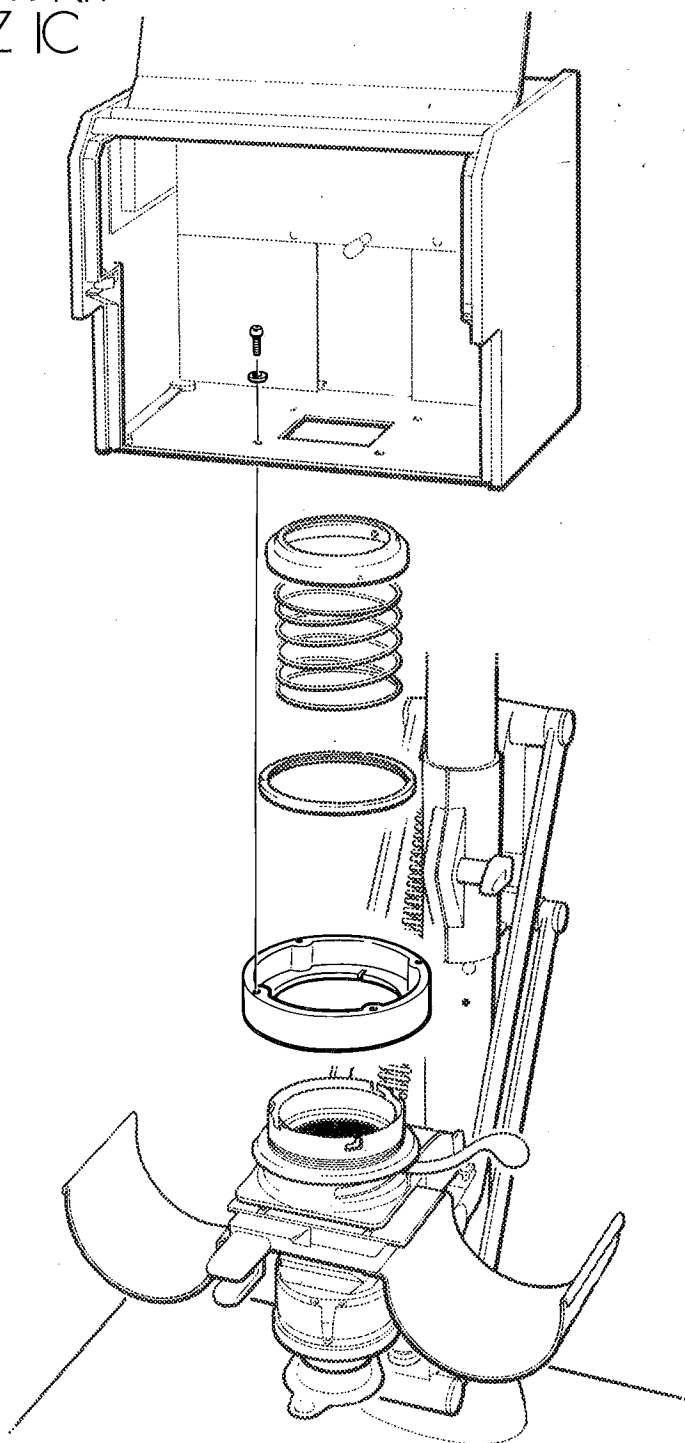


ILFOSPEED MULTIGRADE 500

ENLARGER HEAD
AND ADAPTOR KIT
FOR THE LEITZ IC
ENLARGER



CONTENTS

	Page
Introduction	1
1 Enlarger head	3
2 Control unit	4
2.1 Program switch	4
2.2 Connection to the power supply unit	4
3 Specification	5
4 Parts list - ILFOSPEED MULTIGRADE 500HLZ enlarger head	7
5 Pre-installation	11
5.1 Introduction	11
5.2 Unpacking	11
5.3 Removing the Leitz enlarger head	12
6 Fitting the ILFOSPEED MULTIGRADE 500HLZ enlarger head	14
7 Parts list - adaptor kit	17

