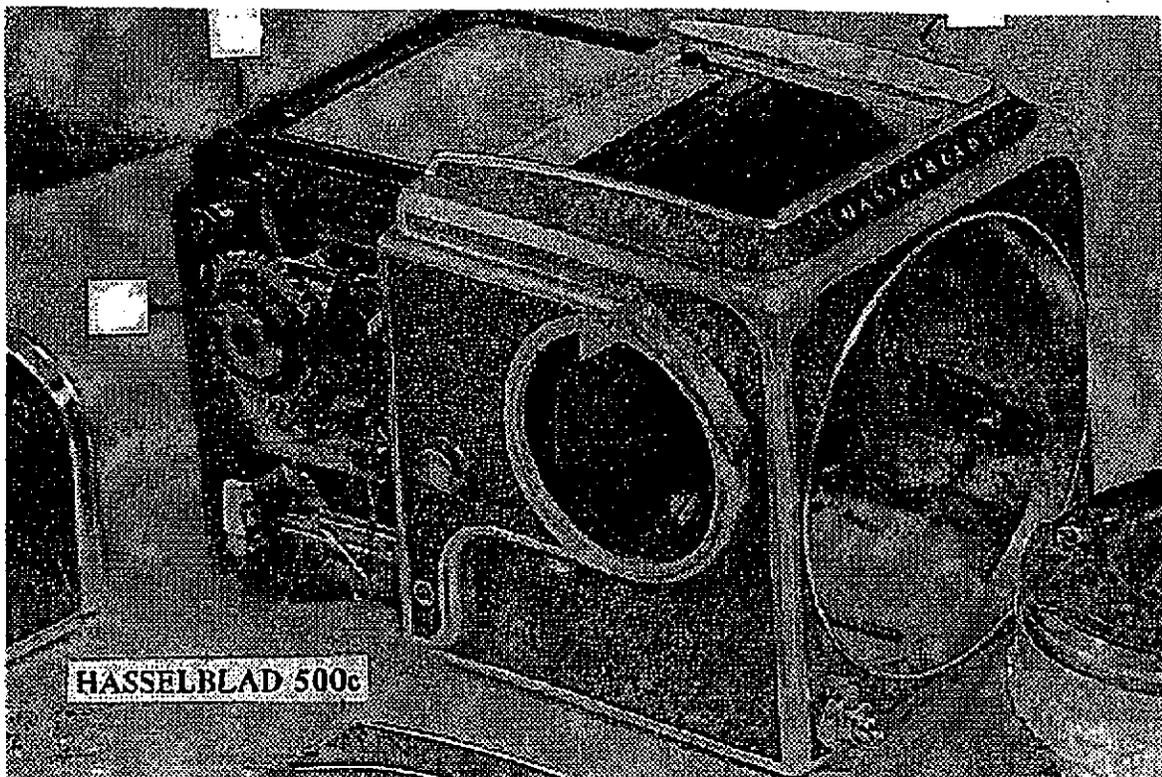


*HASSELBLAD 500 C/CM  
REPAIR MANUAL*



**HASSELBLAD REPAIR**— We discuss only the 500 c and cm cameras here. They are extremely difficult cameras and there are many pitfalls. The easiest repair is the leaf shutter. The shutter is like any other leaf shutter except when fully wound it goes to Bulb and it has no conventional shutter release. You remember if you wind up any shutter with the release pressed it will release the moment you let go of the cocking lever. In the Hasselblad this is what happens. The cocking gear which is keyed to a slot in the shutter winds the shutter. It is released by removing a brake or catch to this shaft internally in the body of the Hasselblad. You have to take off quite a few rings for LVS and aperture to get to the shutter but then it is conventional. You will find many repairs are faulty flash synch or dirty slow speeds within the leaf shutter and you can do these without difficulty.

**OPENING THE HASSELBLAD** involves taking off all the controls and removing the screws around the tripod socket in the bottom of the camera body. Now the whole mechanism slides back like the picture in Picture Plate 1. You must be extremely careful not to tilt the camera or the gears will fall off. They are on little shafts just sitting there with no clips at the end of them to hold them in place. The gears are marked with dots on the teeth to keep the time and you will see repair people's scratch marks too on a camera that has been repaired. But it is serious to get a Hasselblad out of time in its gears. The body shell, when installed, holds them in. Outer body is just a protective shell. Camera is still light tight and will perform stripped as it is shown in the picture.

**HOW IT WORKS**— Three springs that must be wound propel the camera parts. There is a spring that flips the mirror. The mirror does not return automatically. It comes back down when you wind the film. Another spring works the internal shutter that keeps light off the film when the lens is open for focus. You need this back shutter since this is a leaf shutter, not a focal plane shutter camera. The third spring is the main spring inside the leaf shutter which works the blades and the slow speed timer—like any leaf shutter. All these springs are wound by the wind knob which turns gear G in the photo through an idler gear. The wind knob is ratcheted so the springs won't unwind. Gear G works the internal shutter which must open while the leaf shutter is still closed just before it opens. You realize for the camera to take a picture, each of these mechanisms must work at just the right speed at the right time. Otherwise the mirror or the internal shutter would block the image for part or all of the time. All three of these parts are working simultaneously and independently each driven by its own spring and retarded by inertial loads from its own gear train and the weight of moving parts. Any excess friction or misalignment could be disastrous to the camera— which is one reason why Hasselblads are difficult to repair.

The two blinds of the internal shutter are driven by two connecting rods and crankshafts like the rods and crank in your car. They turn to first open and then close this shutter. Their timing is critical and a heavy rotating flywheel keeps them from accelerating too much and opening before the mirror is up. This shutter can be used by itself at bulb with special lenses that have no shutter. A

