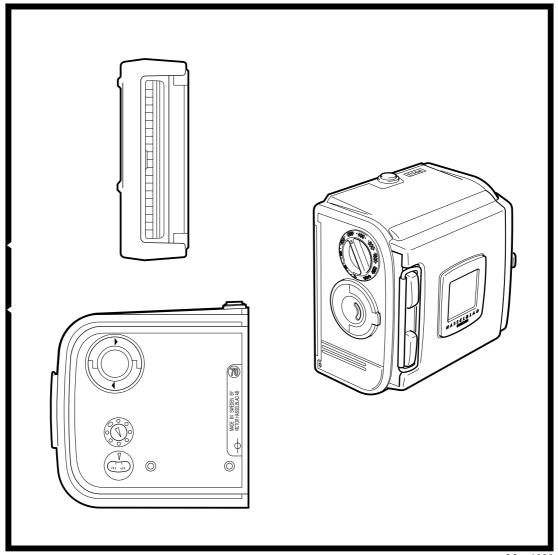
HASSELBLAD

Service Manual Film magazines



May 1993

Victor Hasselblad AB Göteborg Sweden

Copyright © 1997 by Victor Hasselblad AB. All rights reserved. No parts of this material may be reproduced, stored in retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopy, recording, or otherwise, without the prior written permission of the Company.

Film magazines

1. Disassembly: Film magazines series A, E, TCC 2. Reassembly: Film magazines series A, E, TCC 3. Support and mechanism A12, A16, A16S, A24 4. **Shell and cover A12, A16, A16S, A24 5**. Shell and cover A12, A16, A24 (Modified 1996) 6. Shell and dark slide holder A12, A16, A24 7. **Spool holder A12, A24** S/N TR 133000 - RI 3250868 8. Spool holder A12, A24 S/N RI 3250869 - forwards 9. Spool holder A16, A16S S/N UV 211701 - 31EP12394 **10**. Spool holder A16 S/N 31EP12395 - forwards, A32 11. Cover A16 S/N 31EP12395 - forwards **12**. Support and Mechanism A12/A16/A24TCC, E12/16/24, E12CC 13. Shell, cover and dark slide holder E12/16/24, E12CC **14**. Shell and dark slide holder E12/16/24, E12CC (Modified 1996) **15.** Shell and cover A12TCC, A16TCC, A24TCC **16**. Spool holder A12/A16/A24TCC, E12/16/24, E12CC 17. Cover and circuit board E12, E16, E24 **18**. Cover and circuit board A12/A16/A24TCC, E12CC

Support magazine 70 **20**. Mechanism magazine 70

21. Shell and cover magazine 70

22. Spool holder magazine 70

23. Polaroid magazine 100

Revision 1

19.

Film	n magazines	2
24.	Magazine PolaPlus	
25.	Magazine PolaBasic	
26.	Support and mechanism A32	
27.	Shell and cover A32	

Revision 1 September 1997

Magazines

Modification - A12, A16, A24 and 70 (incl. TCC)
E-type film magazines introduced - E12, E16 and E24
Stop arm modification - A, E and TCC
Film magazine E12, E16 and E24
Magazine shell and support modification - A, E and TCC
New spool holder - A16
Magazines redesigned - A12, A16 and A24
New dark slide holder - E12, E16, E24 and E12CC
Fixed stop screw - A24 and E24
Modified spool holder - E12, E16, E24, E12CC and A16
New picture frame - A16 and E16
New spacing gear - A16 and E16
Modified magazine support - A12, A24, E12, E24 and E12CC
Shaft and mechanism plate modification - A12, A16 and A24
Film magazine - A32
Spare part number changed - PolaPlus/PolaBasic
New CD-ROM - Version 1.2
Adjustment of the eccentric - A16 and E16
New CD-ROM - Version 1.3
Discontinued modification kit - friction brake A12
Modification of light trap foil
New CD-ROM - Version 2.0

Revision 3 January 2001

Right cover (see page 13)

Pull out the magazine slide.
Remove the spool holder from the magazine.
Dismantle the magazine slide holder where appropriate. Remove the leather from the cover.
Unscrew 3 screws **823012** and lift off the right cover.

Mechanism (see page 12)

Remove the washer **810927**, loosen 2 screws **823012** and lift off plate **308485**. Remove gear **12209**. Pull up the shaft **308426**, and remove the complete gear **308109**. Lift off and separate the spring housing **13030** from hub **14185**, remove return spring **14184**. Remove the clip **817132**, washer **810802** and return stop **20717**.

Remove the washer **810926**, unhook spring **814852** from link **21494**. Unhook the 2 springs **814527** from the riveted pin (A Fig. 1).

Remove the signal 13031, loosen 3 screws 824202 and lift off dial 13806, remove spring 816611.

Pull up the shaft **12819** and remove arm **22715**. Lift the centre mechanism **21548** up from the hub in the magazine support (B Fig. 1), turn it slightly sideways, and lift off gear **22371** and thereafter centre mechanism **21548**. Remove the release arm **22277**.

Fig. 1

Outer plate (see page 12 and 13).

Unscrew 9 screws **823015** and lift off the outer plate. Remove the light trap **13067**, foil **13508**, exposure lock **21535**, spring **13820**, 2 plate springs **13821** and locking spring **20684**.

Remove the locking arm **20843** from button **22356**. Unhook the spring **814752** from the locking arm.

Shell (see page 13)

Loosen the screws **823017** and **823013** situated underneath the leather on the shell. (The shell of older magazines are slightly different, where 2 screws **820013** are going through the right side of the body and into the frame. They have to be dismantled too. See Service Info 25/95). Separate the shell from the magazine support.

Spool holder (see page 16 and 17)

Loosen 4 screws **824033**, lift up the plate **312105** slightly and remove pressure plate **308104** and plate spring **13913**. Loosen the 2 screws **826028**, disconnect spring **814952** from support **308516**, and lift off plate **312105** and arm **22398**. Lift off the rollers **13514**, remove spring **12540** and looking shaft **308103**.

Remove the leather **308521** and rubber plate **308365**. Unscrew the 4 screws **823435**. Lift off the cover **308519**. Remove the indicators and dials.

CAUTION! When handling the circuit board a grounded bench mat and a wrist strap must be used to prevent ESD damage.

Unsolder the 4 cables of the contact assembly **308043** from the circuit board. Remove the circuit board carefully (kept in place by a double sided adhesive tape).

Disassemble the clip **817140** and remove locking mechanism **308101**. Loosen the gear **22375** and remove locking mechanism and film signal **22382**. Unscrew the 4 screws **823650** and separate the end plate from the support.

Revision 1 February 2000

Shell (see page 13)

Fit the shell on the magazine support. Note! The position of the shell in connection with the support (Fig. 2). Secure with the 5 screws **820013** and 823017. Fold back the leather onto the shell and fasten with glue.

Outer plate (see page 12 and 13)

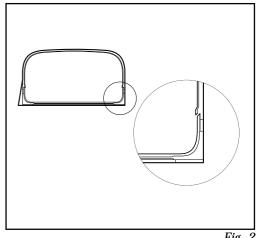
Fit the exposure lock **21535**, spring **13820** and 2 plate springs 13821 on the support.

Thread the washer 810761 over button 22356 and assemble it in the shell.

Connect the spring **814752** to locking arm **20843**. Grease the spring, as well as the upper side of the locking arm, and connect it to button 22356. Fit the locking spring **20684**. Put the light trap 13067 in foil 13508 and fit it on the support. Pull down and hold the light trap in place by means of the magazine slide 41068, fit the outer plate and secure it with 9 screws **823015**. Make sure that the exposure lock 21535 and locking arm 20843 are functioning when taking the magazine slide in and out.

Picture frame

The position of the picture frame of the magazine, i. e. the distance between the edge of the picture frame and the outer plate is inspected and adjusted using the magazine gauge V- 4548. The distance is $3.55 \text{ mm} \pm 0.05 \text{ mm}$ (Fig. 3).



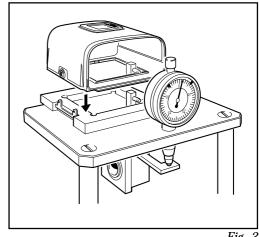


Fig. 3

Mechanism (see page 12)

Lubricate with grease (Fig. 4). Fit the release arm **22277**. Lubricate the gears and shafts of the centre mechanism **21548** with some drops of oil and fit it over the pin (A Fig 4).

Fit the gear **22371** and bring the centre mechanism into the hub of the magazine support. Fit the spring **816611** into the spacing gear. Tension the spring by rotating the gear clockwise approx. 1 1/2 turns. Turn the spacing gear towards the stop and check that it returns properly (to Zero).

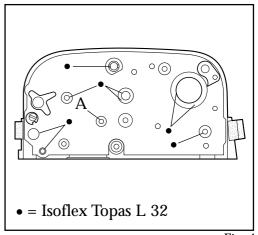


Fig. 4

Fit the arm **22715**. Lubricate the shaft **12819** with grease and assemble it. Connect 2 springs **814527** to the pin (A Fig. 4).

On the centre mechanism there are 2 springs, connect them to the screw **824060** and link **21494** respectively. Fit the dial **13806** over the spacing gear. Secure with 3 screws **824202**, do not tighten the screws too hard (Fig. 5)

Fit the return stop **20717** together with washer **810802** and secure it with clip **817132**.

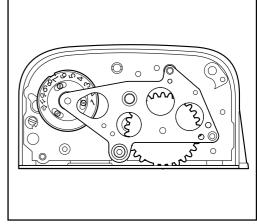


Fig. 5

Fit the spring **14184** in the spring housing as shown in the diagram. The easiest way to do this is to use a new spring kept in its plastic ring, then lubricate the spring with grease (Fig. 6).

Fit the hub **14185** into the spring and assemble back the spring housing on the magazine support.

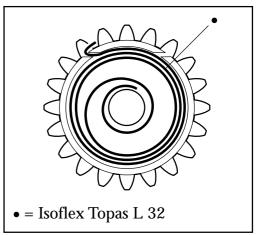


Fig. 6

Lubricate the gear assembly **308109** (Fig. 7). Tension the spring **14184** by rotating the spring housing 13030 clockwise approx. 1 1/2 turns, hold in place and fit the gear assembly (Fig. 8).

Conduct the shaft 308426 through gear 308109. Note! The long pin has to go down into the magazine support. Fit the gear 12209, insert washer 810926 over the centre mechanism 21548, fit the plate **308485** and secure with 2 screws **823012**. Fit the washer **810927** over the plate. Tension the spring 816509 approx. 1 turn and fit the film signal 13031.

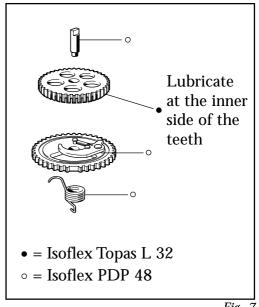
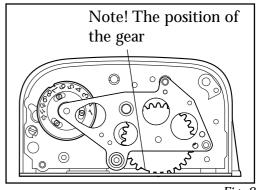


Fig.

Adjustment of automatic stop

Press the pin 13754 in with a finger and rotate gear 12209 clockwise on until release arm 22277 falls into the first recess under gear 22371.

At the same time this takes place the stop on plate 308485 has to fall into the recess on dial 13806. This relation will be adjusted by turning the dial. When the correct position is reached the screws 824202 shall be tightened and secured with safety lacquer (Fig. 9)



Adjustment of eccentric 22171

With eccentric 22171 you can easily increase or reduce the distance between the mark (double arrow) at the backing paper and the position of first exposure. Loosen the screw 820013 and rotate the eccentric to the required position and then tighten the screw. Note! The screw shall be secured with loctite. In fig. 9 you can see the basic position of the eccentric, which is set to fit our reference film (Kodak Plus-X).