INTRODUCTION

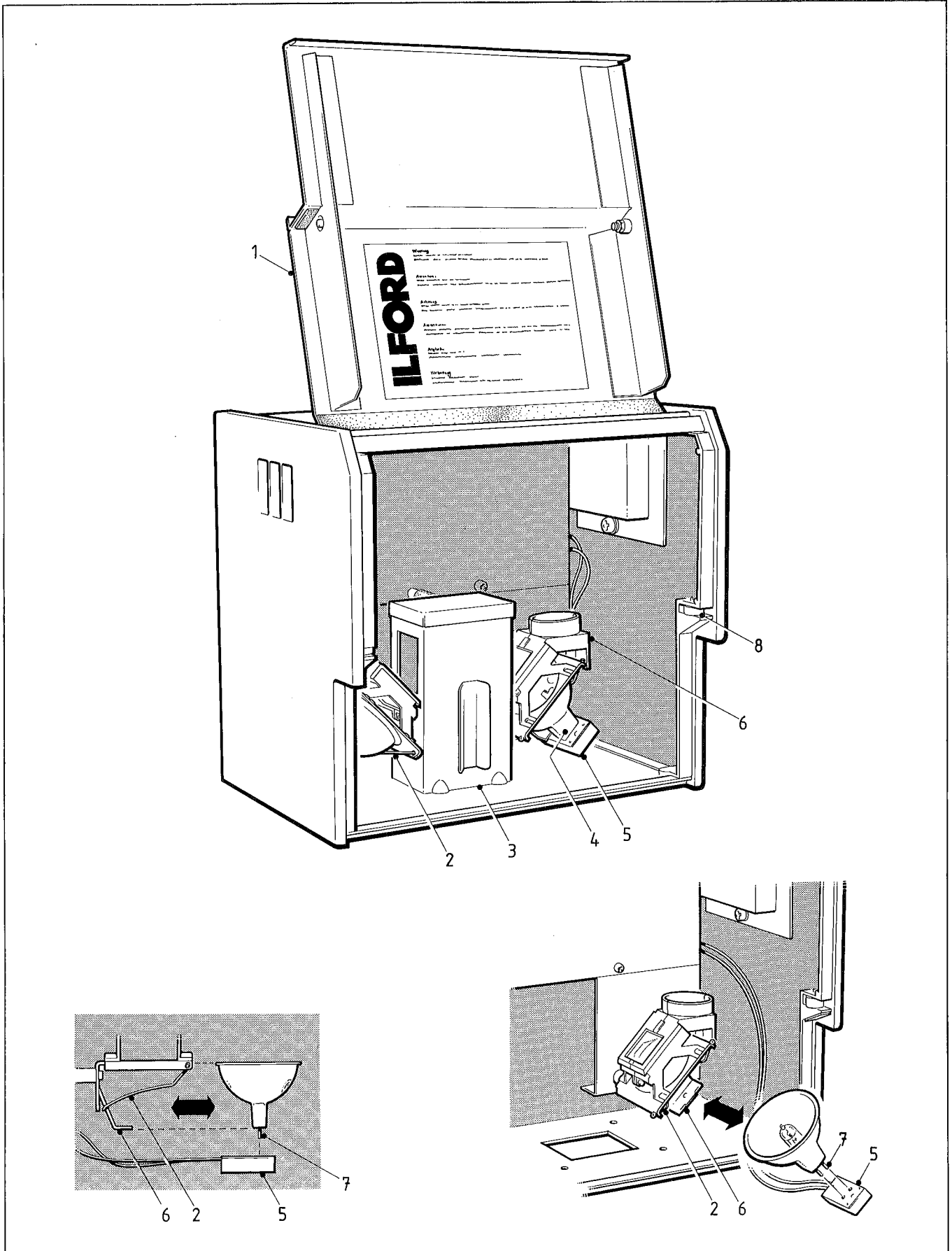
The ILFOSPEED MULTIGRADE 500HLZ enlarger head has been developed by ILFORD to enable the unique ILFOSPEED MULTIGRADE 500 control system to be used with the smaller 35mm enlarger. This enlarger head incorporates many common features and components of the larger ILFOSPEED MULTIGRADE 500H enlarger head, which is described in detail in the ILFOSPEED MULTIGRADE 500 Operating manual supplied.

This manual is divided into two major sections.

The information in sections 1-4 supplements the ILFOSPEED MULTIGRADE 500 Operating manual supplied. It details the major differences between the two ILFOSPEED MULTIGRADE enlarger heads, and how the ILFOSPEED MULTIGRADE 500 control system is used with the smaller enlarger head.

The information in sections 5-7 details how to fit the ILFOSPEED MULTIGRADE 500HLZ enlarger head to the enlarger, using the adaptor kit supplied.

ILFOSPEED MULTIGRADE 500HLZ



1 ENLARGER HEAD

- 1 Front cover
- 2 Retaining spring
- 3 Light mixing box - 35mm
- 4 80W lamp
- 5 Electrical connector
- 6 Lampholder assembly
- 7 Lamp pins
- 8 Door catch wheel

See figure 1.1 and section 2 of the ILFOSPEED MULTIGRADE 500 Operating manual.

The major differences between the two enlarger heads are as follows:

- 1 The smaller ILFOSPEED MULTIGRADE 500HLZ enlarger head is fitted with lower power 80W lamps and, therefore, requires no cooling fan. This reduces the overall weight of the enlarger head.
- 2 The lampholder does not have an integral electrical connector. This is a separate unit that is plugged onto the lamp pins before the lamp is fitted into the lampholder in the normal way.
- 3 The ILFOSPEED MULTIGRADE 500HLZ enlarger head accepts a 35mm light mixing box only, and the lamp positions are fixed. The mixing box fits directly into the base of the enlarger head. A register plate is not required.
- 4 The ILFOSPEED MULTIGRADE 500HLZ enlarger head is supplied complete with the appropriate adaptor kit. No additional parts are required.