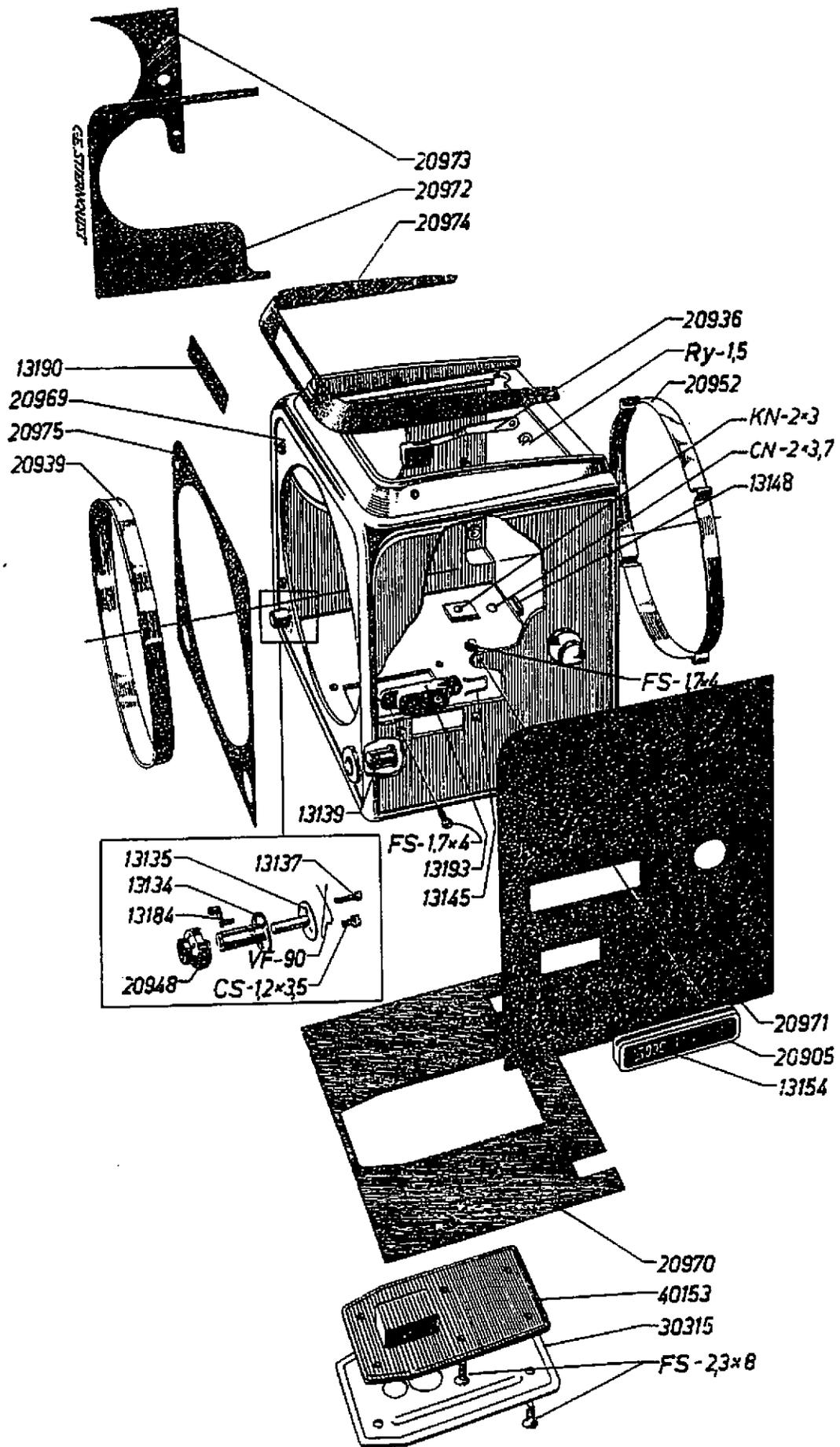
lever from the shutter release blocks the mirror and keeps the shutter blinds open as long as the release is pressed. The mirror is wound by a linked lever worked by a cam powered from the wind knob.

Film wind is by the gear G in our photo which engages a gear in the magazine. A pin sticks into the magazine and the shutter will not work unless it is in place. There is an interlock so you cannot remove the magazine without putting in the dark slide. The magazine has a cam inside it that reduces the numbers of turns the takeup spool makes as more exposures are taken. There is no idler roller. Except for the cam, it is fairly conventional. You realize this camera is entirely dependent upon its many little ratchets performing properly and the stops actually locking the various gears and shafts in an accurate position. Proper lubrication and absence of dirt and corrosion is more important in Hasselblad than in other cameras too. Most people who understand Hasselblad specialize in them. The best way to learn this camera is to study the literature well and then pay a skilled Hasselblad expert to sit down at a workbench with a camera and teach you over several days. Many of these people are retired now since the 500c has been around 35 years. Pay this person at least a thousand dollars since this is a skill that few people know, that can earn you a good living if you think the 500cm is difficult, the motor drive and focal plane shutter Hasselblads are much harder. Nevertheless they are very fine cameras...

500C

Pcs	Part No.	Description	Price (each)	Next assy.	Remark
1	13134	Release button		30323	
1	13135	Buffer		30323	
1	13137	Screw		30323	
1	13139	Lens release button		40160	
1	13145	Nylon ring		30323	
2	13148	Magazine support		20969	SVL No. 7/63
1	13154	Name plate		13161	
1	13161	Accessory shoe, complete		30323	
1	13184	Arm		30323	
1	13190	Name plate		30323	
1	13193	Cable attachment, complete		30323	
1	20905	Accessory shoe		13161	
1	20936	Quick release lever		30323	
1	20939	Ring		30323	
1	20948	Socket		30323	
1	20952	Ring		30323	
1	20969	Shell	×	30323	
1	20970	Leather		30323	
1	20971	Leather		30323	
1	20972	Leather		30323	
1	20973	Leather		30323	
1	20974	Leather		30323	
1	20975	Leather		30323	SVL No. 7/64
1	30315	Slide		40160	
1	30323	Shell, complete		40160	SVL No. 7/64
1	40153	Tripod socket		40160	
1	40160	Camera body, complete	×	—	
2	CN-2×3,7	Rivet		20969	
1	CS-1,2×3,5	Screw		30323	
4	FS-1,7×4	Screw		30323	
6	FS-2,3×8	Screw		40160	
2	KN-2×3	Rivet		20969	
1	RY-1,5	Clip		30323	
1	VF-90	Torsion spring		30323	SVL No. 19/69