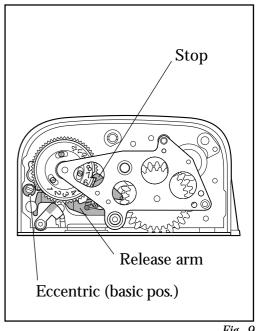


Fig. 9

Revision 2 February 2000

Right cover (see page 13)

Fit the cover, secure with 3 screws **823012** and put the leather back.

Fit the magazine slide holder when necessary.

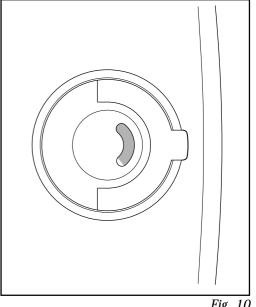
Spool holder (see page 15 and 16)

CAUTION! When handling the circuit board a grounded bench mat and a wrist strap must be used to prevent ESD damage.

Fit the support and end plate with 4 screws **823650** (secured with loctite). Thread the 4 cables 308043 through the end plate and solder them on the circuit board. Press the circuit board on to the end plate, and if necessary, replace the tape 308495. Fit the dials, indicators, cover, leather and rubber plate. Fit the felt ring 308410, thread the washer 810925 over the lock 308101 and fit it as well as the film signal 22382 into the spool holder, together with gear 22375 so that you will get a red indication in the film indicator (exact adjustment will be set later), fasten the locking handle with clip 817140. Fit the 2 rollers 13514, locking shaft 308103 and spring 12540.

Adjustment of film indicator

Fit the plate **312105** and take-up arm **22398**, connect spring 814952. Place the film indicator gauge V-5065 (magazine 12 and 16) or V-5068 (magazine 24) on the feeding side of the spool holder. Adjust the indicator by holding the gear **22375** in place and thereafter turn the shaft of the film signal 22382 to the position as shown in the diagram (Fig. 10). Take the film indicator gauge off and check that the film signal is changing to fully red (Fig. 11). Secure the gear 22375 to the shaft with safety lacquer. Fit the contact assembly 308043 in plate 312105 with 2 screws 826028. Loosen the screws 824033 somewhat, lift up plate 312105 and fit the plate spring 13913 and the pressure plate **308104**, then tighten the screws **824033**.





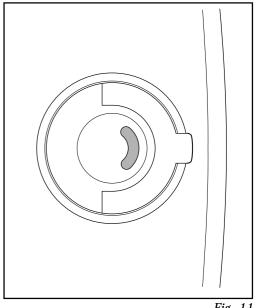


Fig. 11

Revision 1 February 2000

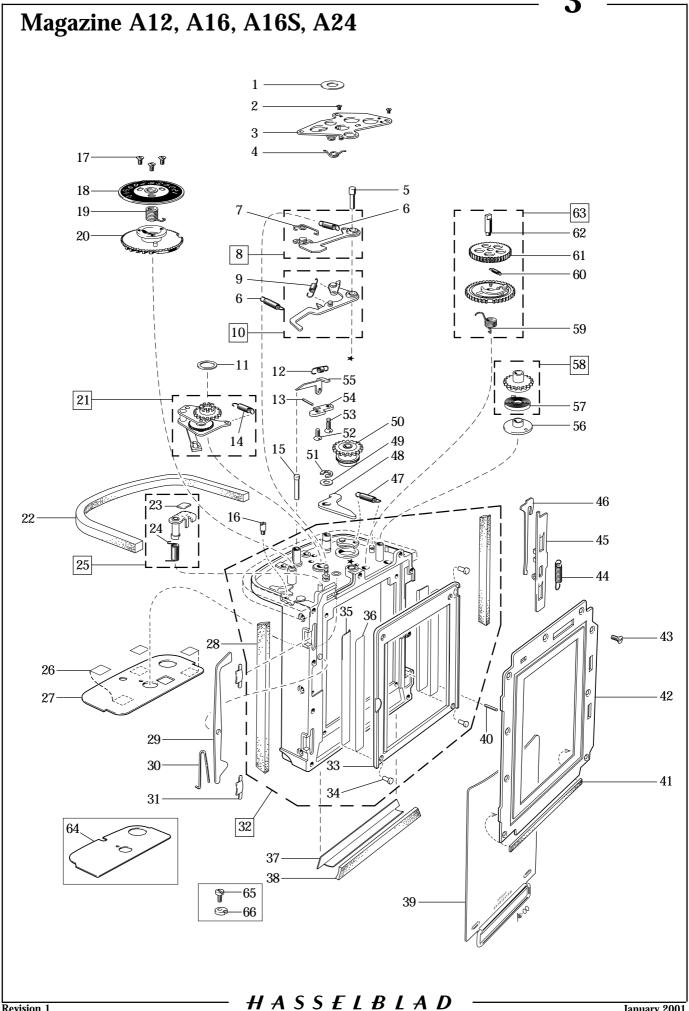
Final checks

Insert the spool holder in to the magazine, advance and check that the automatic stop is functioning (first exposure). Adapt the magazine on a camera body and make some test exposures. Check that the film counter, exposure signal, etc. are functioning. Take the spool holder out and check that the film counter sets to zero.

Load the magazine with film and check the spacing i.e. that you after every exposure are making a mark on the film inside the picture frame and then check the placing of the "exposures". Check also that the film indicator gradually changes from white to red as the film is wound through.

After the repair of E or TCC magazine the speed and film contrast dials shall be checked. Adapt the magazine on a 203FE or a 205FCC camera and connect it to the Hasselblad Service Test System. Choose the function "203/205" from the main menu, then choose the function "MAGAZINE" from the sub menu. Turn the ISO dial and the film contrast dial from 12 to 6400 and from -4 to +3 respectively and back again.





H A S S **E** L **B** L A D Magazine A12, A16, A16S, A24

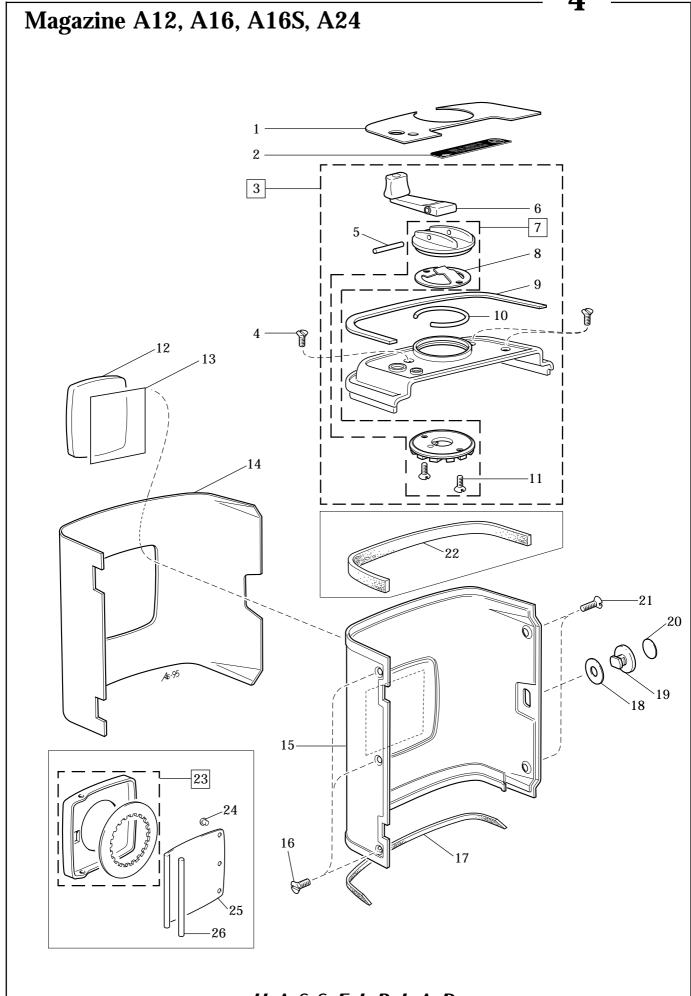
Pos No.	Pcs	Spare Part No.	Description	Remark
110.		Tart No.		
1 2 3 4	1 2 1	810 927 823 012 308 485 816 505	Washer Screw Plate Spring	
5	1	12 819	Shaft	
6 7 8 9 10	2 1 1 1 1	814 527 816 502 22 715 814 508 22 277	Spring Spring Arm Spring Release arm	A12, A16, A16S
11 12 13 14	1 1 1 1	22 315 810 926 814 852 812 005 814 803	Release arm Washer Spring Pin Spring	A24
15 16 17 18	1 1 3 1 1	13 754 822 065 824 202 13 806 13 849	Pin Stop screw Screw Dial Dial	A12, A24 A12 A16, A16S
19 20	1 1 1 1	13 819 816 611 22 371 21 583 22 841	Dial Spring Spacing gear Spacing gear Spacing gear	A24 A12 A16, A16S A16, Serial No. 31ET10601 - fwd
21 22 23	1 1 1 1	21 484 21 548 21 483 22 716 22 745	Spacing gear Center mechanism Center mechanism Light seal Tape	A24 A12, A16, A16S A24
24 25 26 27 28	1 1 3 1 2	816 509 13 031 308 488 22 747 14 309	Spring Signal Tape washer Cover plate Light seal	
29 30 31 32	1 1 2 1 1	21 535 13 820 13 821 30 752 30 751	Exposure lock Spring Plate spring Magazine support Magazine support	A12, A24 A16
33	1 1 1 1 4	30 516 22 710 22 712 21 587 833 105	Magazine support Picture frame Picture frame Picture frame Rivet	A16S A12 A16 A16S
35 36 37 38 39	2 2 1 1 1	309 407 309 408 13 508 13 067 Z41 068	Light seal Tape Foil Light trap Magazine slide	A16 A16
40 41	1 1	812 107 12 295	Pin Ribbon	
Revision				January 2001

Revision 1 January 2001

H A S S E L B L A D Magazine A12, A16, A16S, A24

Pos No.	Pcs	Spare Part No.	Description	Remark
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63	1 1 9 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	40 380 13 804 823 015 814 752 20 843 20 684 814 307 20 717 810 802 12 209 817 132 823 012 824 060 21 568 21 494 14 185 14 184 13 030 816 707 814 303 12 215 308 426 308 109 309 103 311 101	Outer plate Outer plate Screw Spring Locking arm Locking spring Spring Return stop Washer Gear Clip Screw Screw Bracket Link Hub Spring Spring Spring Spring Spring Spring Spring Cear Shaft Gear assembly	Please state serial No. Previous type outer plate, please see Service Info 6/93 A12 A16, A16S
64 65 66	1 1 1 1 1	311 101 21 490 820 013 22 171	Gear assembly Cover Screw Eccentric	Previous type cover A16, A16S A16, A16S