2

CONTROL UNIT

2.1 Program switch

See section 3.7 of the ILFOSPEED MULTIGRADE 500 Operating manual.

The following table applies when using the ILFOSPEED MULTIGRADE 500HLZ enlarger head.

Table 2.1 Program switch

Switch position	Lamp type	Program
9	ELB 30V 80W	Balanced lamps
0	ELB 30V 80W	Increases green light by 20%

The instructions in section 3.7 of the ILFOSPEED MULTIGRADE 500 Operating manual apply except that, for optimum light output, the program switch is set to position 9 for obtaining balanced lamps under normal operating conditions. Choose the program switch position detailed in table 2.1 above that gives the best density balance for the particular lamps fitted.

Note

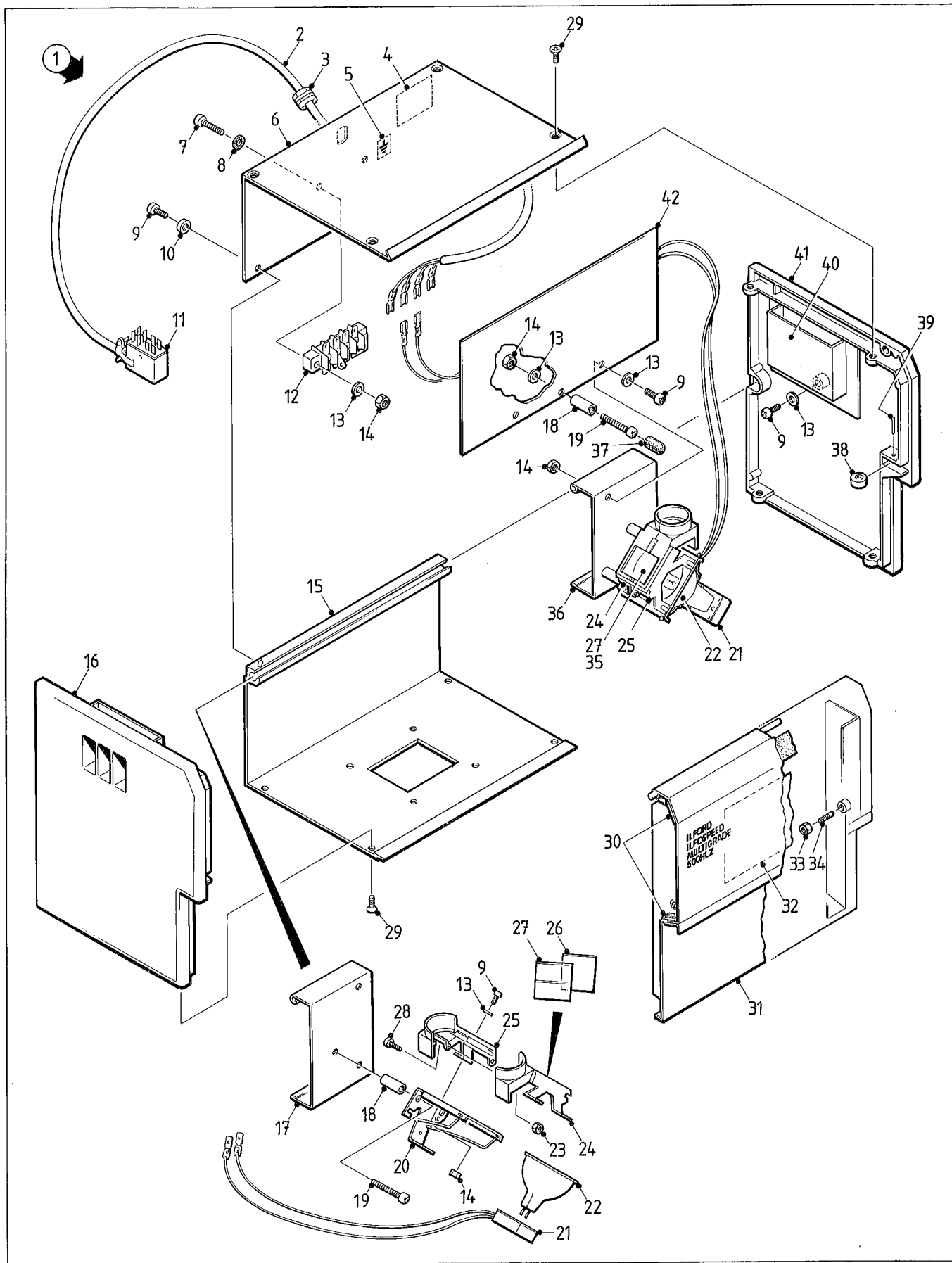
Programs 1-5 and 6-8 can be used but longer exposure times are required as the light output is significantly lower.

2.2 Connection to the power supply unit

The ILFOSPEED MULTIGRADE 500HLZ enlarger head is plugged into the ILFOSPEED MULTIGRADE 500S power supply unit 'enlarger' socket in the normal way.