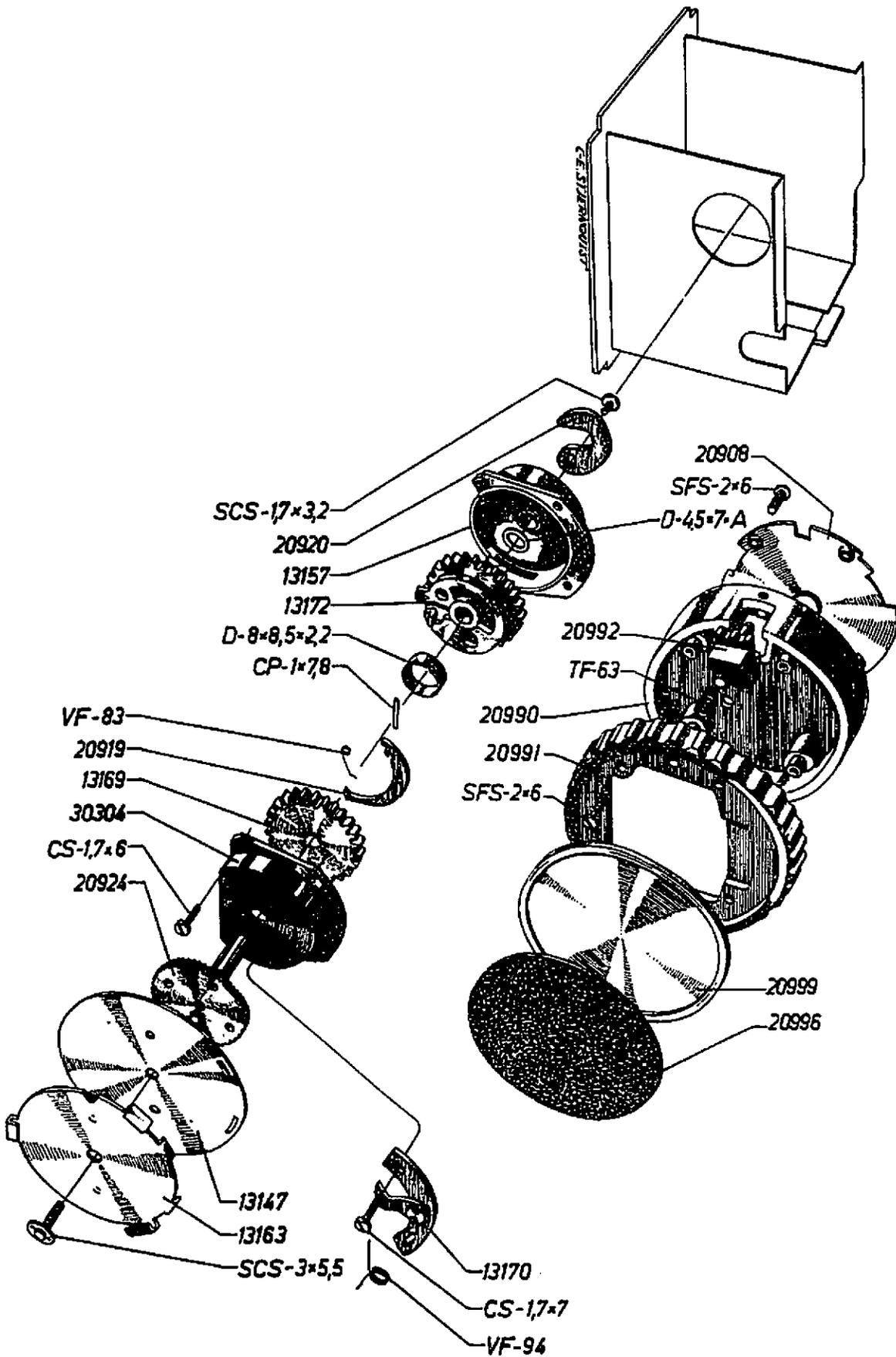
Serial number CU 30000 - CE 38591



500C

Pcs	Part No.	Description	Price (each)	Next assy.	Remark
1	13147	Shim		40160	SVL No. 2/60
1	13157	Gear housing, bottom		30324	
1	13163	Bayonet plate		40160	
1	13169	Gear		30324	
1	13170	Adjustable pawl		40160	
1	13172	Gear with spring stop		30324	SVL No. 4/63; 2/64
1	20908	Bayonet plate		30316	
1	20919	Hook		30324	
1	20920	Mirror cam		30324	
1	20924	Ratchet wheel		30324	
1	20990	Housing		30316	
1	20991	Rim		30316	
1	20992	Catch		30316	
1	20996	Leather		30316	
1	20999	Lid		30316	
1	30304	Gear housing, top		30324	
1	30316	Knob, complete	▲	40160	Order Code No. 44024
1	30324	Gear housing, complete		30326	
1	40160	Camera body, complete	×	—	
1	CP-1 × 7,8	Pin		30324	
1	CS-1,7 × 6	Screw		40160	
2	CS-1,7 × 7	Screw		40160	
1	D-4,5 × 7 × A	Washer		30324	A=0,10; 0,20; 0,30 mm
1	D-8 × 8,5 × 2,2	Washer		30324	
1	SCS-1,7 × 3,2	Screw		30324	
1	SCS-3 × 5,5	Screw		40160	
8	SFS-2 × 6	Screw		30316	
1	TF-63	Pressure spring		30316	
1	VF-83	Torsion spring		30324	
1	VF-94	Torsion spring		13170	

