the screws (D3118, 96045/D or 96045/E) securing the instruction plate (D13394, D3022 or D14689) to the side of the camera and remove the plate and shutter lock (D3024/D or D14725) if fitted. Take care not to lose the shutter lock. Remove the screw (S6196 or S6197) securing the contact cover plate (D17534) and remove the cover plate.
- (c) Model Flash B - Remove the contact cover plate as in (b). The instruction plate is secured by two rivets and two screws. Remove the screws (96045/E) to free the shutter bracket.
- (d) All models - Place a finger behind and on the right-hand side of the shutter bracket (D11585, D17536, D17535 or C21183) and pull towards the front; at the same time ease the right edge of the bracket over the indentations on the right-hand side of the case. Once clear of the indentations, the complete assembly will lift out.

9. Springs

The following springs are incorporated in the shutter bracket assembly:-

Model I

- (a) Spring for the shutter push pin (D3052)
- (b) Shutter spring (90400)

Flash II, III and IV

- (a) Spring for the shutter push pin (D3052)
- (b) Shutter spring (90400)
- (c) Contact lever spring (D17533)

Flash B

- (a) Spring for the shutter push pin (D24981)
- (b) Shutter spring (D21198)
- (c) Contact lever spring (D17533)
- (d) Speed blade latch spring (D21192)

(a) Spring for the shutter push pin.

Removal - Lift the end of the spring from the hole in the bottom centre of the shutter bracket. Lift the coil of the spring from the capping blade stud (D11579 or D21193) and remove the spring, sliding out the upper end from the drilled lug on the capping blade (D3377 or D21205).

Replacement - Insert the short end of the new spring into the drilled lug on the capping blade. Ease the coil of the spring over the capping blade stud and hook the long end of the spring into the hole in the bottom of the shutter bracket. Operate the shutter push pin (D10500 or D14692) and check the action of the spring and capping blade.

(b) Shutter spring

This spring is attached at one end to the rear of the capping blade and at the other to the front of the shutter (D3376 or D21207).

Removal - Set the time lever to "I" (the upper position). Remove the spring for the shutter push pin and swing the capping blade to the right. This will bring into view one end of the spring and the stud in the shutter to which it is attached. Using a pair of tweezers, remove this end of the spring from the stud, noting carefully the method of attachment. Allow the spring to straighten and hang from the stud in the capping blade. Steady the loose end of the spring with the thumb

and push the opposite end off the stud, using a small screwdriver.

Replacement - Attach one end of the new spring to the stud in the capping blade, then press the shutter push pin and fix the other end to the stud in the shutter. The arms of the spring must exert an "outwards" force and the coil should point away from the shutter push pin.

(c) Contact lever spring

Removal - Remove the spring from the contact lever (D17529), noting the method of attachment.

Replacement - Fit a new spring on the contact lever stud (D17531) attaching one end of the spring to the contact lever and the other end to the contact block (D19131).

(d) Speed blade latch spring

Removal - Remove the spring from the latch (D21187), noting the method of attachment.

Replacement - Fit a new spring on the speed blade latch stud (D21196) attaching one end of the spring to the latch and the other end to the speed blade.

10. Shutter push pin

Removal - Remove the shutter push pin spring as in Operation 9(a). Swing the capping blade to the right and remove the pin (D10500 or D14692) from the shutter bracket.

Replacement - Insert the new pin so that the knob projects through the hole in the bracket and the blade engages in the cable release

socket (D3062 or D18198) when fitted. Check that pressure on the pin moves the capping blade correctly. Replace the shutter push pin spring as in Operation 9(a).

11. **Capping blade and spring stud assembly**

Removal - Remove the shutter push pin spring, shutter spring and the shutter push pin (Operations 9 and 10). Drill out the capping blade stud (D11579 or D21193) and remove the blade and spacer (D3051).

Model Flash B only - A rebound brake (D21189), spring washer (D21191) and spacer (D21190) are fitted beneath the capping blade of this camera. Note the position of these to ensure correct replacement.

Replacement - Attach the shutter spring to the new capping blade. Fit the new capping blade, stud and spacer, replacing the rebound brake and washer where applicable, and secure the stud with a rivet punch. Replace the shutter push pin and springs (Operations 9 and 10). Press the shutter push pin and check that the shutter operates correctly and that the rebound brake is sufficiently free to prevent shutter rebound.