3 SPECIFICATION

Dimensions	Height 216mm Width 228mm Depth 173mm
Weight	2.1kg including mixer box and adaptor kit
Construction	Black stoved aluminium alloy sheet and extrusion with polycarbonate end plates
Electrical cable	Multicore Length 2m Maximum voltage 30V ac
Lamps	Two 30V ac 80 watt ANSI code ELB Quartz halogen projection lamp with dichroic reflector
Heat filters	Four 30x15x2mm thick heat absorbing glass
Colour filters	Two 25x25x1mm thick. One blue and one green dichroic interference filter on glass substrate. Tempered for maximum stability. Cut-off frequencies are selected for optimum grade range with ILFOSPEED MULTIGRADE II paper
Cooling fan	None
Light mixing box	One size only for negative sizes up to 35mm Note The light mixing box and adaptor kit are supplied with the enlarger head

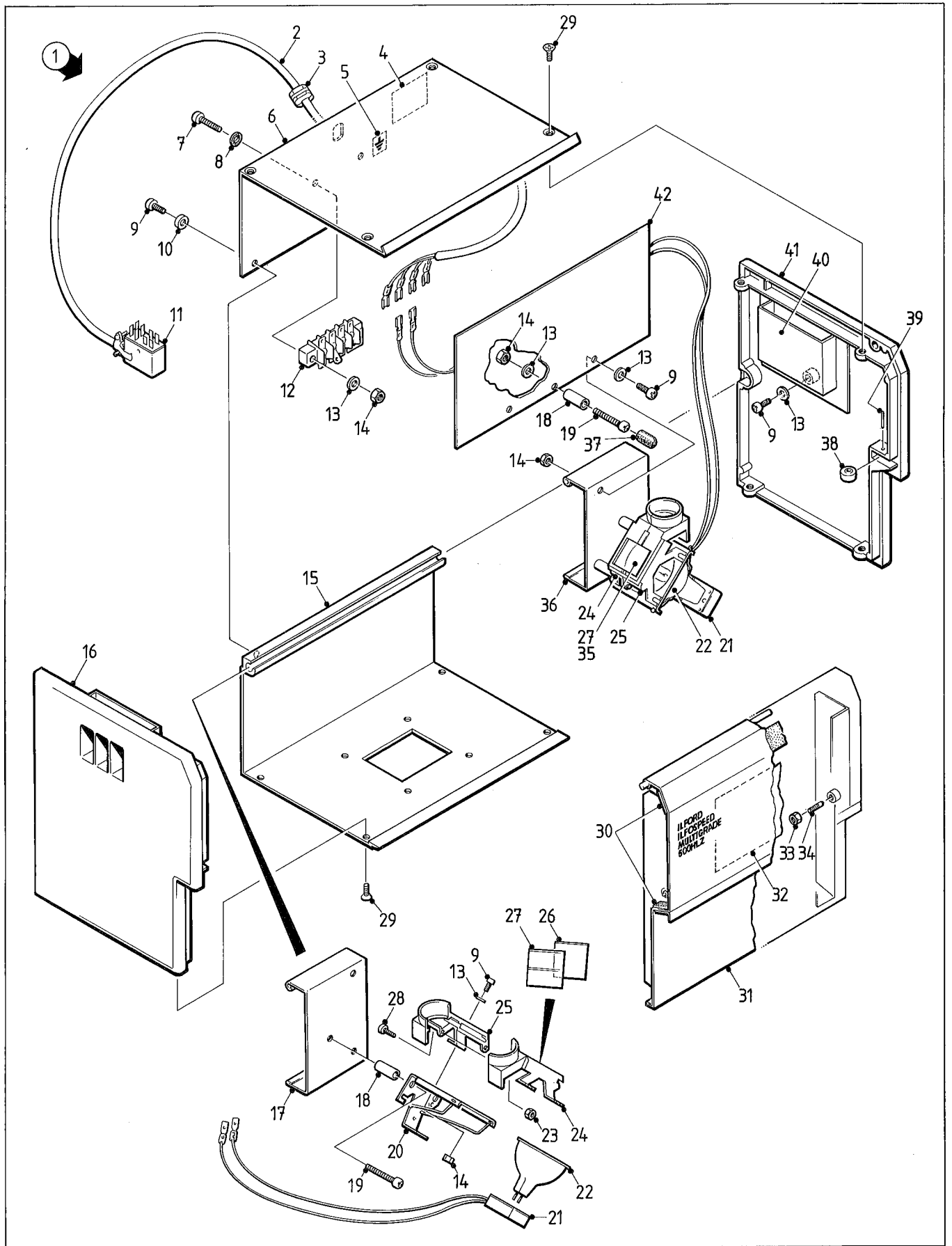


4 PARTS LIST ILFOSPEED MULTIGRADE 500HLZ ENLARGER HEAD

Figure 4.1 and the following table detail all parts that are available for the ILFOSPEED MULTIGRADE 500HLZ enlarger head. When ordering spare parts, please quote both the part number and GIN number in order that ILFORD may process your order quickly and efficiently.