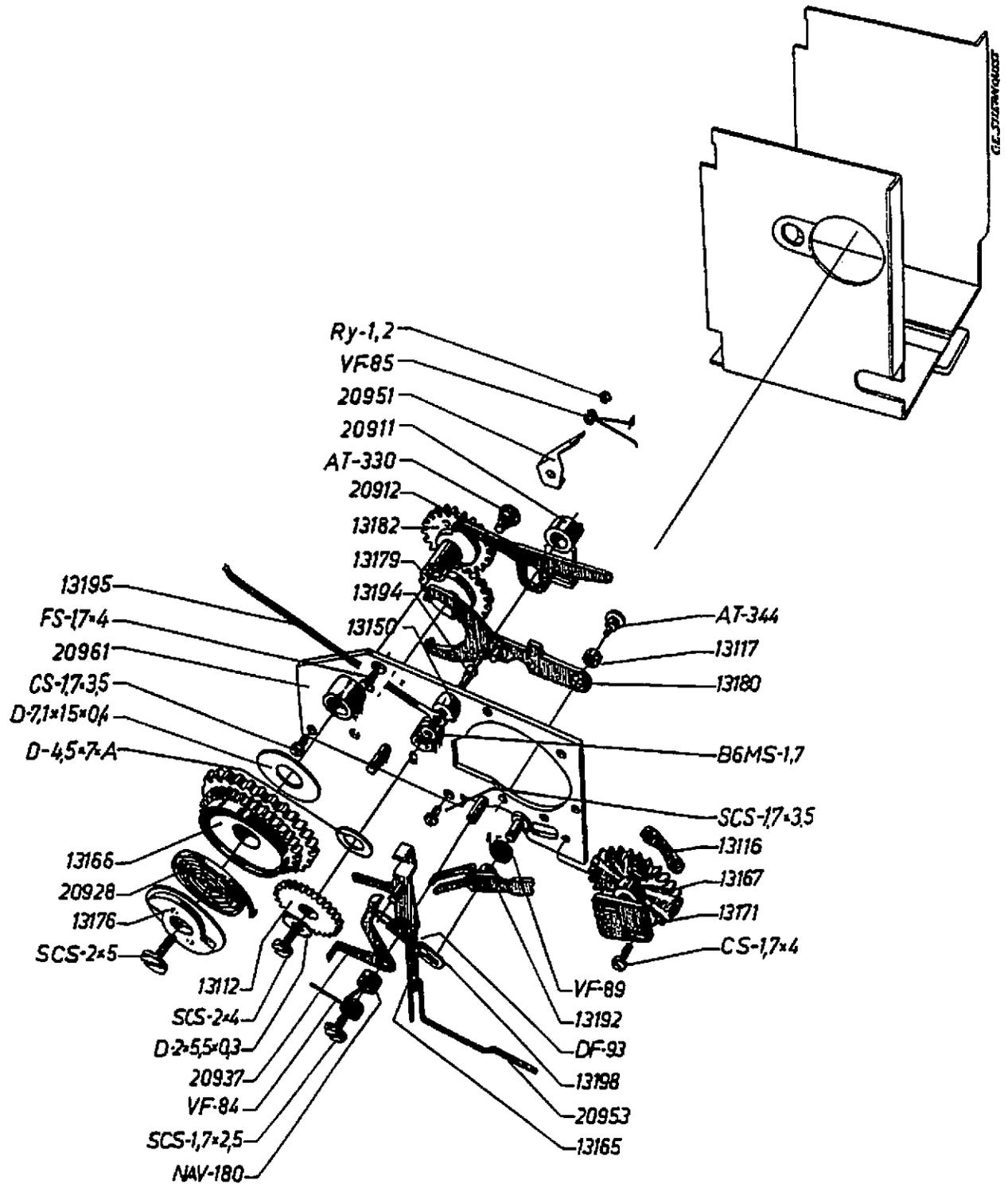
Serial number CU 30000 -- CE 38591



500C

Pcs	Part No.	Description	Price (each)	Next assy.	Remark
1	13112	Gear		40160	
1	13116	Nut		30327	
1	13117	Bushing	×	20967	
1	13150	Nylon insulator		20967	
1	13165	Arm		30327	
1	13166	Gear		30327	
1	13167	Gear		30327	
1	13171	Bearing bracket		30327	
1	13176	Cam		30327	SVL No. 4/60; 1/63
1	13179	Gear	×	20967	
1	13180	Coupling	×	20967	
1	13182	Gear with cam		30327	
1	13192	Arm		30327	
1	13194	Contact screw		20967	
1	13195	Cable		13193	
1	13198	Shim		30327	
1	20911	Stop		40160	
1	20912	Bar		30327	
1	20928	Coil-Spring		30327	SVL No. 4/60; 1/63; 11/63
1	20937	S-arm		30327	
1	20951	Contact spring		30327	
1	20953	Push rod		30327	
1	20961	Mechanism plate	×	20967	
1	20967	Mechanism plate, assy.		30327	SVL No. 14/64
1	30327	Mechanism plate, complete	×	40160	
1	40160	Camera body, complete	×	—	
1	AT-330	Pin	×	20967	
1	AT-344	Pin	×	20967	
1	B6MS-1.7	Nut		40160	
1	CS-1.7×3.5	Screw		40160	
2	CS-1.7×4	Screw		30327	
1	D-2×5.5×0.3	Washer		40160	
1	D-4.5×7×A	Washer		40160	A=0,10; 0,20; 0,30 mm
1	D-7.1×15×0.4	Washer		30327	
1	DF-93	Draw spring		30327	
1	FS-1.7×4	Screw		40160	
1	NAV-180	Bushing		30327	
1	RY-1,2	Clip		30327	
1	SCS-1.7×2.5	Screw		30327	
1	SCS-1.7×3.5	Screw		40160	
1	SCS-2×4	Screw		40160	
1	SCS-2×5	Screw		30327	
1	VF-84	Torsion spring		30327	
1	VF-85	Torsion spring		30327	
1	VF-89	Torsion spring		30327	