Revision 1 January 2001



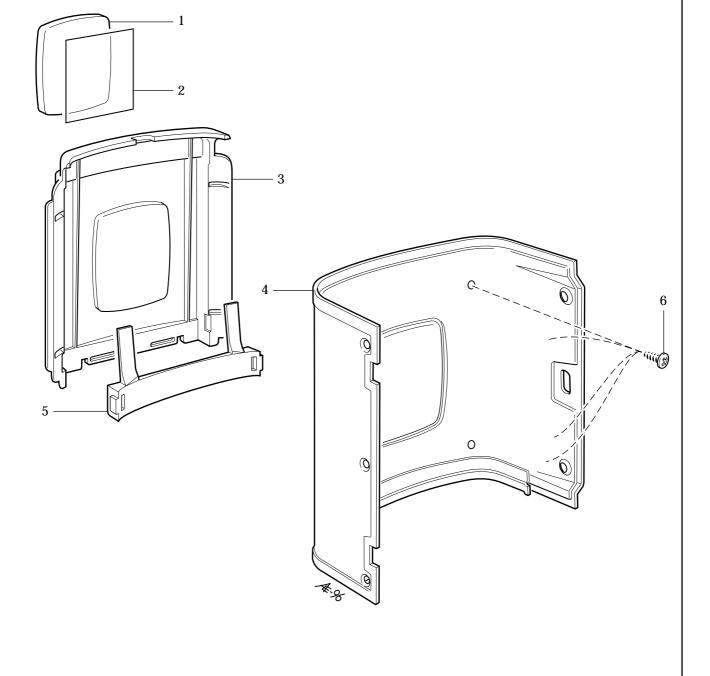
*H A S S E L B L A D*Magazine A12, A16, A16S, A24

Pos	Pcs	Spare	Description	Remark
No.		Part No.		
1 2	1 1 1 1	13 080 13 091 13 082 13 299 13 748	Leather Name plate Name plate Name plate Name plate	A12 A16 A16S A24
3	1 1 1 1 3	30 483 30 639 30 499 30 640 823 012	Cover right, complete Cover right, complete Cover right, complete Cover right, complete Screw	A12 chrome A12 black A16, A16S, A24 chrome A16, A16S, A24 black
5 6 7 8 9	1 1 1 1	812 207 13 810-1 21 572-2 13 826 12 290	Pin Handle Crank mounting Spring Leather	
10 11 12 13 14	1 2 1 1	13 827 823 015 308 328 308 507 21 537	Tube Screw Film indicator Tape Leather	
15 16 17 18 19	1 1 3 1 1	308 023 308 024 823 013 22 409 810 761 22 356	Shell Shell Screw Light seal Teflon washer Button	Chrome Black
20	1 1 1 1 2	22 440 22 438 22 439 22 441 823 017	Sign plate Sign plate Sign plate Sign plate Screw	A12 A16 A16S A24
22	1	12 942	Light seal	Below Serial No. 30EI58263
23 24 25 26	1 3 1 1	21 456 832 203 21 418 13 692	Cover Rivet Plate spring Shaft	Previous type Film indicator
Revision				May 1997

Magazine A12, A16, A24 (Modified 1996) 21 20 -11

Magazine A12, A16, A24 (Modified 1996)

Pos	Pos Pcs Spare Description Remark			rk	
No.	rcs	Part No.	Description	Kellia	I K
		1 410 1 100			
1	1	308 328	Film indicator		
2	1	308 507	Tape		
3	1	30 312	Leather		
4	3	823 013	Screw		
5	1	22 409	Light seal		
6	1	308 023	Shell	Chrome	
	1	308 024	Shell	Black	
7	1	810 761	Teflon washer		
8	1	22 356	Button		
9	1	22 404	Leather		
10	2	823 017	Screw		
11	1	308 534	Name plate	A12	
	1	309 507	Name plate	A16	
10	1	311 407	Name plate	A24	
12	2	823 015	Screw		
13	1	13 827	Tube		
14	3	823 012	Screw		
15	1	12 290	Leather		
16	1	13 826	Spring		
17	1	812 207	Pin		
18	1	21 572-2	Crank mounting		
19	1	13 810-1	Handle		•
20	1	30 483	Cover right, complete	A12	chrome
	1	30 639	Cover right, complete	A12	black
	1	30 499	Cover right, complete	A16, A24	chrome
0.4	1	30 640	Cover right, complete Leather	A16, A24	black
21	1	308 411	Leather		
Dovision					



Magazine A12, A16, A24

Pos No.	Pcs	Spare Part No.	Description	Remark
1 2 3 4 5 6	1 1 1 1 1 1 4	308 328 308 507 308 536 308 015 308 016 308 400 826 038	Film indicator Tape Dark slide holder Shell Shell Support Screw	Chrome Black

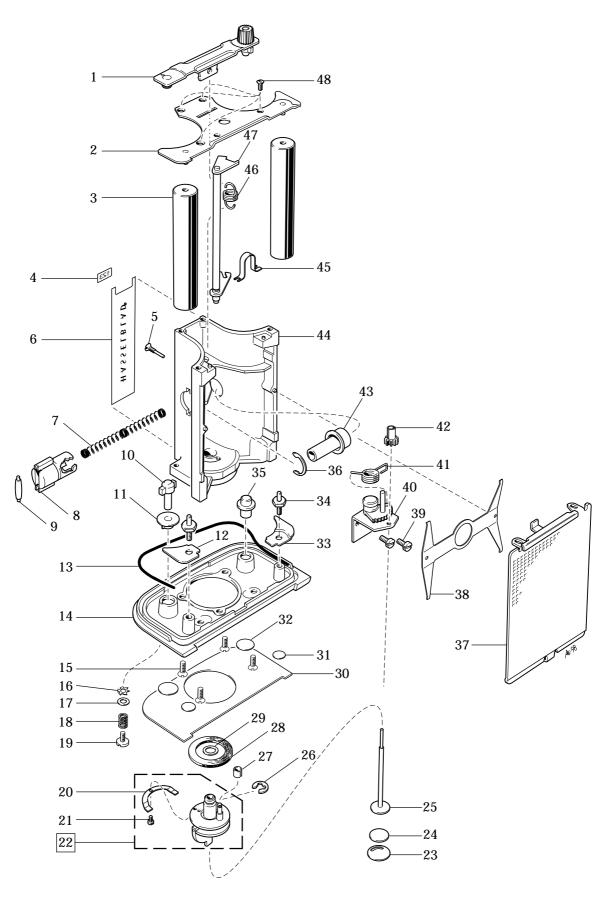
Magazine A12, A24 Serial No. TR 133000 - RI 3250868 -39 -37 -33 11-

Magazine A12, A24 Serial No. 133000 - RI 3250868

Pos No.	Pcs	Spare Part No.	Description	Remark
1 2 3 4 5	1 1 1 1	13 797 12 279 13 060 13 795 14 261	Arm Holder Locking shaft Cover Number plate	Please state serial No.
6 7 8 9 10	4 1 2 1 2	820 225 13 268 22 282 308 522 13 514	Screw Name plate Spool center Sealing cord Roller	
11 12 13 14 15	2 1 4 1 1	12 273 13 511 823 045 12 289 12 267	Journal Film guide Screw Leather Spring	
16 17 18 19 20	1 1 1 1	821 060 13 784 817 140 12 268 810 925	Screw Lock Clip Felt ring Washer	0.1 mm
21 22 23	1 1 2 2 1	810 928 810 933 12 722 -0.20 14 093 40 305	Washer Washer Shim Shim End plate	0.2 mm 0.5 mm Alt. 12 722-0.10 or 12 722-0.30 Chrome
24 25 26 27	1 2 2 1 1	40 306 810 403 820 012 13 510 13 512	End plate Washer Screw Film guide Plate spring	Black 0.2 mm
28 29 30 31	1 1 1 1	21 521-3 22 129-3 13 792 13 791 13 785	Intermed. part + End plate Intermed. part + End plate Plate Window Film signal	Chrome Black
32 33 34 35 36	4 1 1 1	822 001 12 307 12 769 12 540 814 522	Screw Spring Spring Spring Spring	
37 38 39 40	2 1 1 4	820014 21524 13794 824033	Screw Bracket Gear Screw	
				Please note! Parts assortment for this type of spool holder is now reduced. Parts not specified above are not available any more.

Revision 2 January 2001

$Magazine\ A12,\ A24\ \ {\tt Serial\ No.\ RI\ 3250869\ -\ forwards}$



$Magazine\ A12,\ A24\ \ {\tt Serial\ No.\ RI\ 3250869\ -\ forwards}$

Pos No.	Pcs	Spare Part No.	Description	Remark
1 2 3 4 5	1 1 2 1	22 398 22 389 13 514 14 261 22 408	Take-up arm Plate Roller Number plate Screw	Please state serial No.
6 7 8 9 10	1 1 1 1	22 392 815 608 40 318 22 406 22 169	Name plate Spring Plunger Roller Hub	
11 12 13 14	1 1 1 1	22 168 13 511 308 522 40 305 40 306	Bushing Film guide Sealing cord End plate End plate	Chrome Black
15 16 17 18 19	4 1 1 1	823 045 13 436 810 704 815 901 821 012	Screw Locking washer Washer Spring Screw	
20 21 22 23 24	1 1 1 1	12 267 821 060 13 784 13 792 13 791	Spring Screw Lock Plate Window	
25 26 27 28 29	1 1 1 1 1	22 382 817 140 22 901 12 268 810 925 810 928	Film signal Clip Sleeve Felt ring Washer Washer	0.1 mm 0.2 mm
30 31 32 33	1 1 2 2 1	810 933 12 289-1 12 722-0.20 14 093 13 510	Washer Leather Shim Shim Film guide	0.5 mm Alt. 12 722-0.10 or 12722-0.30
34 35 36 37 38	2 1 1 1 1	12 273 22 282 817 289 22 388 13 512	Journal Spool center Clip Pressure plate Plate spring	
39 40 41 42 43	2 1 1 1	820 014 22 379 816 616 22 375 308 356	Screw Bracket Spring Gear Plunger	
44 45 46 47 48	1 1 1 1 1 4	22 401 22 412 12 540 814 952 13 060 824 033	Intermed. part + End plate Intermed. part + End plate Spring Spring Locking shaft Screw	Chrome Black
		40 317 40 319	Spool holder, compl. Spool holder, compl.	Chrome Black

Revision 2 February 2000

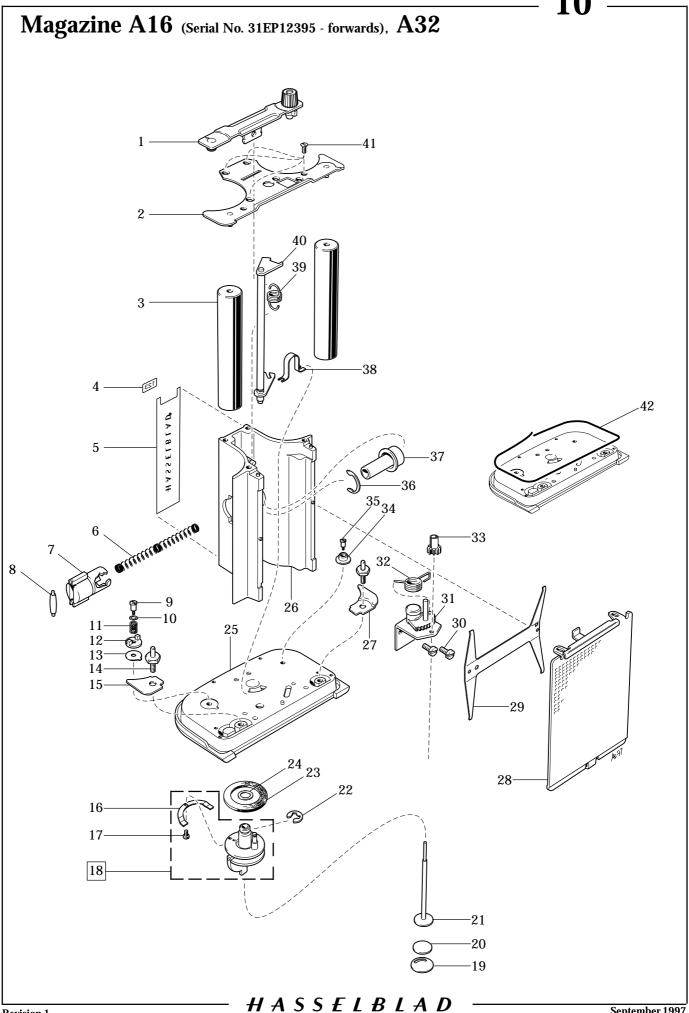
Magazine A16, A16S Serial No. UV 211701 - 31EP12394 1 42 -41 40 39 34 33 35 -32 11 27 28 29 12 30 13 -31 15 -17--21 18 20 -19