Ref no. on fig. 4.1	Part no.	GIN no.	Description	Quantity
1	6129-0-001	1491236	ILFOSPEED MULTIGRADE 500HLZ enlarger head	
2	81335313	-	Cable	1
3	81334712	-	Strain relief bush	1
4	6065-4-112	1471667	Serial number label	1
5	85268401	1471348	Earth label	1
6	6129-2-102	-	Top section	1
7	87989748	-	Screw, pan head, M3x20mm	2
8	89730600	-	Washer, shakeproof, M3	2
9	87992722	1471216	Screw, pan head, M3x6mm	11
10	6129-4-112	-	Spacer washer	2
11	86618520	1471397	Plug, 10A	1
12	89013016	-	Terminal strip	1
13	89730453	1471205	Washer, plain, M3	12
14	86203903	1471360	Nut, hexagonal, M3	9
15	6129-1-101	-	Base extrusion	1
16	6068-2-143	1471601	End cap, left hand	1
17	6068-3-146	1471634	Lamp slide, left hand	1
18	88000809	-	Lampholder spacer	5
19	87989749	-	Screw, pan head, M3x25mm	5
20	85269001	1492842	Lampholder assembly	2
21	86618527	1492820	Lamp connector	2
22	84677112	1492831	Lamp, 30V 80W	2
23	86203902	1471359	Nut, hexagonal, M2.5	4
24	6068-1-115	1471535	Filter holder, left hand	2
25	6068-2-114	1471580	Filter holder, right hand	2
26	83425802	1471296	Filter, green (left hand side)	1
27	83425803	1471304	Filter, heat	4
28	87992714	1471425	Screw, pan head, M2.5x6mm	4
29	87990420	1471403	Screw, countersunk head, M3x6mm	8
30	89014019	-	Foam sealing strip	232mm