12. **Shutter and spring stud assembly**

Removal - Remove the capping blade (Operation 11). Drill out the shutter stud and remove the shutter complete with the spring stud and contact lever stud.

Model Flash B only - A speed blade assembly (D21213) is fitted in this camera and is secured by the shutter stud. Remove the speed blade with the shutter.

Replacement - Fit a new shutter assembly and stud; replace the speed blade where applicable and secure the shutter stud with an angle rivet

punch. Replace the capping blade, shutter push pin and springs (Operations 9 to 11).

13. Time lever

Removal - Bend back the lugs securing the slide guide (D21197). Then move the guide with the filter and portrait slides until the time lever stud is exposed. Drill out the time lever stud (D3057 or D21194) and remove the time lever (D3056/A, D3056/E or C21188/E) and leak light felt.

Replacement - Fit a new time lever, replacing the felt, and stud. Secure the stud with a rivet punch. Check the action of the time lever by moving it to all settings and operating the shutter push pin. Finally replace the guide and portrait and filter slide assemblies and secure in position.

14. Speed blade assembly

Model Flash B only

Removal - Remove the capping blade (Operation 11), then remove the shutter and speed blade assembly (Operation 12).

Replacement - Replace the shutter together with a new speed blade assembly (D21213) as in Operation 12. Finally replace the capping blade (Operation 11).

15. Cleaning and easing the shutter movement

To ensure smooth working of the shutter, clean the INNER surfaces of the shutter and capping blade with a camel-hair brush and polish with dry powdered graphite. DO NOT USE OIL.

16. Contact block assembly

The assembly (D19131) is secured to the rear surface of the shutter bracket by two rivets. Testing the flash contacts is described in Operation 25.

Removal - Drill out the two tubular rivets (D18415) using a No. 50 drill and remove the complete assembly.

Replacement - Place the assembly in position and secure with two tubular rivets, inserting the rivets with the heads towards the camera front.

17. Portrait slide assembly

Models Flash II, III, IV and B

The assembly (D3429, D3375 or D14719) consists of a portrait slide housing a portrait lens and mount. The slide runs in a guide (D6524 or D21197) immediately behind the shutter bracket, the guide being attached to the shutter bracket by two securing lugs and one rivet.

Removal - Remove the shutter bracket assembly as in Operation 8. Straighten the lugs securing the top of the guide to the shutter bracket. Then ease the guide back slightly and remove the portrait slide assembly and spacer (D3065A, D3065B or D3070). Take care to retain the felt. The filter slide (D3374 or D14717), if fitted, may also be removed (see Operation 18).

Replacement (Model II only) - Insert the spacer so that the "V" cut in the bottom edge engages with the raised lug one third of the way along

the guide. Then with the lettering facing the rear of the camera, insert the portrait slide assembly. Check that the cut-out at the bottom of the slide engages with the raised lug, so that when the slide is pulled out, the movement is checked when the portrait lens exactly covers the aperture. Finally, replace the felt for the slide and press the guide back into position on the shutter bracket. Test the operation of the slide and secure the guide by bending and tapping home the retaining lugs on the shutter bracket.

18. Filter slide assembly

Models Flash II, III, IV and B

Removal - Remove the filter slide together with the portrait slide as described in Operation 17.

Replacement - Replace the filter slide, packing and portrait slide in the guide, positioning the packing so that the "V" recess in the bottom edge engages with the raised lug on the guide. Note that the filter slide is inserted with the lettering to the front of the camera and the portrait slide is inserted with the lettering to the rear. Test the operation of the slides and refix the guide as described in Operation 17.

19. Replacing the shutter bracket assembly

Reverse the procedure described in Operation 8.

ROLL HOLDER

If the roll holder body is damaged, the complete roll holder must be replaced. The rollers may, however, be removed and cleaned and the interior of the roll holder "touched up" with dead black paint when necessary. Do not apply oil to the guide rollers; if they show signs of corrosion they should be renewed.

20. Guide roller

Removal - Bend-out the drilled lugs supporting the guide roller. Do not bend the lugs more than is necessary to release the roller.

Replacement - Fit a new roller and straighten the drilled lugs forming the bearings at either end of the roller. The lugs should be set so as to give maximum freedom of the roller to revolve, with minimum end-play. If there is any stiffness in working, apply a little powdered graphite to the ends of the rollers. DO NOT USE OIL.