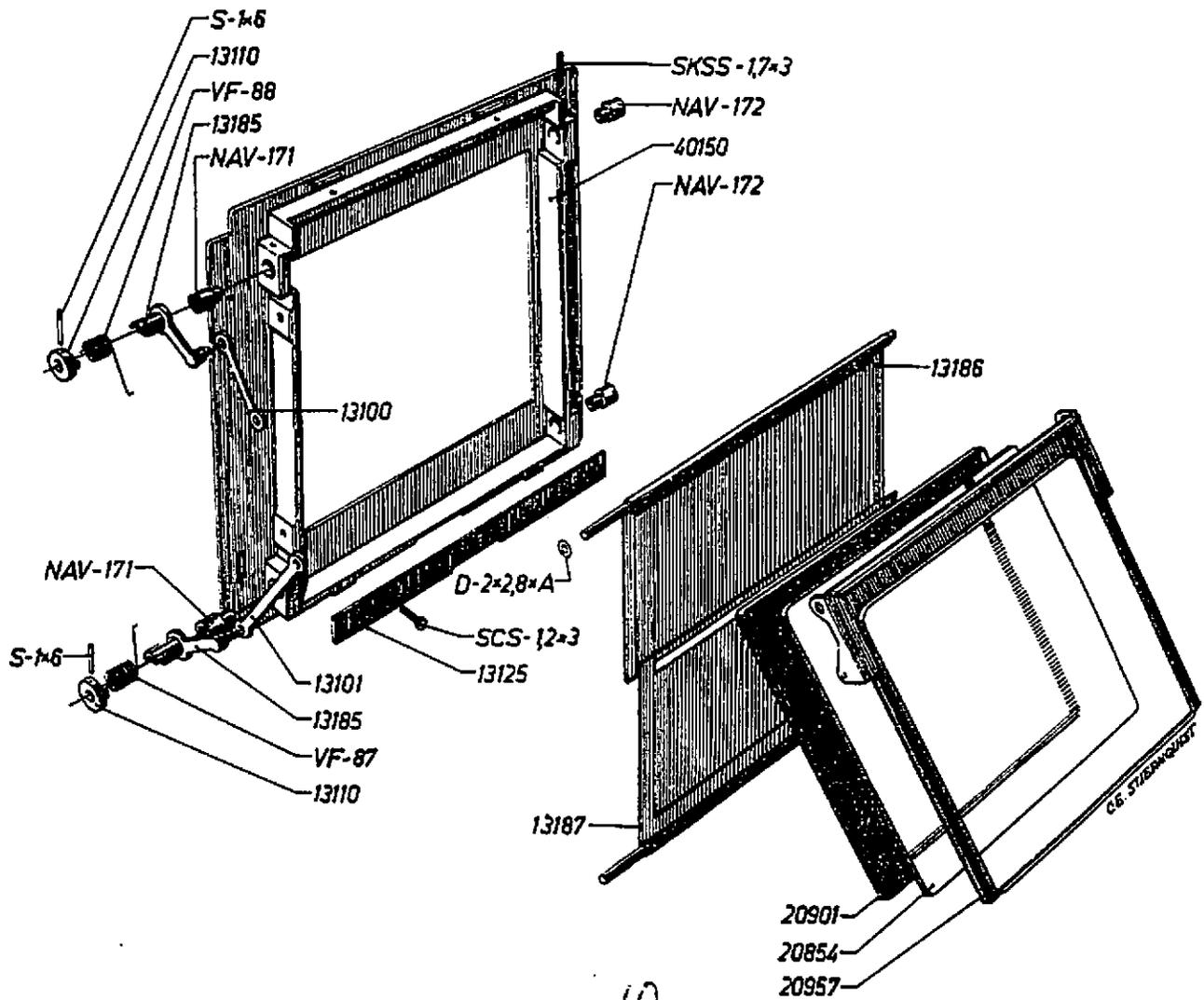
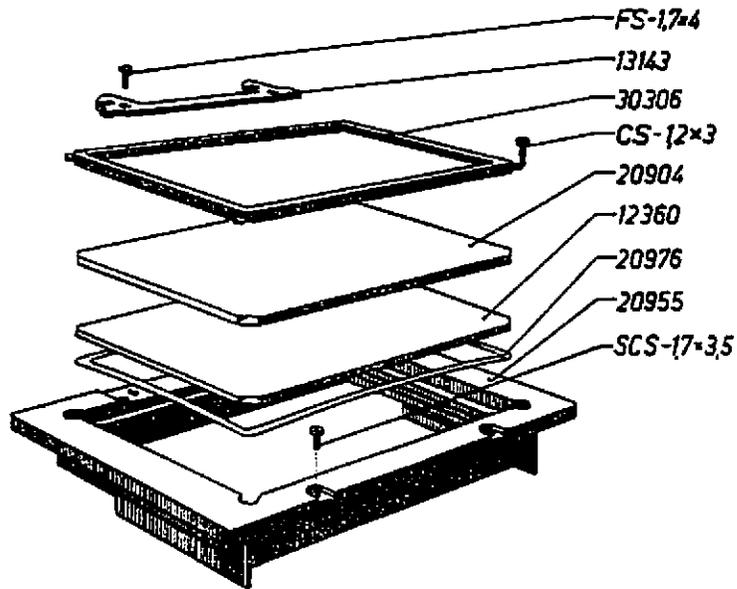
Serial number CU 30000 - CE 38591



## 500C

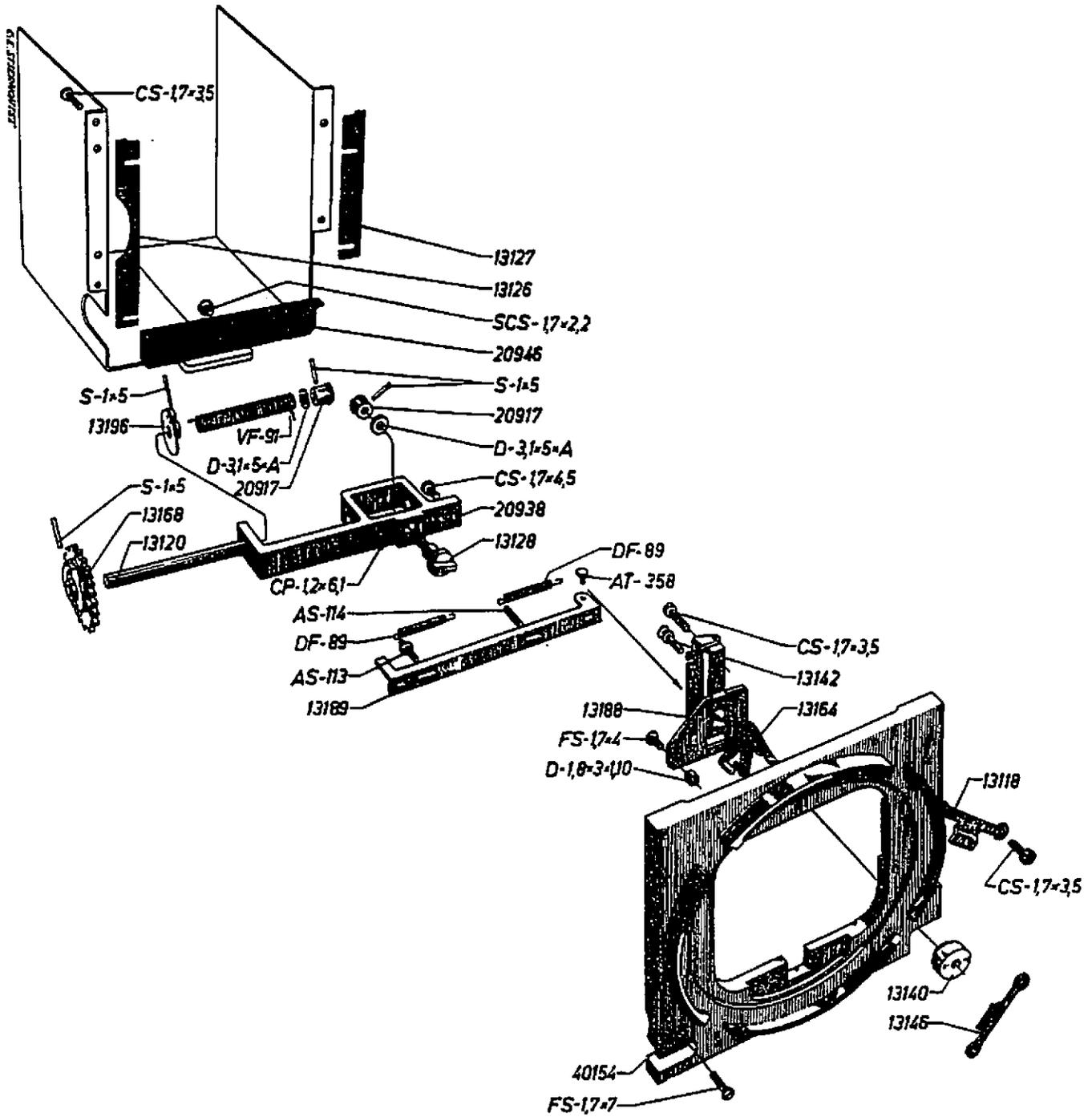
Pcs	Part No.	Description	Price (each)	Next assy.	Remark
1	12360	0.8 mm Fresnellens		50109	SVL No. 10/61
1	13100	Connecting rod, upper		50109	
1	13101	Connecting rod, lower		50109	
2	13110	Driving disc		GR-30322	
1	13125	Light trap		GR-30322	
1	13143	Magazine hook		50109	
2	13185	Lever		GR-30322	
1	13186	Top flap	X	GR-30322	SVL No. 20/67
1	13187	Bottom flap	X	GR-30322	SVL No. 20/67
1	20854	Mirror		20958	
1	20901	Mirror protection		20958	
1	20904	Ground glass		50109	
1	20955	Frame, complete		50109	SVL No. 1/62
1	20957	Mirror frame		20958	
1	20958	Mirror, complete		GR-30322	
1	20976	Plate spring		50109	A = 0.15; 0.25 mm
1	30306	Ground glass holder		50109	
1	GR-30322	Rear plate, complete		50109	State serial No.
1	GR-40150	Rear plate		GR-30322	State serial No.
1	40160	Camera body, complete	X	—	
1	50109	Camera body, assy.	X	40160	
4	CS-1,2×3	Screw		50109	SVL No. 2/63; 2/67
2	D-2×2,8×A	Washer		GR-30322	A = 0.10; 0.20 mm
2	FS-1,7×4	Screw		50109	
2	NAV-171	Bushing		GR-30322	
2	NAV-172	Bushing	X	GR-30322	SVL No. 4/66
2	S-1×6	Pin		GR-30322	
2	SCS-1,2×3	Screw		GR-30322	
2	SCS-1,7×3,5	Screw		50109	
4	SKSS-1,7×3	Screw		GR-30322	
1	VF-87	Torsion spring		GR-30322	
1	VF-88	Torsion spring		GR-30322	