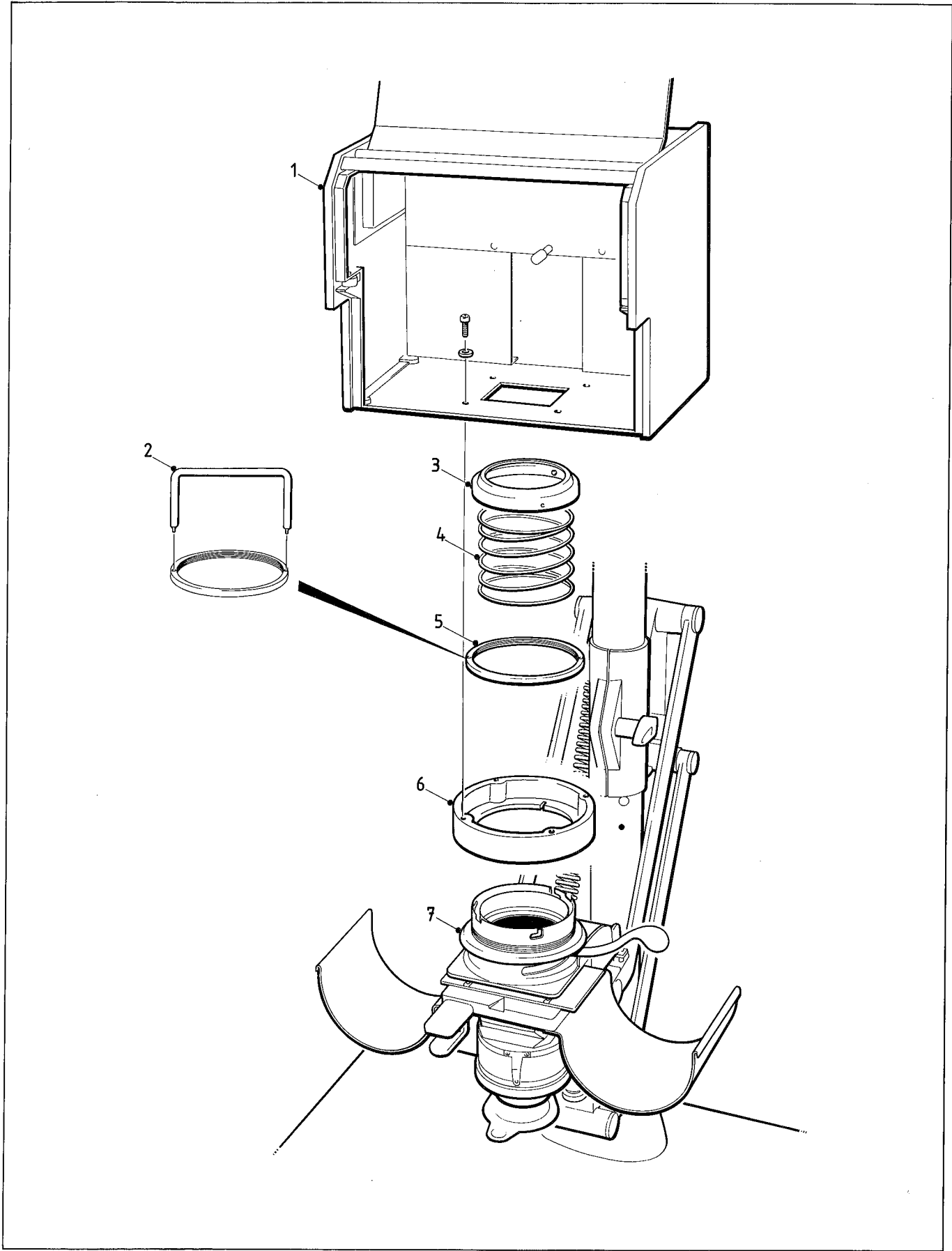
▷



Ref no. on fig.	Part no.	GIN no.	Description	Quantity
4.1				
31	6129-2-003	-	Door assembly	1
32	6129-4-110	-	Warning label	1
33	86204519	-	Nut, hexagonal, nylon, M4	2
34	87989070	-	Screw, grub, nylon, M4x10mm	2
35	83425801	1471287	Filter, blue (right hand side)	1
36	6068-3-147	1471645	Lamp slide, right hand	1
37	83425603	1471278	Ferrule, PVC	1
38	6129-4-104	-	Door catch wheel	2
39	87997604	1471458	Pin, spring, 2x12mm	2
40	6068-3-126	1471623	Light trap	2
41	6068-1-142	1471557	End cap, right hand	1
42	6129-4-103	-	Terminal strip cover plate	1

Note

Items shown above without GIN numbers are not held in stock



5 PRE-INSTALLATION

- 1 ILFOSPEED
MULTIGRADE 500HLZ
enlarger head
- 2 Ring key
- 3 Spring retaining
ring
- 4 Spring
- 5 Condenser
retaining ring
- 6 Adaptor plate
- 7 Leitz IC chassis

5.1 Introduction

The adaptor kit (see figure 5.1) enables the ILFOSPEED MULTIGRADE 500HLZ enlarger head to be fitted to the Leitz IC enlarger. Installation is straightforward provided the instructions in this manual are carefully followed. If you have any problems, please contact your nearest ILFORD selling company, the address of which can be found on the back cover of this manual.

WARNING

To prevent irreparable damage to the equipment, do not use force when carrying out any of the following instructions. Handle the ILFORD ILFOSPEED MULTIGRADE 500HLZ enlarger head with extreme care. Remove the lamps if you feel it is necessary.

5.2 Unpacking

The adaptor kit for the Leitz IC enlarger consists of the sub-assemblies detailed in table 5.1. Each sub-assembly is packed in a plastic bag, with the part number written on the bag. Please ensure you have all the correct items before proceeding with any of the fitting instructions (see also figure 5.1).

Table 5.1 Adaptor kit

Part no.	Description
6091-3-001	Light mixing box, 35mm
6130-P-002	Sub kit

The sub kit, part number 6130-P-002, consists of the items detailed in table 5.2.

Table 5.2 Adaptor assembly sub kit
6130-P-002

Description	Quantity
Adaptor	1
Ring key	1
Screw, M3x8mm, pan head	4
Washer, M3, plain	4

5.3 Removing the Leitz enlarger head

The Leitz IC enlarger head is counter balanced to be moved up and down with the minimum of effort. Before proceeding, ensure the chassis is positioned at a convenient working height and securely locked.

WARNING

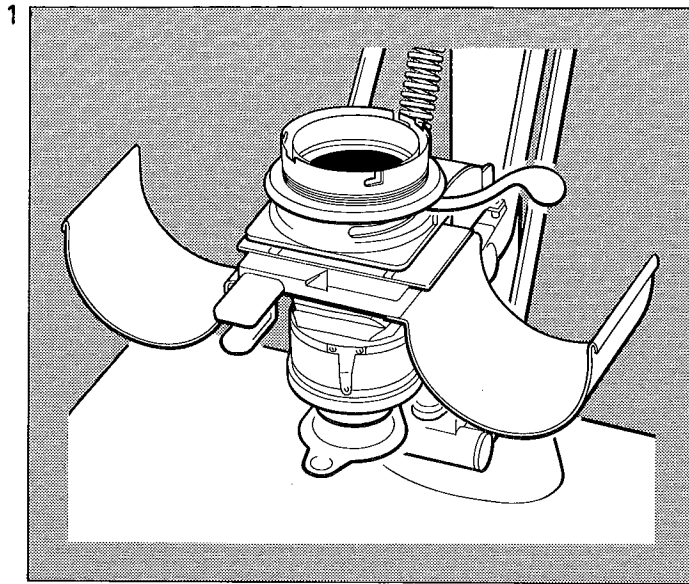
Never lean over counter balanced enlargers; failure of the locking mechanism could cause injury.