CASE COMPLETE

If the case structure itself is damaged, repair is not practicable and a complete replacement is necessary. The only possible repairs to case fitments are renewal of the viewfinder top lens and the winding key.

21. Viewfinder top lens

Removal - Remove the front assembly as in Operation 1. With a screw-driver, lift the lugs securing the viewfinder top lens retainer (D3029). Straighten the lugs and withdraw the viewfinder lens retainer. The top lens (D3025) may now be removed.

Replacement - Fit a new lens and replace the lens retainer. Refasten the retainer by means of the four lugs, making certain that the lens is gripped tightly in position.

22. Winding key

Removal - slide the disc of the winding key (D3396), D21228 or D21229) into the slot provided on the winding key jig (T.12). Open the camera back, withdraw the roll holder, and using a screwdriver, prise up the

two lugs securing the key. Straighten the lugs and withdraw the key.

Replacement - Remove the defective key from the jig and replace with a new one. Insert the lugs of the key into the slots in the camera side and press home with the winding key still held in the jig. Bend the lugs outwards to secure the key.

BACK

23. Removing the back

Removal - Unlatch the back and using a small pin punch, tap out the hinge pin (D3032) until it projects sufficiently to be gripped with pliers. Withdraw the hinge pin and remove the back (D3391, D3392 or D14718).

Replacement - Align the hinge pieces of the new back with those of the case. When they are in alignment, insert the hinge pin using pliers, and tap home with a hammer. Close the back of the camera. It will be found that the latch (D5758 or D14724) will not engage on the catch stud (91154). Adjust the latch as follows:-

Remove the front assembly and place the camera on a wooden block with the back uppermost. Using a mallet, tap the latch where it is formed round the edge of the camera back until the latch snaps over the catch stud. Open and close the back and check the action of the latch. It should close easily over the catch stud but should hold the camera back in the closed position without movement.

24. Back latch

Removal - Remove the camera back as in Operation 23. Drill out the rivets securing the latch to the camera back, using a 1/16 in. drill. Tap out the rivets and remove the defective latch.

Replacement - Place the new latch in position with the rivet holes in alignment, and insert new rivets with the heads on the outside of the camera back. Using a set and punch, spread the ends of the rivets to secure the latch. Replace the camera back and adjust the latch as described in Operation 23.

FLASH CONTACTS

The contact block assembly forms part of the shutter bracket assembly and removal and replacement instructions are given in Operation 16.

25. Testing

With these cameras the flash contacts have been modified to give a long contact period. Check that the end of the spring (D17533) on the contact lever stud (D17531) makes contact with the rivet (D20271) on the block. Move the contact operating stud (D19121) until the edge of the shutter blade has moved from rest to one third of the distance across the aperture. In this position contact should be made between the contact operating lever (D17529) and the spring contact on the block. The point of contact can be tested by connecting a low voltage lamp and battery to the contact block. Adjust by bending the spring contact.

Should there be any doubt as to the efficiency of the flash contacts, the camera should be returned to Kodak Limited, Equipment Services, for checking.

Section IV – HOW TO USE THE PART LIST

The part list can be used in the following ways:-

1. TO FIND THE NUMBER OF A PART

Refer to the drawing and identify the part.

The part number is printed in red on the drawing.

2. TO FIND THE NAME AND QUANTITY OF A PART

Read the part list opened alongside the unfolded drawing.

3. TO IDENTIFY A PART FROM ITS NAME OR NUMBER

Read the part list opened alongside the unfolded drawing.

Section V – HOW TO ORDER SERVICE PARTS

All orders for service parts of photographic equipment made by Kodak Limited should be sent to:-

KODAK LIMITED,
Equipment Services,
WEALDSTONE, HARROW,
MIDDLESEX.

When ordering parts, give the name of the camera and the number of the part. It is unnecessary to give the name of the part.

Service parts are listed as replacement units. These units may consist of two or more parts which are permanently secured together. If an order for one of these parts is received, the replacement unit which contains that part will be sent.

Some replacement units are common to two or more models of 'Brownie' cameras while others will fit only one particular model. Replacement units for individual models are listed separately, but to avoid confusion only one type of each replacement unit is shown on the drawings with the appropriate part numbers for different models grouped together. To indicate the camera model for which the replacement unit is intended, a suffix, printed in black, has been added to some of the part numbers shown on Sheet 1, e.g. D13394.II is the Side Instruction Plate (Part Number D13394) for the Flash II camera. When ordering these parts, do not quote the suffix. Part numbers shown on the drawing without suffixes are common to all cameras.