Magazine A16, A16S Serial No. UV 211701 - 31EP12394

Pos	Pcs	Spare	Description	Remark
No.		Part No.		
1 2 3 4 5	1 1 1 1	13 917 13 797 12 279 13 916 13 060	Plate, compl. Arm Holder Plate Locking shaft	
6 7 8 9 10	1 1 4 1 1	13 795 14 261 821 204 13 268 308 522	Cover Number plate Screw Name plate Sealing cord	Please state serial No.
11 12 13 14 15	2 2 1 4 1	13 514 12 273 13 912 823 045 12 289	Roller Journal Film guide Screw Leather	
16 17 18 19 20	1 1 1 1	12 267 821 060 13 784 13 792 13 791	Spring Screw Lock Plate Window	
21 22 23 24	1 1 1 1 1	13 785 817 140 12 268 810 925 810 928 810 933	Film signal Clip Felt ring Washer Washer Washer	0.1 mm 0.2 mm 0.5 mm
25 26 27 28	2 1 1 1 1	12 722-0.20 90 394 90 458 13 510 13 913	Shim End plate End plate Film guide Plate spring	Alt. 12 722-0.10 or 12 722-0.30 Chrome Black
29 30 31 32 33	2 2 4 1	820 012 810 403 822 001 21 615 21 616	Screw Washer Screw Pressure plate Guide plate	
34 35 36 37	1 1 1 1	12 307 21 620 22 131 12 769 12 540	Spring Intermed. part + End plate Intermed. part + End plate Spring Spring	Chrome Black
38 39 40 41 42	1 2 1 1 4	814 522 820 014 21 524 13 794 824 033	Spring Screw Bracket Gear Screw	
		40 286	Spool holder, compl.	Black
				Please note! Parts assortment for this type of spool holder is now reduced. Parts not specified above are not available any more.
Revision	لــــــا			January 200

Revision 3 January 2001



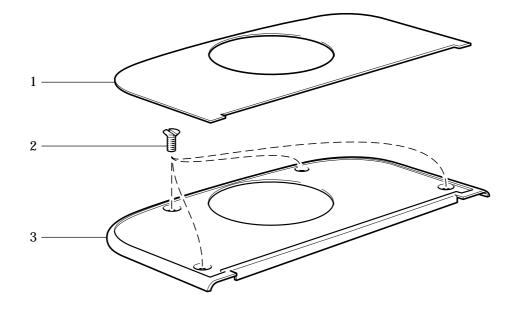


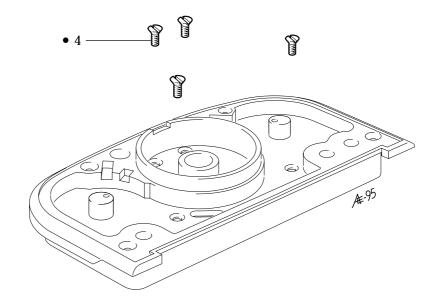
$Magazine \ A16 \ (Serial \ No.\ 31EP12395 \ - \ forwards), \ A32$

Pos No.	Pcs	Spare Part No.	Description	Remark
1 2 3 4 5	1 1 2 1 1	22 398 313 101 13 514 14 261 308 504	Take-up arm Plate Roller Number plate Name plate	Please state serial No.
6 7 8 9 10	1 1 1 1	815 608 40 318 22 406 822 438 810 778	Spring Plunger Roller Screw Washer	
11 12 13 14 15	1 1 1 2 1	815 512 308 358 308 506 12 273 309 403	Spring Coupling Washer Journal Film guide	
16 17 18 19 20	1 1 1 1 1	12 267 821060 308 101 13 792 13 791	Spring Screw Lock Plate Window	
21 22 23 24	1 1 1 1 1	22 382 817 140 308 410 810 925 810 928	Film signal Clip Felt ring Washer Washer	0.1 mm 0.2 mm
25 26 27 28	1 1 1 1 1	810 933 313 322 309 506 308 345 309 102	Washer End plate Intermed. part Film guide Pressure plate	0.5 mm
29 30 31 32 33	1 2 1 1	13 913 820 014 22 379 816 616 22 375	Spring Screw Bracket Spring Gear	
34 35 36 37 38	1 1 1 1 1	308 408 822 433 817 289 308 356 12 540	Spool center Screw Clip Plunger Spring	
39 40 41 42	1 1 4 1	814 952 308 103 824 033 308 522	Spring Locking shaft Screw Sealing cord	
		309 022 309 023	Spool holder, complete Spool holder, complete	chrome Black

Revision 1 September 1997

Magazine A16 Serial (No. 31EP12395 - forwards)





$Magazine \ A16 \ \ (Serial\ No.\ 31EP12395\ -\ forwards)$

	Pcs	Spare Part No.	Description	Remark
Pos		Spare Part No. 12 289 823 435 22 762 22 764 823 450 823 650	Leather Screw Cover Screw Screw	Chrome Black Serial No. 31ET10171 - fwd please see Service Info 10/96

Magazine A12/16/24TCC, E12/16/24, E12CC 17-23— −68

HASSELBLAD

Magazine A12/A16/A24TCC, E12/16/24, E12CC

Pos No.	Pcs	Spare Part No.	Description	Remark
1 2 3 4 5	1 2 1 1	810 927 823 012 308 485 816 505 12 819	Washer Screw Plate Spring Shaft	
6 7 8 9 10	2 1 1 1 1	814 527 816 502 22 715 814 508 22 277	Spring Spring Arm Spring Release arm	12, 16
11 12 13 14	1 1 1 1	22 315 810 926 814 852 812 005 814 803	Release arm Washer Spring Pin Spring	24
15 16 17 18	1 1 3 1 1	13 754 822 065 824 202 13 806 13 849	Pin Stop screw Screw Dial Dial	12, 24 12 16
19 20	1 1 1 1	13819 816611 22371 21583 22841	Dial Spring Spacing gear Spacing gear Spacing gear	24 12 16 E16, Serial No. 37ET10301 - fwd
21 22 23	1 1 1 1	21 484 21 548 21 483 22 716 22 745	Spacing gear Center mechanism Center mechaniam Light seal Tape	24 12, 16 24
24 25 26 27 28	1 1 2 1 3	816 509 13 031 308 496 308 044 308 488	Spring Signal Tape washer Contact flex Tape Washer	
29 30 31 32 33	1 2 1 1 2	22 747 14 309 21 535 13 820 13 821	Cover Light seal Exposure lock Spring Plate spring	
34 35 36	1 1 1 1 4	308 364 309 344 22 710 22 712 833 105	Magazine support Magazine support Picture frame Picture frame Rivet	12, 24 16 12, 24 16
37 38 39 40 41	2 2 1 1 1	309 407 309 408 13 508 13 067 Z41 068	Light seal Tape Foil Light trap Magazine slide	16 16
42 43	1 1	812 107 12 295	Pin Ribbon	

Revision 1 January 2001

HASSELBLAD

Magazine A12/A16/A24TCC, E12/16/24, E12CC

Pos No.	Pcs	Spare Part No.	Description	Remark
44 45 46 47	1 1 9 1	308 321 308 106 823 015 814 752 20 843	Outer plate Outer plate Screw Spring Locking arm	Please state serial No. Previous type outer plate please see Service Info 6/93
48 49 50 51 52	1 1 1 1 1	20 684 814 307 20 717 810 802 12 209	Locking spring Spring Return stop Washer Gear	
53 54 55 56 57	1 1 1 1 1	817 132 823 012 824 060 21 568 21 494	Clip Screw Screw Bracket Link	
58 59 60 61 62	1 1 1 1	14 185 14 184 13 030 816 707 814 303	Hub Spring Spring housing Spring Spring	
63 64 65	1 1 1 1 1	12 215 308 426 308 109 309 103 311 101	Gear Shaft Gear assembly Gear assembly Gear assembly	12 16 24
66 67 68	1 1 1	308 402 820 013 22 171	Cover Screw Eccentric	Previous type cover 16 16

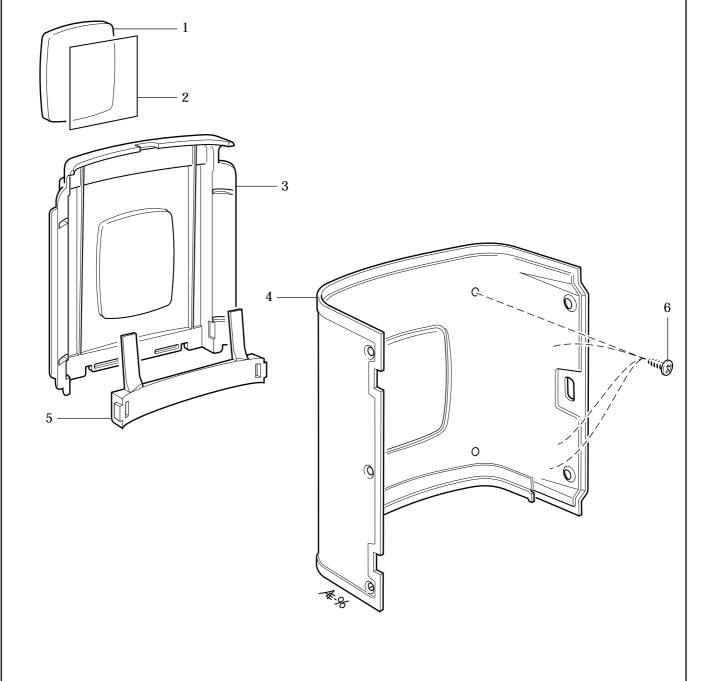
Revision 1 January 2001

Magazine E12, E16, E24, E12CC 24 23 22 -17 -14 <u>1</u>2 11 10

H A S S **E** L B L A D Magazine E12, E16, E24, E12CC

1 1 1 2 1 1 3 1 1 1 1 1 1 1 2 1	308 328 308 507 308 366 308 487 308 400 30 312 823 013 22 409 308 023 308 024 810 761 22 356 22 404 823 017 308 489 309 406	Film indicator Tape Dark slide holder Tape Support Leather Screw Light seal Shell Shell Teflon washer Button Leather Screw Name plate	Chrome Black	
1 1 1 1 1 1 2 1 1 1	22 409 308 023 308 024 810 761 22 356 22 404 823 017 308 489	Light seal Shell Shell Teflon washer Button Leather Screw		
1 2 1 1	22 404 823 017 308 489	Leather Screw		
1		Name plate	E12 E16	
1 2 1	311 406 308 540 823 015 13 827	Name plate Name plate Screw Tube	E24 E12CC	
3 1 1 1 1	12 290 13 826 812 207 21 572-2	Leather Spring Pin Crank mounting		
1 1 1 1 1 1	13 810-1 30 483 30 639 30 499 30 640 308 411	Handle Cover right, complete Cover right, complete Cover right, complete Cover right, complete Leather	E12, E12CC E12, E12CC E16, E24 E16, E24	chrome black chrome black
	1 3 1 1 1 1 1 1 1 1 1 1 1 1	1 13 827 3 823 012 1 12 290 1 13 826 1 812 207 1 21 572-2 1 13 810-1 1 30 483 1 30 639 1 30 640	2 823 015 Screw 1 13 827 Tube 3 823 012 Screw 1 12 290 Leather 1 13 826 Spring 1 812 207 Pin 1 21 572-2 Crank mounting 1 13 810-1 Handle 1 30 483 Cover right, complete 1 30 639 Cover right, complete 1 30 499 Cover right, complete 1 30 640 Cover right, complete	2 823 015 Screw 1 13 827 Tube 3 823 012 Screw 1 12 290 Leather 1 13 826 Spring 1 812 207 Pin 1 21 572-2 Crank mounting 1 13 810-1 Handle 1 30 483 Cover right, complete E12, E12CC 1 30 639 Cover right, complete E16, E24 1 30 640 Cover right, complete E16, E24