Serial number CU 30000 - CE 38591

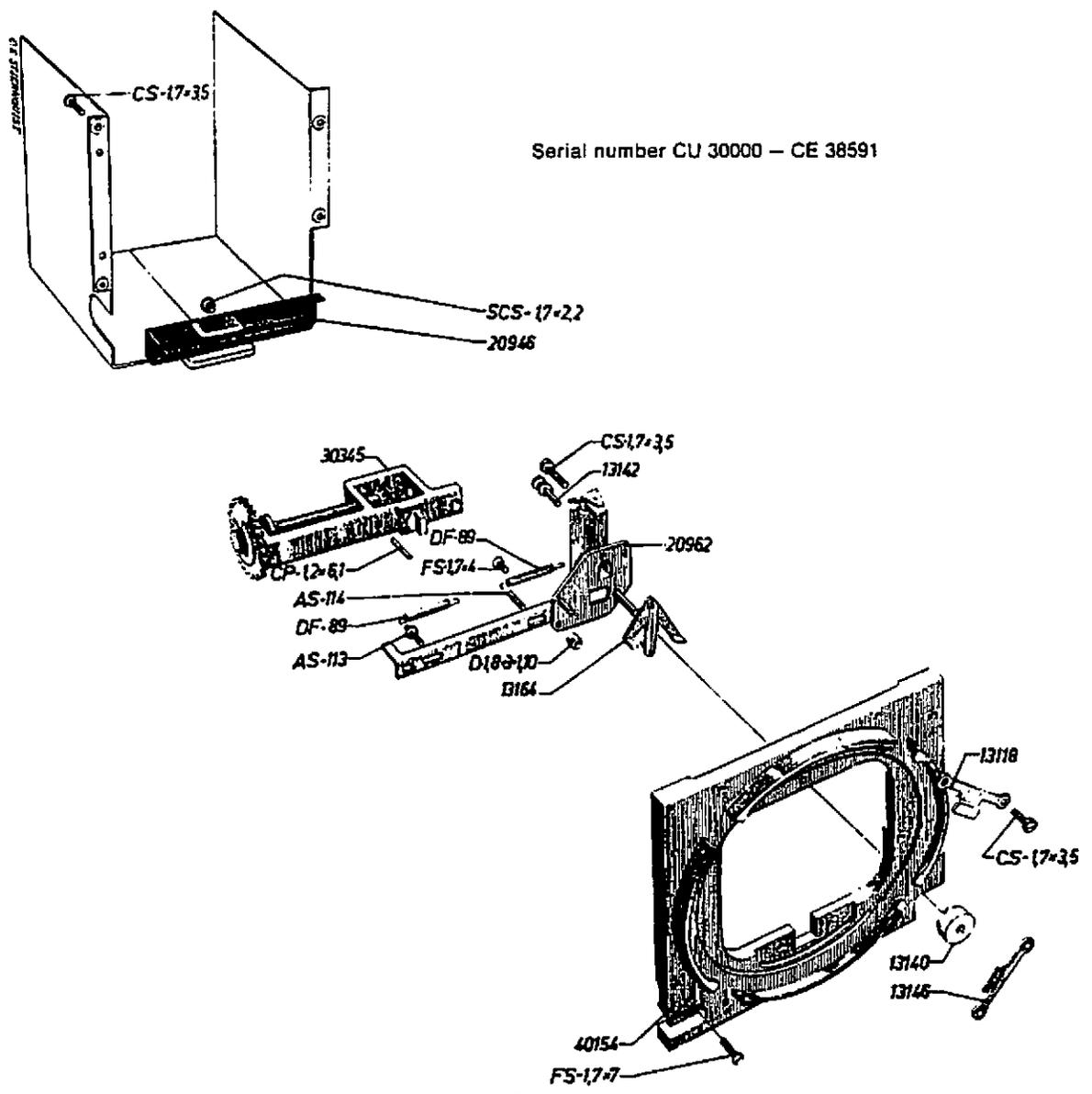


# 500C

Pcs	Part No.	Description	Price (each)	Next assy.	Remark
3	13118	Bayonet flange		30328	
1	13120	Shaft	×	30329	
1	13126	Shim		50109	A=0,15; 0,20; 0,25; 0,30 mm
1	13127	Shim		50109	A=0,15; 0,20; 0,25; 0,30 mm
1	13128	Key	×	30329	SVL No. 5/59
1	13140	Teflon button		50109	
1	13142	Locking pin		30328	
1	13146	Bayonet flange		30328	
1	13164	Lens catch		30328	
1	13168	Gear	×	30329	
1	13188	Plate		20962	
1	13189	Latch		20962	
1	13196	Plate	×	30329	
2	20917	Gear	×	30329	
1	20938	Bracket	×	30329	
1	20946	Cover		50109	
1	20962	Locking mechanism		30328	
1	30328	Front plate, complete	×	50109	SVL No. 2/58; 2/60; 2/64
1	30329	Front gear mechanism	×	30328	SVL No. 2/58; 2/60; 2/64; 16/64
1	40154	Front plate	×	30328	SVL No. 2/58; 2/60; 2/64
1	40160	Camera body, complete	×	—	
1	50109	Camera body, assy	×	40160	
1	AS-113	Screw		30328	
1	AS-114	Screw		30328	
1	AT-358	Rivet		20962	
1	CP-1,2×6,1	Cylinder pin		30328	
9	CS-1,7×3,5	Screw		30328	
4	CS-1,7×3,5	Screw		50109	
1	CS-1,7×4,5	Screw		30328	
2	D-1,8×3×1,10	Washer		30328	
2	D-3,1×5×A	Washer	×	30329	A = 0,05; 0,10; 0,20; 0,30 mm
2	DF-89	Draw spring		30328	
2	FS-1,7×4	Screw		30328	
1	FS-1,7×7	Screw		30328	
4	S-1×5	Pin	×	30329	
1	SCS-1,7×2,2	Screw		50109	
1	VF-91	Torsion spring	×	30329	

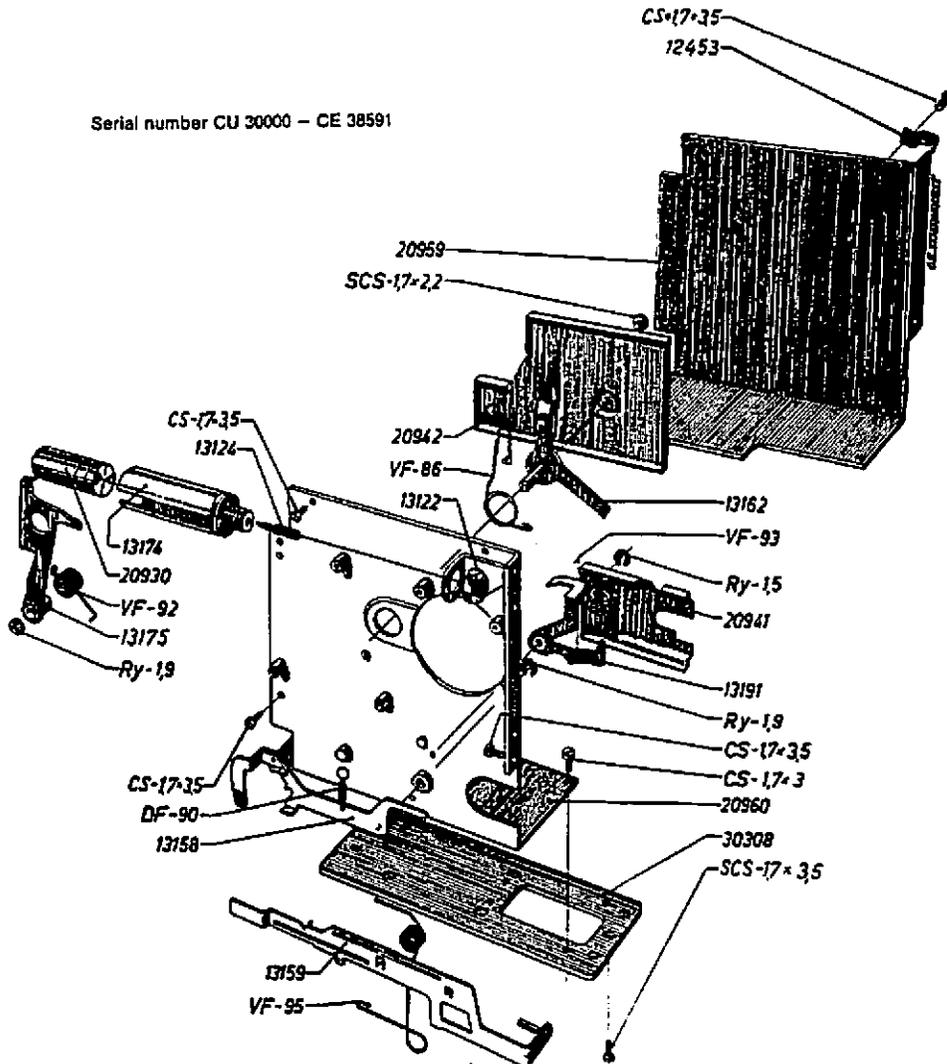


Pcs	Part No.	Description	Price (each)	Next assy.	Remark
3	13118	Bayonet flange		30350	
1	13140	Teflon button		50109	
1	13142	Locking pin		30350	
1	13146	Bayonet flange		30350	
1	13164	Lens catch		30350	
1	20946	Cover		50109	
1	20962	Locking mechanism		30350	
1	30345	Front gear mechanism	×	30350	SVL No. 16/64
1	30350	Front plate, complete	×	50109	SVL No. 16/64
1	40154	Front plate	×	30350	SVL No. 2/60
1	40160	Camera body, complete	×	—	
1	50109	Camera body, assy.	×	40160	
1	AS-113	Screw		30350	
1	AS-114	Screw		30350	
1	CP-1,2×6.1	Cylinder pin		30345	
9	CS-1,7×3,5	Screw		30350	
4	CS-1,7×3,5	Screw		50109	
2	D-1,8×3×1,10	Washer		30350	
2	DF-89	Draw spring		30350	
2	FS-1,7×4	Screw		30350	
1	FS-1,7×7	Screw		30350	
1	SCS-1,7×2,2	Screw		50109	