Section VI — SERVICE PART LIST

REPLACEMENT UNITS

Part Number	NAME OF PART	Model	Quantity Required
D3007/1	Front	I, II, III	1
D3007/2	Front	IV, B	1
D3018	Handle	I, II, III	1
D3022	Side Instruction Plate	III	1
D3024/D	Shutter Lock	III	1
D3025	Top Finder Lens	I, II, III, IV, B	2
D3026	Front Finder Lens	I, II, III, IV, B	2
D3027	Finder Mirror	I, II, III, IV, B	2
D3028	Finder Box	I, II, III, IV, B	2
D3029/A	Retainer for Top Finder Lens	I, II	2
D3029/D	Retainer for Top Finder Lens	III	2
D3029/E	Retainer for Top Finder Lens	IV, B	2
D3030/B	Rivet for Back Latch	I, II, III	2
D3030/E	Rivet for Back Latch	IV, B	2
D3032	Hinge Pin	I, II, III, IV, B	1
D3039	Hood	II, III, IV, B	1
D3042	Filter Mount	III, IV, B	1
D3043	Filter	III, IV, B	1
D3045	Mount for Portrait Lens	II, III, IV, B	1
D3050	Shutter Capping Blade	I, II, III, IV	1
D3051	Spacer for Shutter Capping Blade	I, II, III, IV	1
D3052	Spring for Shutter Push Pin	I, II, III, IV	1
D3056/A	Time Lever	I, II, III	1

PART LIST—Replacement Units (continued)

Part Number	NAME OF PART	Model	Quantity Required
D3056/E	Time Lever	IV	1
D3057	Stud for Time Lever	I, II, III, IV	1
D3062	Cable Release Socket	III	1
D3065/A	Packing for Slide	III	1
D3065/B	Packing for Slide	IV, B	1
D3070	Spacer for Slide	II	1
D3076	Hood	I	1
D3118	Screw for Side Instruction Plate	II	2
D3373	Case Complete	I	1
D3374	Filter Slide Assembly	III	1
D3375	Portrait Slide Assembly	III	1
D3376	Shutter and Spring Stud Assembly	I, II, III, IV	1
D3377	Capping Blade and Spring Stud Assembly	I, II, III, IV	1
D3390	Camera Lens Mounted	I, II, III	1
D3391	Back Complete	III	1
D3392	Back Complete	I, II	1
D3396	Key Assembled	III	1
D3429	Portrait Slide Assembly	II	1
D4484	Time Lever Leak Light Felt	I, II, III, IV	1
	Additional Packing for Filter Slide and Portrait Slide	II, III, IV, B	1
D5701	Spool Complete	I, II, III, IV, B	1
D5751	Portrait Lens	II, III, IV, B	1
D5753/D	Filter Slide	III	1
D5753/E	Filter Slide	IV	1

PART LIST—Replacement Units (continued)

Part Number	NAME OF PART	Model	Quantity Required
D5757	Felt for Slide	III, IV, B	1
D5758/A	Back Latch	I, II	1
D5758/D	Back Latch	III	1
D6524	Guide for Slides	II, III, IV	1
D10500	Push Pin for Shutter	I, II, III	1
D11118	Handle Stud	I, II, III	2
D11118/E	Handle Stud	IV, B	2
D11579	Stud for Shutter Capping Blade	I, II, III, IV	1
D11585	Shutter Bracket	I	1
D12024	Eyelet Tucker (for Roll Holder)	I, II, III, IV, B	2
D13265	Red Window	I, II, III, IV, B	2
D13394	Side Instruction Plate	II	1
D14688	Handle	IV, B	1
D14689	Side Instruction Plate	IV	1
D14690	Shutter Stud	I, II, III, IV	1
D14692	Push Pin for Shutter	IV, B	1
D14696	Shutter	I, II, III, IV	1
D14697	Shutter Spring Stud	I, II, III, IV, B	2
D14715	Camera Lens Mounted	IV, B	1
D14717	Filter Slide Assembly	IV, B	1
D14718	Back Complete	IV, B	1
D14719	Portrait Slide Assembly	IV, B	1
D14722/D	Portrait Slide	III	1
D14722/E	Portrait Slide	IV	1