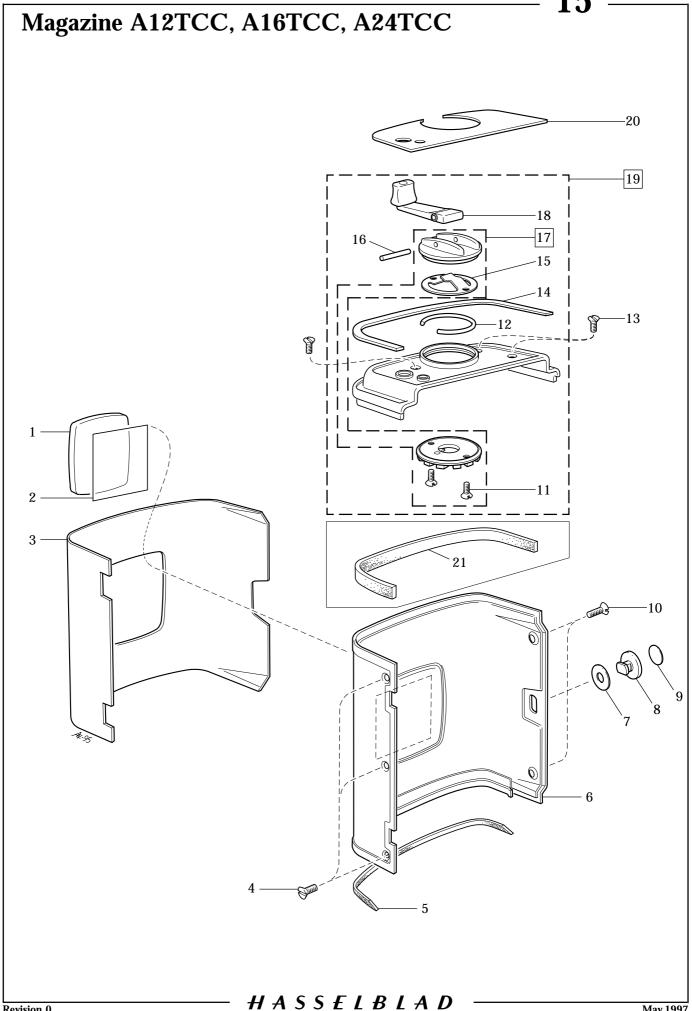
Magazine E12, E16, E24, E12CC (Modified 1996)



Magazine E12, E16, E24, E12CC (Modified 1996)

Pos No.	Pcs	Spare Part No.	Description	Remark
1 2 3 4	1 1 1 1 1	308 328 308 507 308 536 308 015 308 016	Film indicator Tape Dark slide holder Shell Support	Chrome Black
5 6	1 4	308 400 826 038	Support Screw	

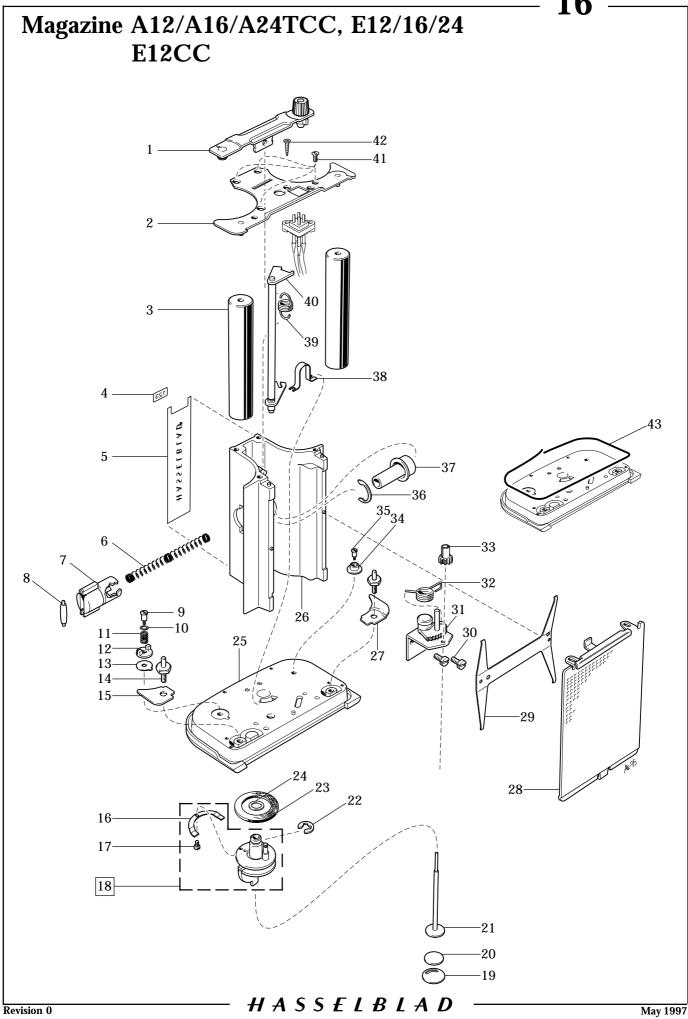




H A S S E L B L A D Magazine A12TCC, A16TCC, A24TCC

Pos No.	Pcs	Spare Part No.	Description	Remark
1 2 3 4 5	1 1 1 3 1	308 328 308 507 21 537 823 013 22 409	Film indicator Tape Leather Screw Light seal	
6 7 8 9	1 1 1 1 1	308 023 308 024 810 761 22 356 22 440	Shell Shell Teflon washer Button Sign plate	Chrome Black
10 11 12	1 1 2 2 1	22 438 22 441 823 017 823 015 13 827	Sign plate Sign plate Screw Screw Tube	A16 A24
13 14 15 16 17	3 1 1 1 1	823 012 12 290 13 826 812 207 21 572-2	Screw Leather Spring Pin Crank mounting	
18 19 20	1 1 1 1 1	13 810-1 30 483 30 639 30 499 30 640 308 411	Handle Cover right, complete Cover right, complete Cover right, complete Cover right, complete Leather	A12 chrome A12 black A16, A24 chrome A16, A24 black
21	1	12 942	Light seal	Previous type Light seal





HASSELBLAD

Magazine A12/A16/A24TCC, E12/16/24, E12CC

Pos No.	Pcs	Spare Part No.	Description	Remark
1 2 3 4	1 1 1 2 1	22 398 312 105 313 101 13 514 14 261	Take-up arm Plate Plate Roller Number plate	12, 24 16 Please state serial No.
5 6 7 8 9	1 1 1 1	308 504 815 608 40 318 22 406 822 438	Name plate Spring Plunger Roller Screw	ricase state serial rvo.
10 11 12 13 14	1 1 1 1 2	810 778 815 512 308 358 308 506 12 273	Washer Spring Coupling Washer Journal	
15 16 17 18	1 1 1 1	308 346 309 403 12 267 821 060 308 101	Film guide Film guide Spring Screw Lock	12, 24 16
19 20 21 22 23	1 1 1 1	13 792 13 791 22 382 817 140 308 410	Plate Window Film signal Clip Felt ring	
24 25	1 1 1 1	810 925 810 928 810 933 312 323 313 322	Washer Washer Washer End plate End plate	0.1 mm 0.2 mm 0.5 mm 12, 24 16
26 27 28	1 1 1 1 1	308 516 309 506 308 345 308 104 309 102	Intermed. part Intermed. part Film guide Pressure plate Pressure plate	12, 24 16 12, 24 16
29 30 31 32 33	1 2 1 1	13 913 820 014 22 379 816 616 22 375	Spring Screw Bracket Spring Gear	
34 35 36 37 38	1 1 1 1	308 408 822 433 817 289 308 356 12 540	Spool center Screw Clip Plunger Spring	
39 40 41 42 43	1 1 4 2 1	814 952 308 103 824 033 826 040 308 522	Spring Locking shaft Screw Screw Sealing cord	

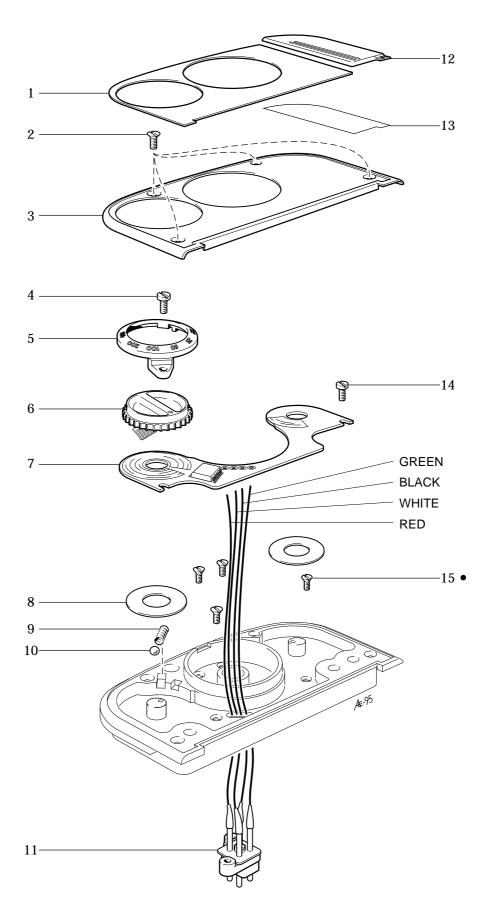
Revision 1 January 2001

Magazine A12/A16/A24TCC, E12/16/24, E12CC

Pos No.	Pcs	Spare Part No.	Description	Remark
		308 111 308 112 309 111 309 112	Spool holder complete Spool holder complete Spool holder complete Spool holder complete	12/24TCC, E12CC chrome 12/24TCC, E12CC black 16TCC chrome 16TCC black
		308 025 308 026 309 024 309 025	Spool holder complete Spool holder complete Spool holder complete Spool holder complete	E12, E24 chrome E12, E24 black E16 chrome E16 black
Pavision				January 2001