To remove the Leitz enlarger head, proceed as follows (refer also to the manufacturer's literature):

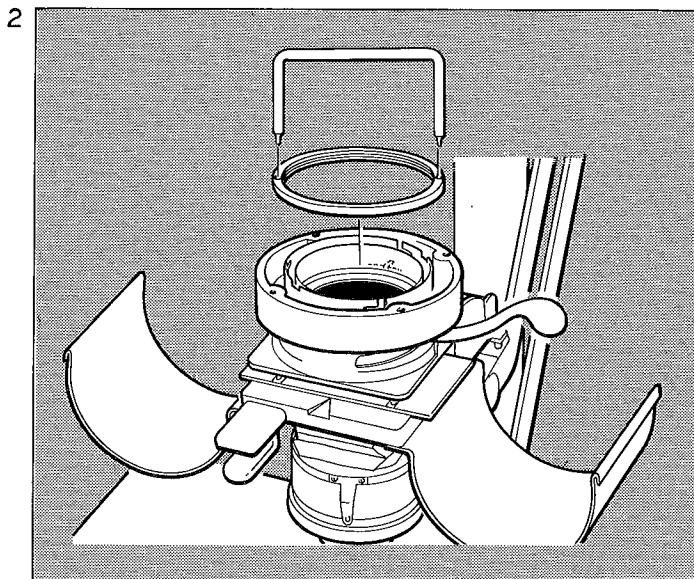
- 1 Lift off the upper half of the lamphouse.
- 2 In the lower half of the lamphouse, release the spring retaining ring from the condenser housing by turning it anti-clockwise.
- 3 Remove the spring.
- 4 Remove the condenser retaining ring by turning it anti-clockwise several turns, using the ring key supplied. Lift the lower half of the lamphouse off the chassis.

6

FITTING THE ILFOSPEED MULTIGRADE 500HLZ ENLARGER HEAD

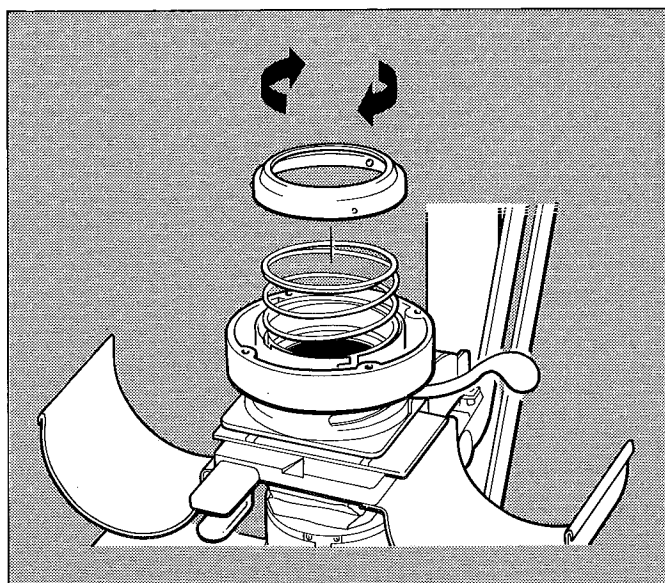


With the Leitz enlarger head removed, the enlarger is ready to accept the ILFOSPEED MULTIGRADE 500HLZ enlarger head.