PART LIST—Replacement Units (continued)

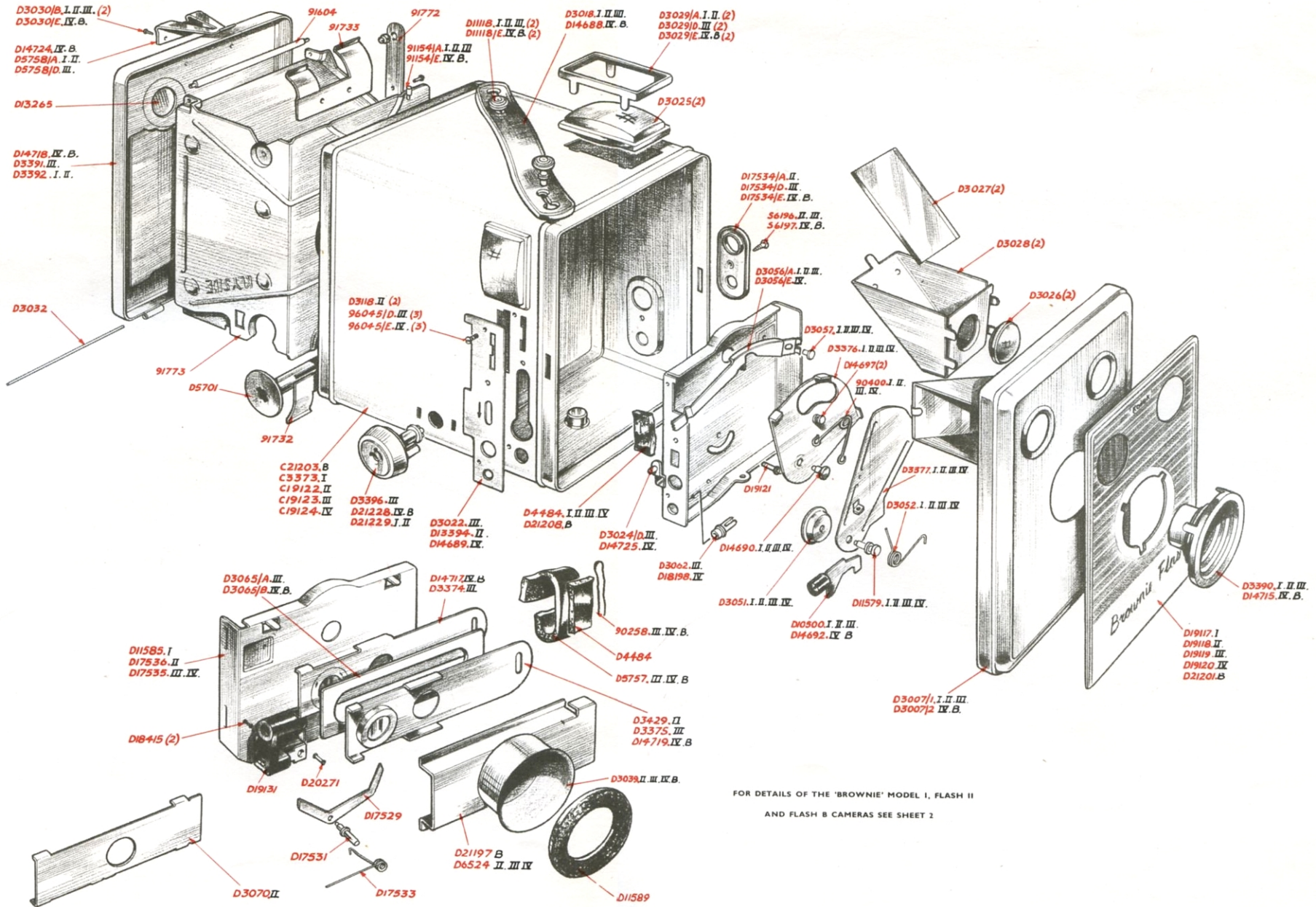
Part Number	NAME OF PART	Model	Quantity Required
D14724	Back Latch	IV, B	1
D14725	Shutter Lock	IV	1
C17526	Contact Block	II, III, IV, B	1
D17529	Contact Lever	II, III, IV, B	1
D17531	Contact Lever Stud	II, III, IV, B	1
D17533	Spring for Contact Lever	II, III, IV, B	1
D17534/A	Contact Cover Plate	II,	1
D17534/D	Contact Cover Plate	III	1
D17534/E	Contact Cover Plate	IV, B	1
D17535	Shutter Bracket	III, IV	1
D17536	Shutter Bracket	II	1
D18198	Cable Release Socket	IV	1
D18415	Eyelet Brass for Contact Block	II, III, IV, B	2
D19117	Front Plate	I	1
D19118	Front Plate	II	1
D19119	Front Plate	III	1
D19120	Front Plate	IV	1
D19121	Contact Operating Stud	II, III, IV, B	1
D19122	Case Complete	II	1
C19123	Case Complete	III	1
C19124	Case Complete	IV	1
D19131	Contact Block Assembly	II, III, IV, B	1
D20271	Eyelet for Contact Block	II, III, IV, B	1