Revision 1 January 2001

Magazine E12, E16, E24

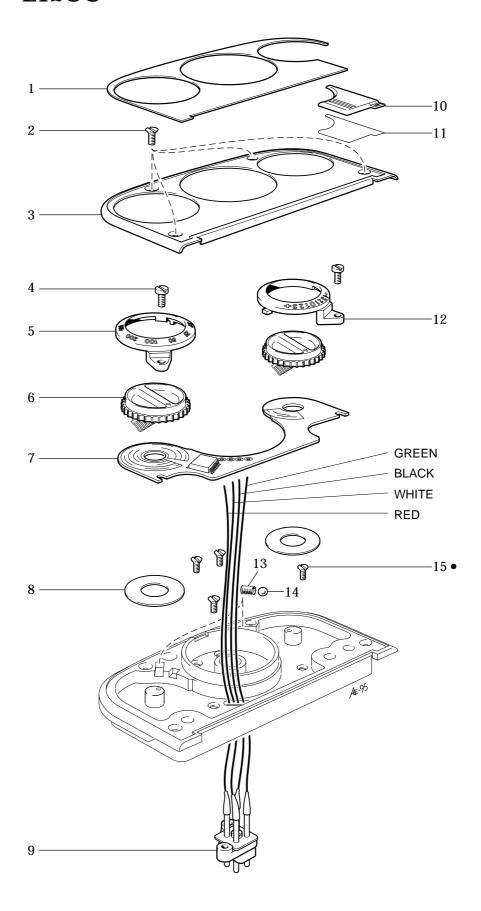


H A S S **E** L B L A D Magazine E12, E16, E24

Pos No.	Pcs	Spare Part No.	Description	Remark
1 2 3 4 5 6 7 8 9 10 11 12 13 14	1 4 1 1 1 1 1 2 1 1 1 1 1	308 521 823 435 308 519 308 520 820 445 308 347 308 107 308 524 308 495 815 604 809 020 308 043 308 368 308 523 820 425	Leather Screw Cover Cover Screw ISO indicator Dial Circuit board Tape Spring Steel ball Contact assembly Rubber plate Tape Screw	Chrome Black
15	4 4	823 450 823 650	Screw Screw	E12, Serial No. 36ET10461 - fwd E16, Serial No. 37ET10172 - fwd E24, Serial No. 38ET10201 - fwd please see Service Info 10/96

Revision 1 September 1999

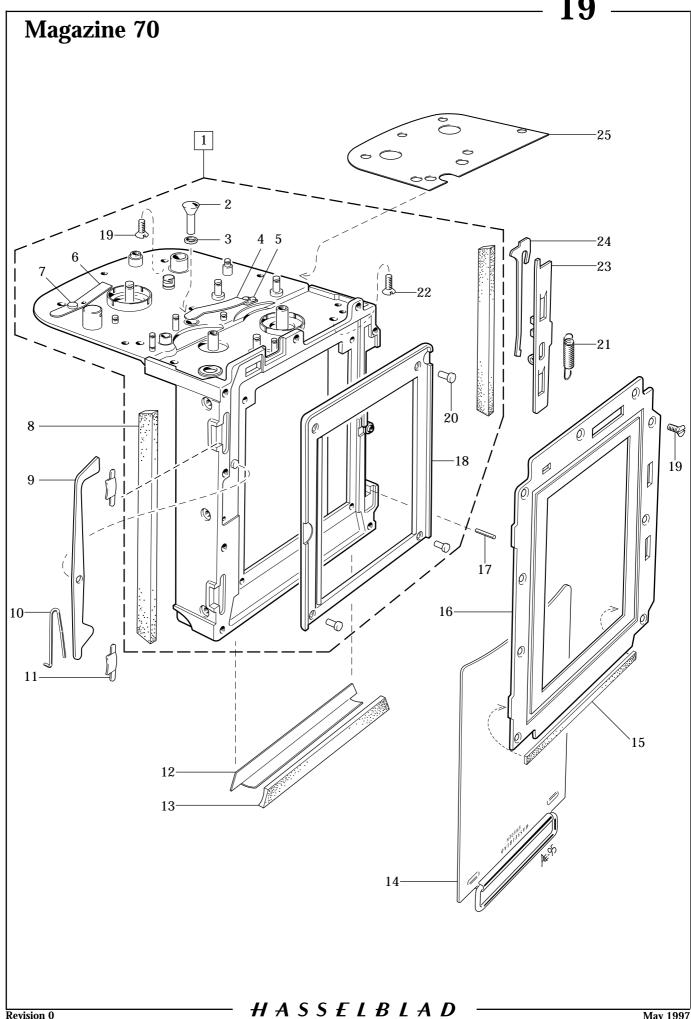
Magazine A12TCC, A16TCC, A24TCC E12CC



HASSELBLAD

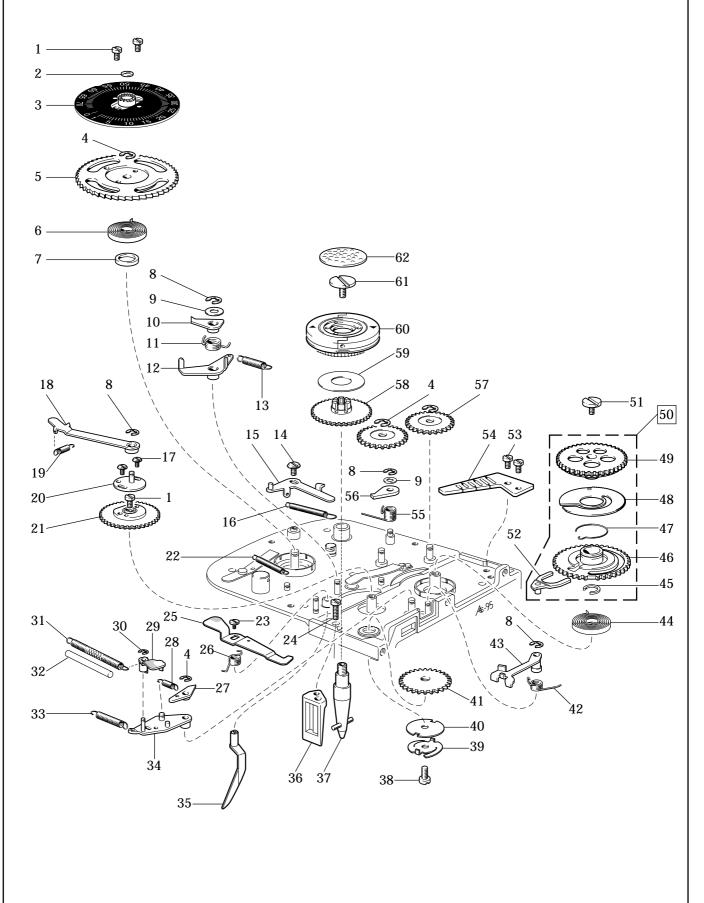
Magazine A12TCC, A16TCC, A24TCC, E12CC

Pos No.	Pcs	Spare Part No.	Description	Remark
Pos		Spare	Description Leather Screw Cover Cover Screw ISO indicator Dial Circuit board Tape Contact assembley Rubber plate Tape Indicator Spring Steel ball Screw Screw	



Pos No.	Pcs	Spare Part No.	Description	Remark
1	1 1	30 759 30 510	Magazine support Magazine support	Previous type magazine support please see Service Info 6/93.
2 3 4 5 6	1 1 1 2 1	13 686 810 611 21 413 831 305 21 414	Zero button Washer Plate spring Rivet Return stop	piease see Service into 0/93.
7 8 9 10 11	1 2 1 1 2	835 325 14 309 21 535 13 820 13 821	Pin Light seal Exposure lock Spring Plate spring	
12 13 14 15 16	1 1 1 1 1	13 508 13 067 Z410 68 12 295 40 212 13 911	Foil Light trap Magazine slide Ribbon Outer plate Outer plate	Please state serial No. Previous type outer plate please see Service Info 6/93.
17 18 19 20 21	1 1 13 4 1	812 107 22 710 823 015 833 105 814 752	Pin Picture frame Screw Rivet Spring	please see Service into 6/93.
22 23 24 25	1 1 1 1	823 017 20 843 20 684 30 676	Screw Locking arm Locking spring Cover	