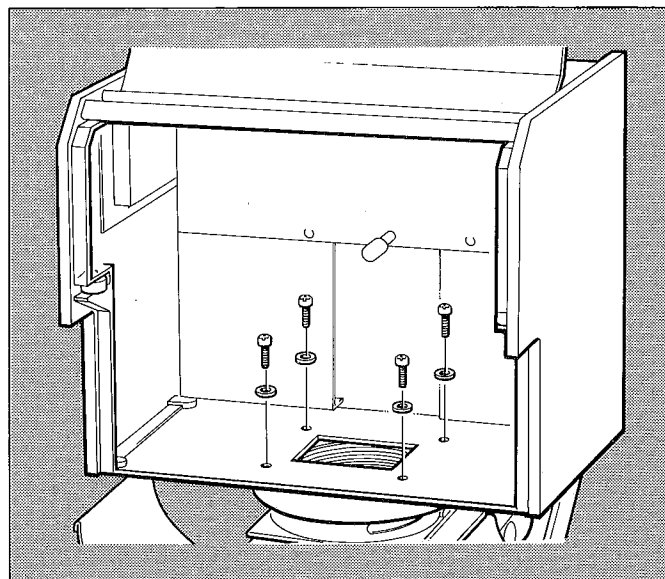


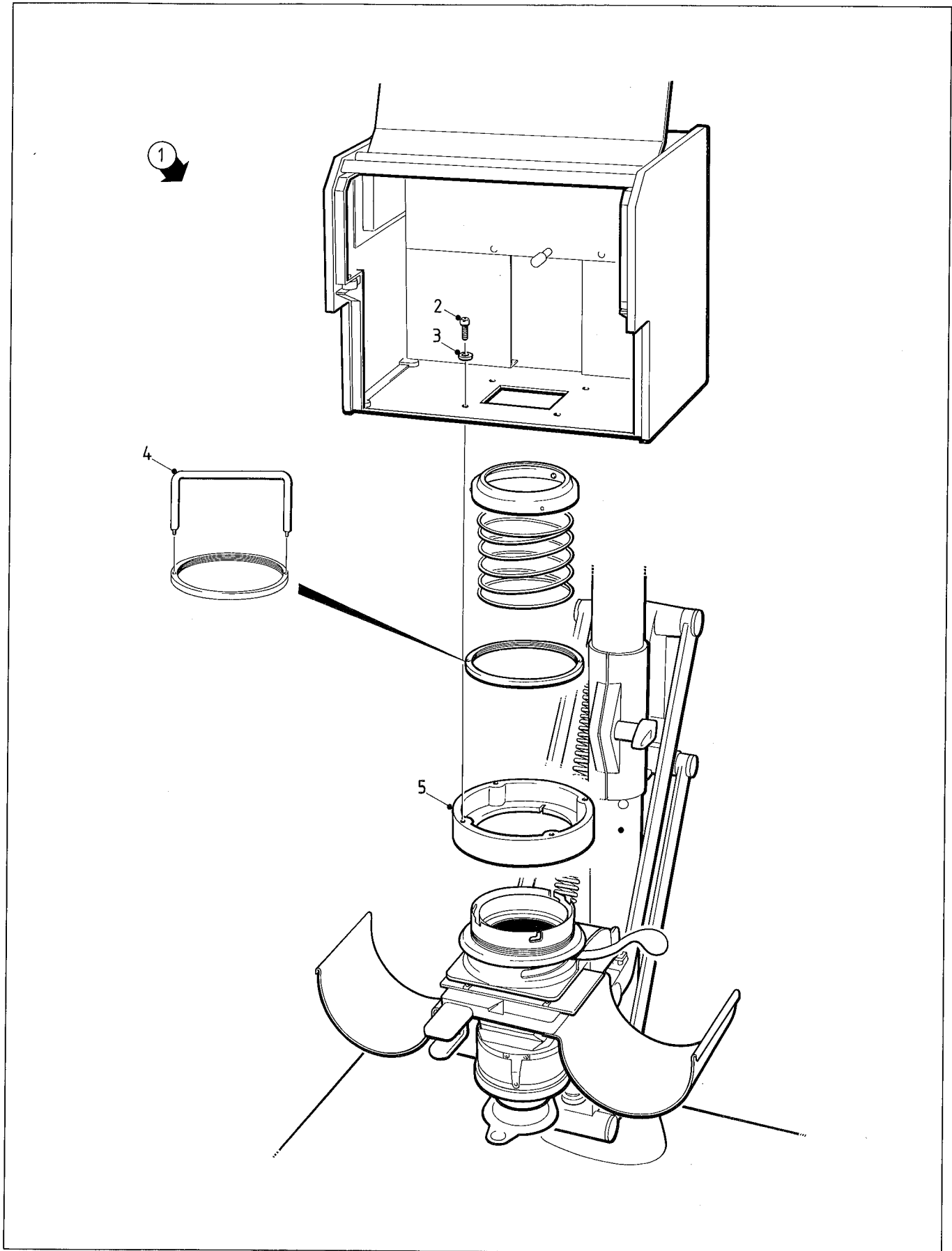
Locate the adaptor over the condenser housing, with the locating slot towards the back of the enlarger, as shown.

Secure the Leitz IC condenser retaining ring onto the adaptor, using the ring key provided. Refit the condenser spring and spring retaining ring.



Secure the ILFOSPEED MULTIGRADE 500HLZ enlarger head to the adaptor with the four M3x8mm pan head screws and associated washers. Insert the light mixing box carefully between the two lamp and filter assemblies and into the aperture in the base of the head.





7

PARTS LIST ADAPTOR KIT

Figure 7.1 and the following table detail all spare parts that are available. When ordering spare parts, please quote the part number in order that ILFORD may process your order quickly and efficiently.

Ref no. on figure 7.1	Part no.	Description	Quantity
1	6130-P-001	Adaptor kit, complete	
2	87989744	Screw, pan head, M3x8mm	4
3	89730453	Washer, plain, M3	4
4	6130-4-103	Ring key	1
5	6130-3-100	Adaptor	1
6+	6091-3-001	Light mixing box, 35mm, 4mm drop	1

+ items not illustrated

Constant improvements in ILFORD products mean that changes in design or specification may occur from time to time. It will not always be possible to amend instructions at the same time, and the right to alter the design and specification of the equipment without prior notice is accordingly reserved.

ILFOSPEED MULTIGRADE 500 is covered by patents and patent applications.