PART LIST—Replacement Units (continued)

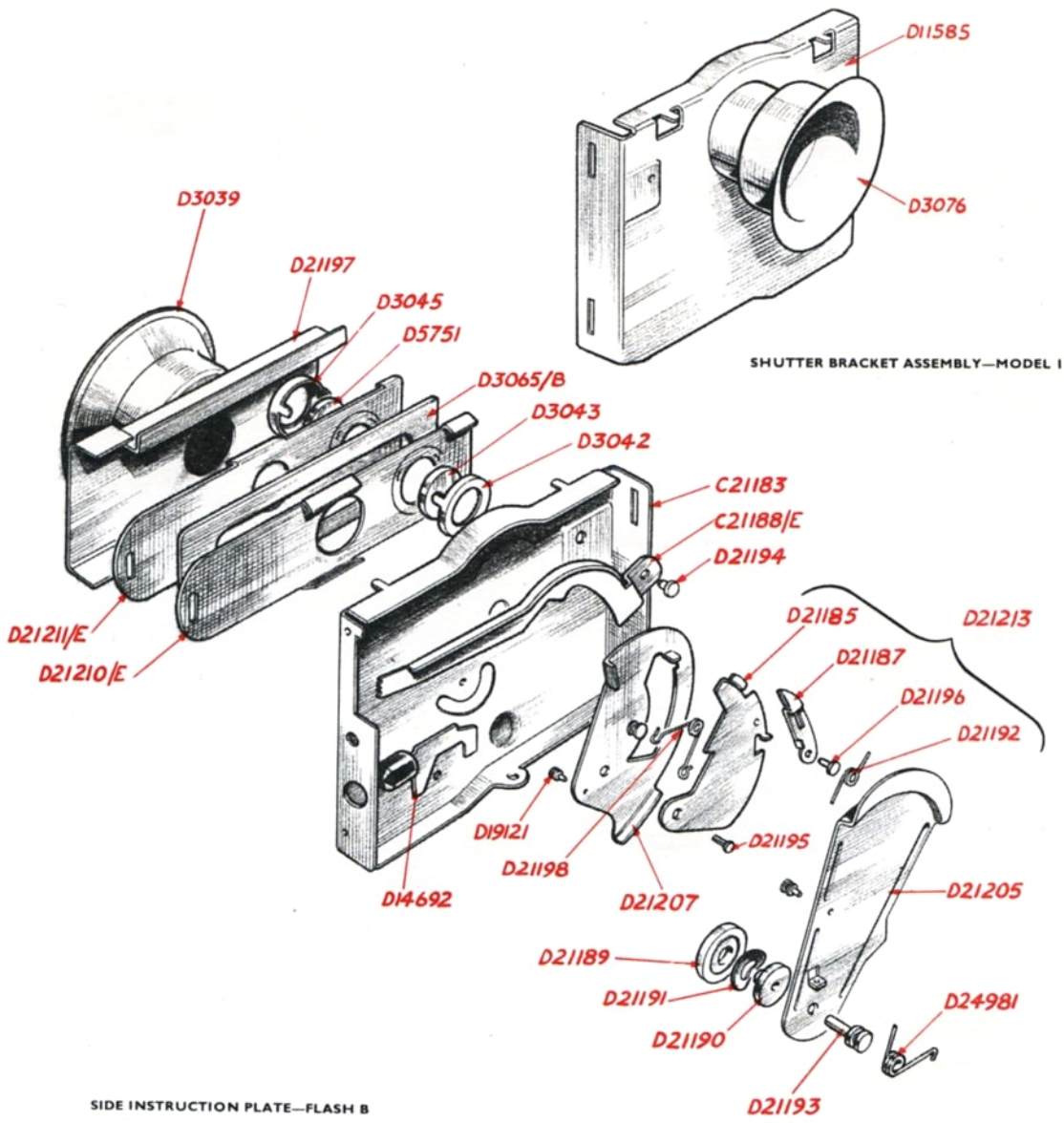
Part Number	NAME OF PART	Model	Quantity Required
C21183	Shutter Bracket	B	1
D21185	Speed Blade	B	1
D21187	Latch	B	1
C21188/E	Time Lever	B	1
D21189	Rebound Brake	B	1
D21190	Spacer for Shutter Capping Blade	B	1
D21191	Spring Washer	B	1
D21192	Speed Blade Latch Spring	B	1
D21193	Stud for Capping Blade	B	1
D21194	Time Lever Stud	B	1
D21195	Shutter Stud	B	1
D21196	Latch Stud	B	1
D21197	Guide for Slide	B	1
D21198	Shutter Spring	B	1
D21199	Side Instruction Plate	B	1
D21201	Front Plate	B	1
C21203	Case Complete	B	1
D21205	Capping Blade and Spring Stud Assembly	B	1
D21207	Shutter and Spring Stud Assembly	B	1
D21208	Time Lever Leak Light Felt	B	1
D21210/E	Filter Slide	B	1
D21211	Portrait Slide	11	1
D21211/E	Portrait Slide	B	1