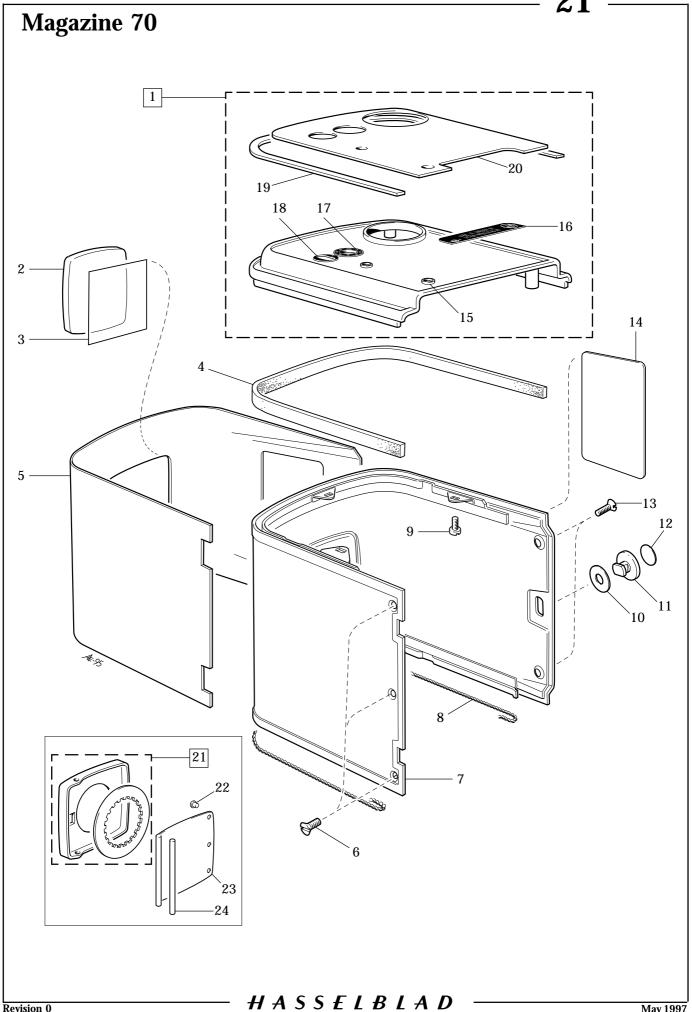
Revision 1 September 1999



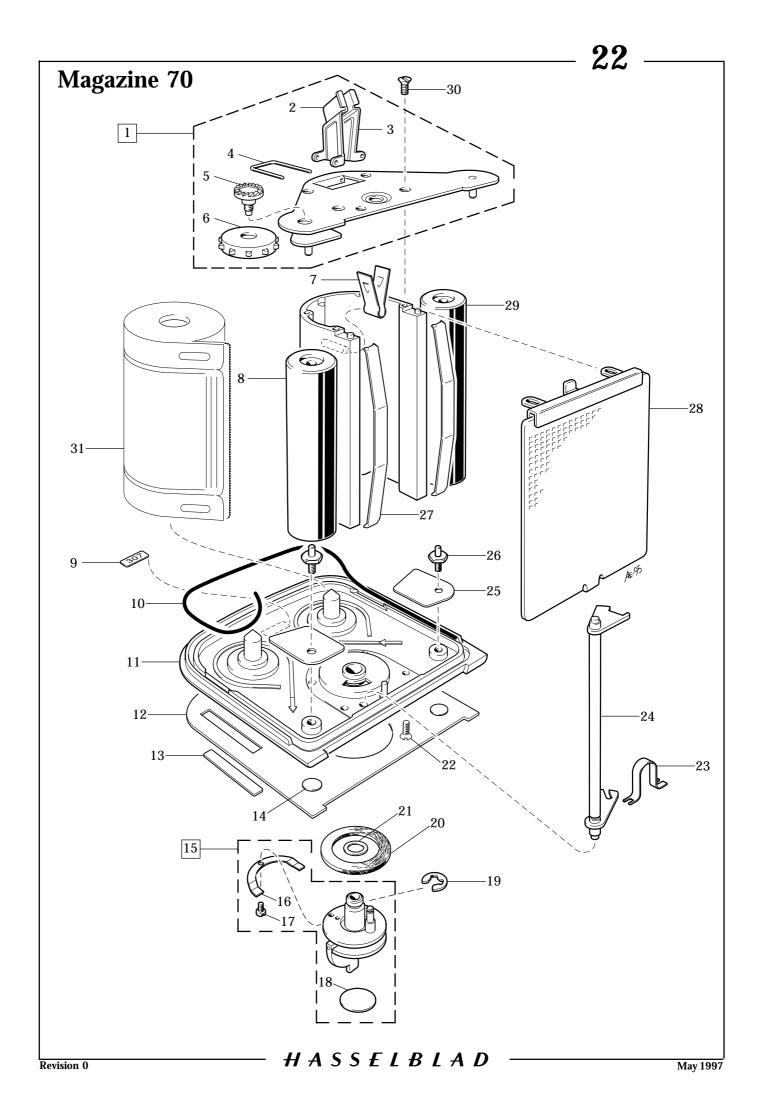
Pos	Pcs	Spare	Description	Remark
No.		Part No.	2 escription	TVO III III
		001.004	C	
1	3	821 004	Screw	
2 3	1 1	13 868 13 670	Name plate Number disc	
4	4	817 119	Clip	
5	1	13 669	Counter wheel	
6	1	21 407	Coil spring	
7	1	810 903	Washer	
8	4	817 115	Clip Washer	
9 10	2	810 506 13 679	vvasner Pawl	
11	1	816 708	Spring	
12	1	13 672	Zero-lever	
13	1	814 307	Spring	
14	1	821 035	Screw	
15	1	13 671	Catch	
16	1	814 518	Spring	
17 18	2	821 205 13 673	Screw Arm	
19	1	814 507	Spring	
20	1	13 666	Cam	
21	1	13 665	Gear	
22	1	814 309	Spring	
23	1	821 230	Screw	
24	1	820 020	Screw	
25	1	21 408	Film signal	
26	1	816 710	Spring	
27 28	1 1	13 676 814 303	Catch	
29	1	13 677	Spring Exposure signal	
30	1	817 112	Clip	
31	1	814 310	Spring	
32	1	812 208	Pin	
33	1	814 515	Spring	
34 35	1 1	13 675 13 674	Cam plate Film feeler	
36	1	21 409	Film guide	
37	1	13 668	Film feeder	
38	1	821 830	Screw	
39	1	21 434	Spring	
40	1	21 433	Washer	
41	1	21 400	Gear	
42 43	1 1	816 711 13 678	Spring Signal catch	
43	1	21 406	Coil spring	
45	1	13 700	Clip	
46	1	21 447	Gear, lower	
47	1	13 699	Spring	
48	1	13 681	Cam disc	
49 50	1 1	21 458 21 532	Return coupling Gear, top	
51	1	821 011	Screw	
52	1	13 682	Catch	
53	2	820 014	Screw	
Revision				May 1997

Pcs	Spare Part No.	Description	Remark
	21 432 816 713 13 687 13 667 21 403 810 927 21 457 821 013 12 288	Return stop Spring Catch Gear Gear Handle Screw Leather	
	1 1 1 2 1 1 1 1	1 21 432 1 816 713 1 13 687 2 13 667 1 21 403 1 810 927 1 21 457 1 821 013	1 21 432 Return stop 1 816 713 Spring 1 13 687 Catch 2 13 667 Gear 1 21 403 Gear 1 810 927 Washer 1 21 457 Handle 1 821 013 Screw





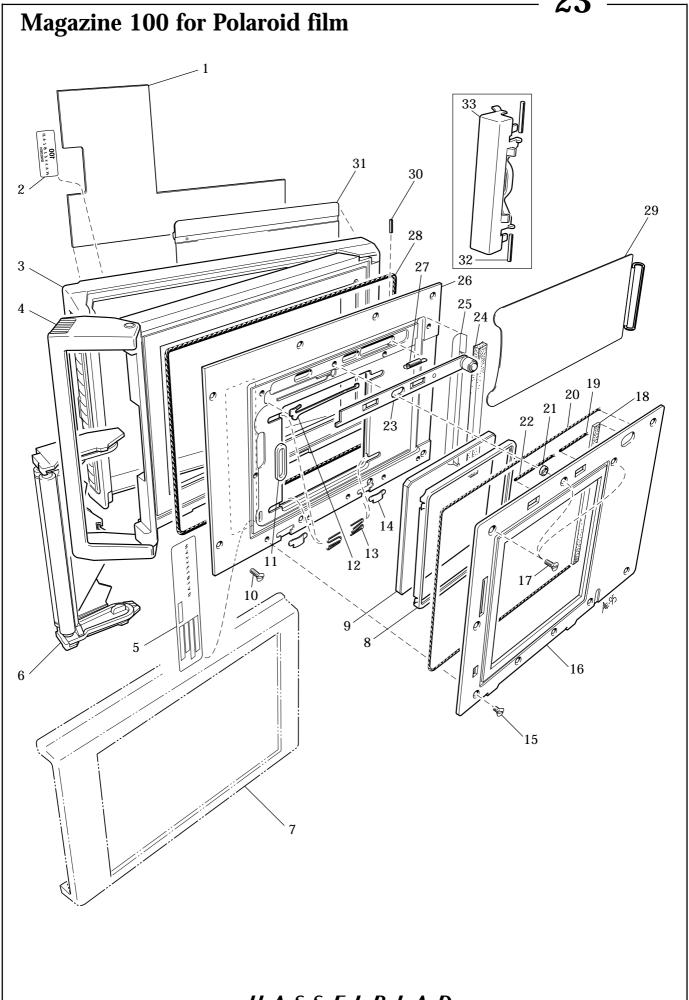
Pos No.	Pcs	Spare Part No.	Description	Remark
1 2 3 4	1 1 1 1	21 459 22 119 308 328 308 507 12 942	Cover right, complete Cover right, complete Film indicator Tape Light seal	Chrome Black
5 6 7 8	1 3 1 1	30 459 823 013 50 115 50 147 22 409	Leather Screw Magazine shell Magazine shell Sealing cord	Chrome Black
9 10 11 12 13	3 1 1 1 3	820 013 810 761 22 356 22 442 823 017	Screw Teflon washer Button Sign plate Screw	
14 15 16 17 18	1 2 1 1	21 410 12 492 13 702 21 420 13 680	Memo tablet Window Name plate Ring Counter window	
19 20	1	21 423 21 422	Leather Leather	
21 22 23 24	1 3 1 1	21 456 832 203 21 418 13 692	Cover Rivet Plate spring Shaft	Previous type film indicator



Pos No.	Pcs	Spare Part No.	Description	Remark
1 2 3 4 5	1 1 1 1 1	21 394 21 375 21 376 13 650 21 378	Plate, compl. Holder Holder Fastening Coupling	
6 7 8 9 10	1 1 1 1	21 377 13 655 13 660 14 261 14 183-2	Tooth wheel Spring Roller, short Number plate Sealing cord	
11 12 13 14	1 1 1 1 2	21 396 22 121 21 387 13 268 12 722-0.30	Endplate + Intermed. part Endplate + Intermed. part Leather Name plate Shim	Chrome Black
15 16 17 18 19	1 1 1 1 1	12 728 12 267 821 060 12 288 817 140	Lock Spring Screw Leather Clip	
20 21 22	1 1 1 1 5	12 268 810 925 810 928 810 933 824 611	Felt ring Washer Washer Washer Screw	0.1 mm 0.2 mm 0.5 mm
23 24 25 26 27	1 1 2 2 2	12 540 13 662 21 389 12 273 21 388	Spring Locking shaft Film guide Journal Plate spring	
28 29 30 31	1 2 4	13 659 13 661 823 015	Pressure plate Roller, long Screw Film cassette	Code No. 51039
		40 211 40 282	Spool holder, compl. Spool holder, compl.	Chrome Black

Revision 1 February 2000

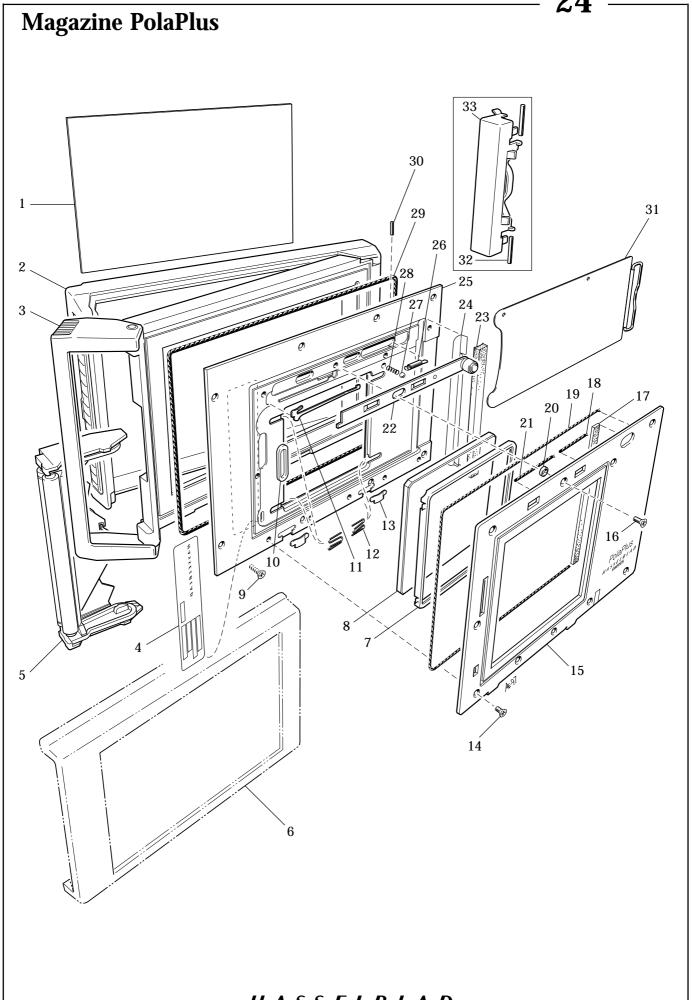




Magazine 100 for Polaroid film

Pos No.	Pcs	Spare Part No.	Description	Remark
1 2 3 4 5 6 7	1 1 1 1 1	303 401 302 408 303 323 303 403 302 426 302 427	Leather Name plate Chassie Clamp Name plate Developing mechanism Film pack	Type 107, 108, 665, 667, 668, 669
8 9 10 11 12 13 14 15	1 1 8 1 1 4 2 7	302 428 302 404 823 755 302 405 303 402 302 429 13 821 823 620	Frame Glass plate Screw Light seal Locking spring Glass holder Plate spring Screw	
16 17 18 19 20 21 22 23 24 25 26	1 3 1 1 1 1 1 1 1 1 1	302 322 823 640 12 295 302 415 302 417 810 528 302 416 302 103 14 195 302 406 303 303	Outer plate Screw Ribbon Light seal Light seal Washer Light seal Locking arm Light trap Foil Plate	Please state serial No.
27 28 29 30 31 32 33	1 1 1 1 1 2 1	814 704 302 418 Z 411 22 812 109 302 101 302 431 302 432	Spring Light seal Magazine slide Pin Slide holder Pin Film pack holder	

Revision 2 September 1999

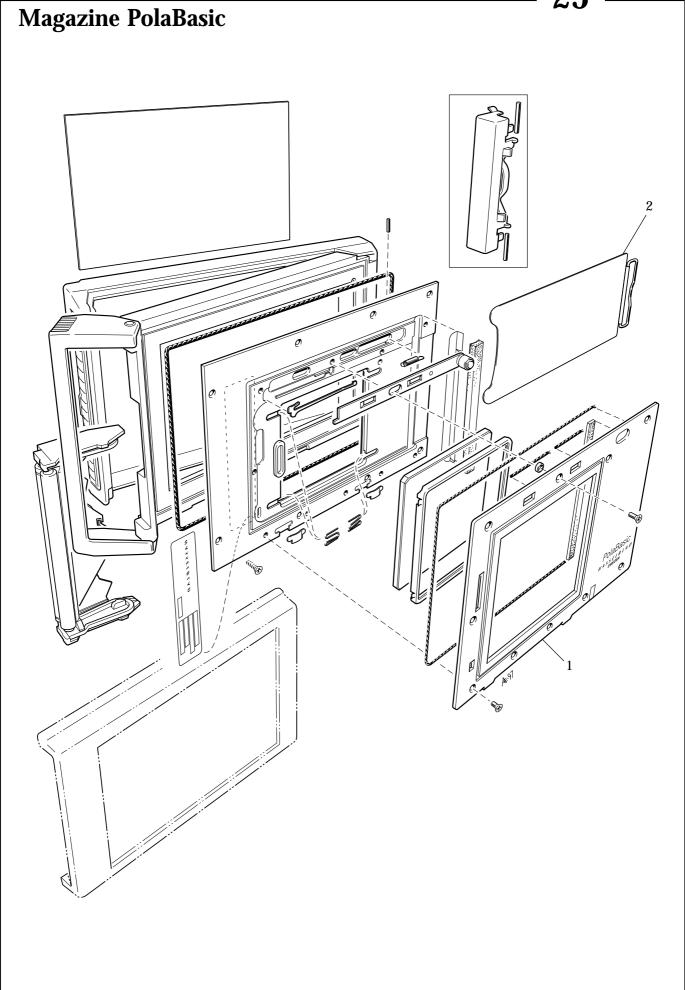


Magazine PolaPlus

Pos No.	Pcs	Spare Part No.	Description	Remark
1 2 3 4 5 6 7	1 1 1 1 1	303 404 303 323 303 403 302 426 302 427	Leather Chassie Clamp Name plate Developing mechanism Film pack Frame	Type 107, 108, 665, 667, 668, 669
8 9 10 11 12 13 14	1 8 1 1 2 4 9	302 404 829 845 302 405 303 402 302 429 13 821 829 525	Glass plate Screw Light seal Locking spring Glass holder Plate spring Screw	
15 16 17 18 19 20 21	1 1 1 1 1 1	302 322 829 540 12 295 302 415 302 417 810 528 302 416	Outer plate Screw Ribbon Light seal Light seal Washer Light seal	Please state serial No. and "to be used for PolaPlus"
22 23 24 25 26 27 28	1 1 1 1 1 1	302 103 14 195 302 406 303 303 814 704 809 120 815 604	Locking arm Light trap Foil Plate Spring Steel ball Spring	
29 30 31 32 33	1 1 1 2 1	302 418 812 109 Z 411 26 302 431 302 432	Light seal Pin Magazine slide Pin Film pack holder	

Revision 2 September 1999





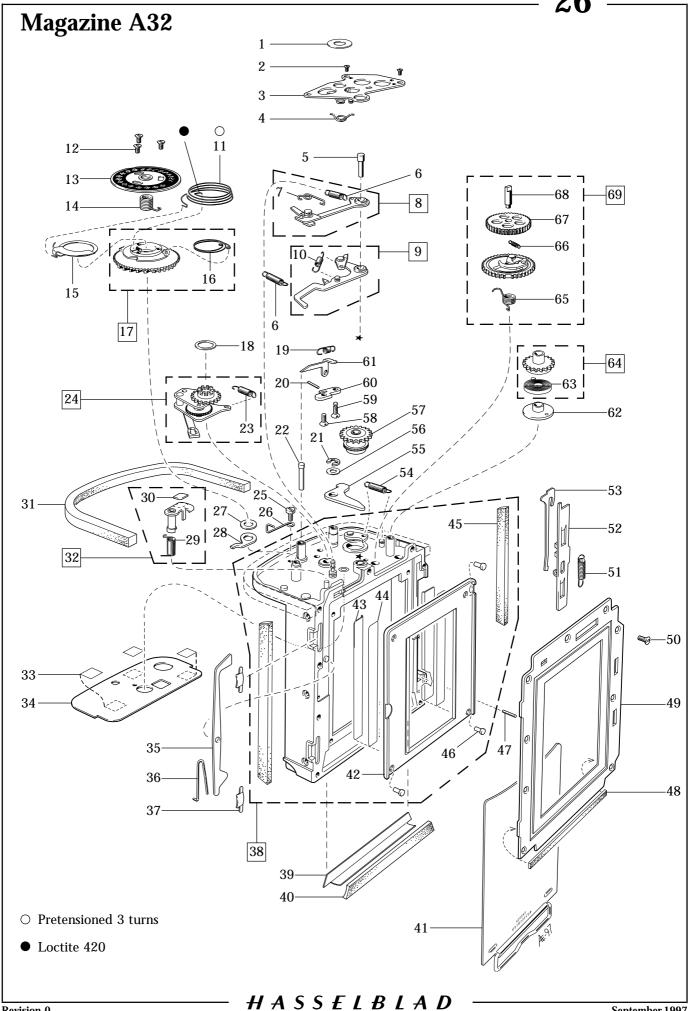
Magazine PolaBasic

Pos No.	Pcs	Spare Part No.	Description	Remark
1	1	302 322	Outer plate	Please state serial No. and "to be used for PolaBasic"
2	1	Z411 22	Magazine slide	Sales code 41122

Spare parts not listed are the same as for magazine PolaPlus

Revision 2 September 1999





Magazine A32

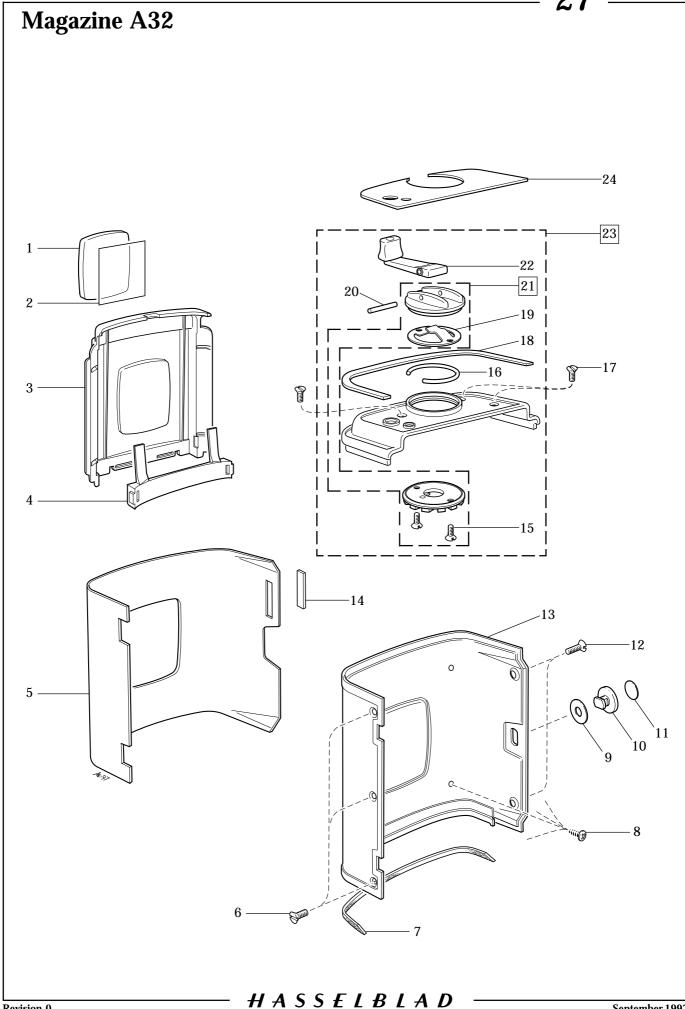
Pos	Pcs	Spare	Description	Remark
No.	1 05	Part No.	Бозеприон	Ivemur K
		010.007	*** 1	
1	1	810 927	Washer	
2	2	823 012	Screw	
3	1	308 485	Plate	
4 5	1 1	816 505	Spring Shaft	
		12 819		
6	2	814 527	Spring	
7	1	816 502	Spring	
8	1	607 318	Arm	
9	1	22 315	Release arm	
10	1	814 508	Spring	
11	1	607 094	Spring	
12	3	824 202	Screw	
13	1	607 320	Dial	
14	1	816 611	Spring	
15	1	607 089	Shade	
16	1	607 095	Spring	
17	1	607 316	Spacing gear	
18	1	810 926	Washer	
19	1	814 852	Spring	
20	1	812 005	Pin	
21	1	817 132	Clip	
22	1	13 754	Pin	1
23	1	814 803	Spring	
24	1	607 313	Center mechanism	
25	1	820 012	Screw	
26	1	607 096	Catch	
27	1	810 778	Washer	
28	1	607 088	Stop	
29	1	816 509	Spring	
30	1	22 745	Tape	
31	1	22 716	Light seal	
32	1	607 314	Signal	
33	3	308 488	Tape washer	
34	1	22 747	Cover plate	
35	1	21 535	Exposure lock	
36	1	13 820	Spring	
37	2	13 821	Plate spring	
38	1	607 311	Magazine support	
39	1	13 508	Foil	
40	1	13 067	Light trap	
41	1	Z410 68	Magazine slide	
42	1	22 712	Picture frame	
43	2	309 407	Light seal	
44	2	309 408	Tape	
45	2	14 309	Light seal	
46	4	833 105	Rivet	
47	1	812 107	Pin	
48	1	12 295	Ribbon	
49	1	40 380	Outer plate	Please state serial No.
50	9	823 015	Screw	
51	1	814 752	Spring	
52	1	20 843	Locking arm	
53	1	20 684	Locking spring	
Povisior Povision			!	Santambar 1907

Revision 0 September 1997

Magazine A32

Pos No.	Pcs	Spare Part No.	Description	Remark
54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69		814 307 20 717 810 802 12 209 823 012 824 060 21 568 21 494 14 185 14 184 13 030 816 707 814 303 12 215 308 426 309 103	Spring Return stop Washer Gear Screw Screw Bracket Link Hub Spring Spring housing Spring Spring Gear Shaft Gear assembly	

Revision 0 September 1997



Magazine A32

Pos No.	Pcs	Spare Part No.	Description	Remark
Pos No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24		Spare Part No. 308 328 308 507 308 536 308 400 30 312 823 013 22 409 826 038 810 761 22 356 22 404 823 017 308 023 308 024 607 883 823 015 13 827 823 012 12 290 13 826 812 207 21 572 -2 13 810 -1 607 305 607 304 308 411	Film Indicator Tape Dark slide Holder Support Leather Screw Light seal Screw Teflon washer Button Leather Screw Shell Shell Name plate Screw Tube Screw Leather Spring Pin Crank mounting Handle Cover right, complete Cover right, complete Leather	Chrome Black Chrome Black

Revision 0 September 1997