PART LIST—Replacement Units (continued)

Part Number	NAME OF PART	Model	Quantity Required
D21213	Speed Blade Assembly	B	1
D21228	Key Assembled	IV, B	1
D21229	Key Assembled	I, II	1
D24981	Spring for Shutter Push Pin	B	1
90258	Leak Light Strip	III, IV, B	1
90400	Shutter Spring	I, II, III, IV	1
91154/A	Back Latch Catch Stud	I, II, III	1
91154/E	Back Latch Catch Stud	IV, B	1
91604	Guide Roller	I, II, III, IV, B	2
91732	Spool and Film Tension (take up end)	I, II, III, IV, B	1
91733	Spool and Film Tension (supply end)	I, II, III, IV, B	1
91772	Spool Centre Spring Complete	I, II, III, IV, B	1
91773	Roll Holder Complete	I, II, III, IV, B	1
96045/D	Screw for Side Instruction Plate	III	3
96045/E	Screw for Side Instruction Plate	IV, B	2 or 3 as required
97522/E	Rivet for Side Instruction Plate	B	2
<u>SCREWS</u>			
S6133	No. 0 x 3/16" P.K. Type U Drive Screw Nickle Plated for Contact Block	II, III, IV	1
S6196	No. 2 x 1/4" Csk. Hd. P.K. Type Z Self Tapping Screw Cadmium Plated for Contact Cover Plate	II, III	1
S6197	No. 2 x 1/4" Csk. Hd. P.K. Type Z Self Tapping Brass Screw for Contact Cover Plate	IV, B	1

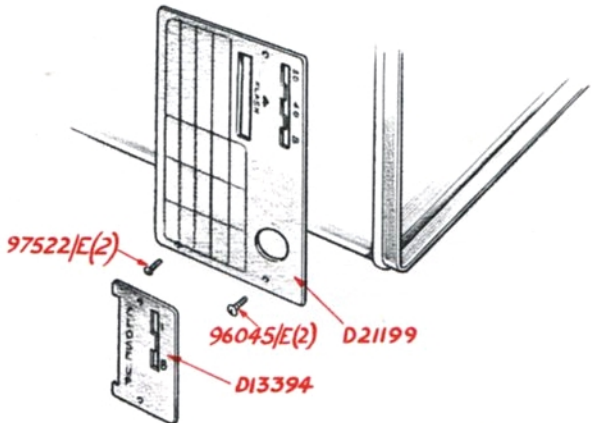


FOR DETAILS OF THE 'BROWNIE' MODEL I, FLASH II AND FLASH B CAMERAS SEE SHEET 2



SHUTTER BRACKET ASSEMBLY—MODEL I

SIDE INSTRUCTION PLATE—FLASH B



SIDE INSTRUCTION PLATE—FLASH II

SHUTTER BRACKET ASSEMBLY—FLASH B

MODEL I, FLASH II AND B—ADDITIONAL DETAILS