Pcs	Part No.	Description	Price (each)	Next assy.	Remark
1	12453	Cable holder		50109	
1	13122	Nut		50109	SVL No. 4/60; 1/63
1	13124	Screw		13173	SVL No. 4/60; 1/63
1	13158	Signal		50109	
1	13159	Release arm		50109	
1	13162	Mirror actuating arm		50109	
1	13173	Pump, complete		50109	
1	13174	Pumphousing	×	13173	SVL No. 4/60; 1/63
1	13175	Pumparm		50109	SVL No. 4/60
1	13191	Mirror catch		50109	
1	20930	Piston	×	13173	SVL No. 4/60; 1/63
1	20941	Cover		50109	
1	20942	Cover		50109	
1	20959	Inner wall, left complete		50109	
1	20960	Inner wall, right		50109	
1	30308	Bottom plate		50109	
1	40160	Camera body, complete	×	—	
1	50109	Camera body, assy.	×	40160	
6	CS-1.7×3	Screw		50109	SVL No. 26/69
12	CS-1.7×3.5	Screw		50109	
1	DF-90	Draw spring		50109	
1	RY-1.5	Clip		50109	
2	RY-1.9	Clip		50109	
1	SCS-1.7×2.2	Screw		50109	
1	SCS-1.7×3.5	Screw		50109	
1	VF-86	Torsion spring		50109	
1	VF-92	Torsion spring		50109	SVL No. 4/60; 1/63
1	VF-93	Torsion spring		50109	
1	VF-95	Torsion spring		50109	

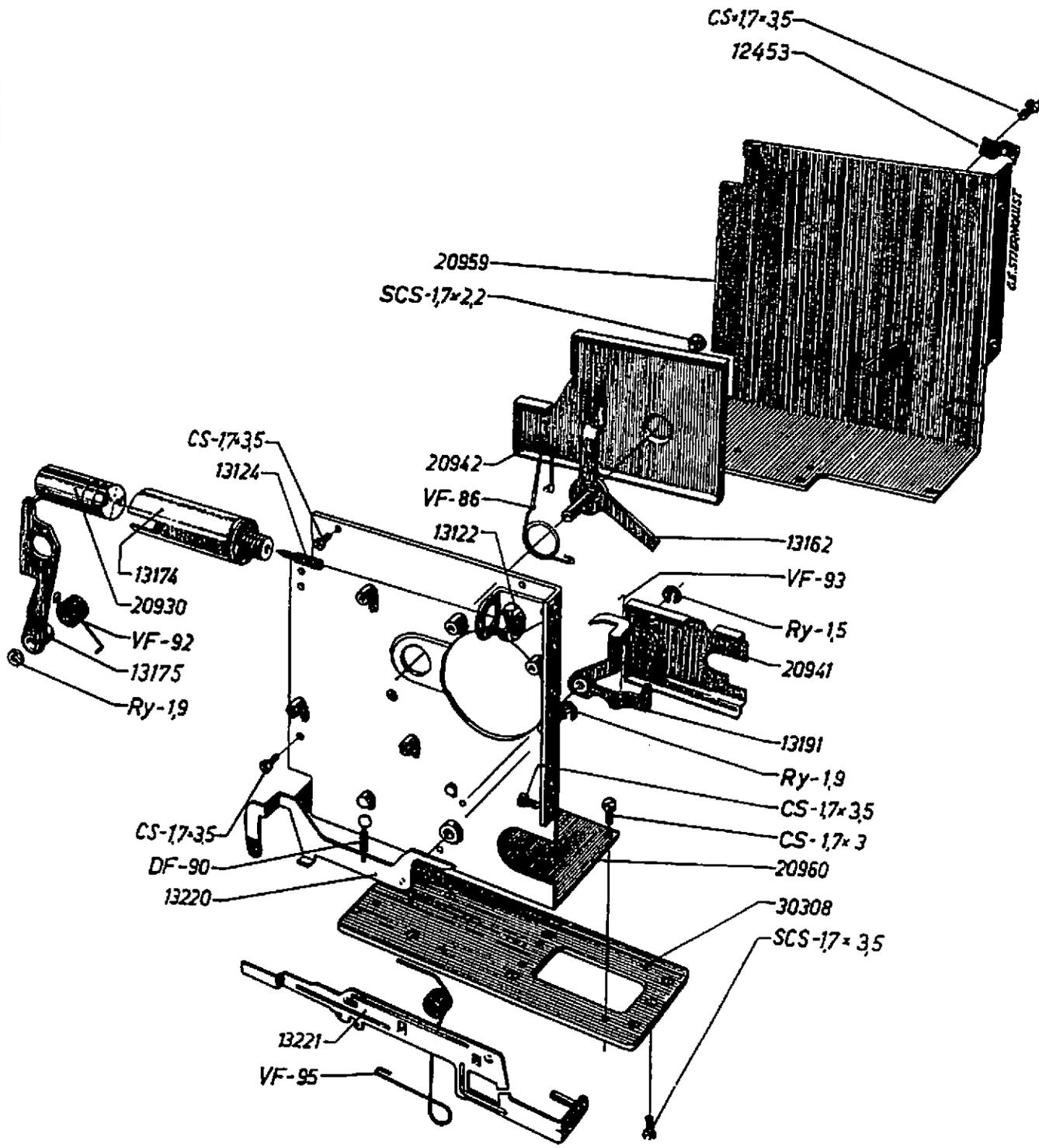
Serial number CU 30000 - CE 38591



500C

Pcs	Part No.	Description	Price (each)	Next assy.	Remark
1	12453	Cable holder		50109	
1	13122	Nut		50109	SVL No. 4/60; 1/63
1	13124	Screw		13173	SVL No. 4/60; 1/63
1	13162	Mirror actuating arm		50109	
1	13173	Pump, complete		50109	
1	13174	Pumphousing	×	13173	SVL No. 4/60; 1/63
1	13175	Pump arm		50109	SVL No. 4/60
1	13191	Mirror catch		50109	
1	13220	Signal		50109	
1	13221	Release arm		50109	
1	20930	Piston	×	13173	SVL No. 4/60; 1/63
1	20941	Cover		50109	
1	20942	Cover		50109	
1	20959	Inner wall, left, complete		50109	
1	20960	Inner wall, right		50109	
1	30308	Bottom plate		50109	
1	40160	Camera body, complete	×	—	
1	50109	Camera body. assy.	×	40160	
6	CS-1.7×3	Screw		50109	
12	CS-1.7×3.5	Screw		50109	
1	DF-90	Draw spring		50109	
1	RY-1.5	Clip		50109	
2	RY-1.9	Clip		50109	
1	SCS-1.7×2.2	Screw		50109	
1	SCS-1.7×3.5	Screw		50109	
1	VF-86	Torsion spring		50109	
1	VF-92	Torsion spring		50109	SVL No. 4/60; 1/63
1	VF-93	Torsion spring		50109	
1	VF-95	Torsion spring		50109	

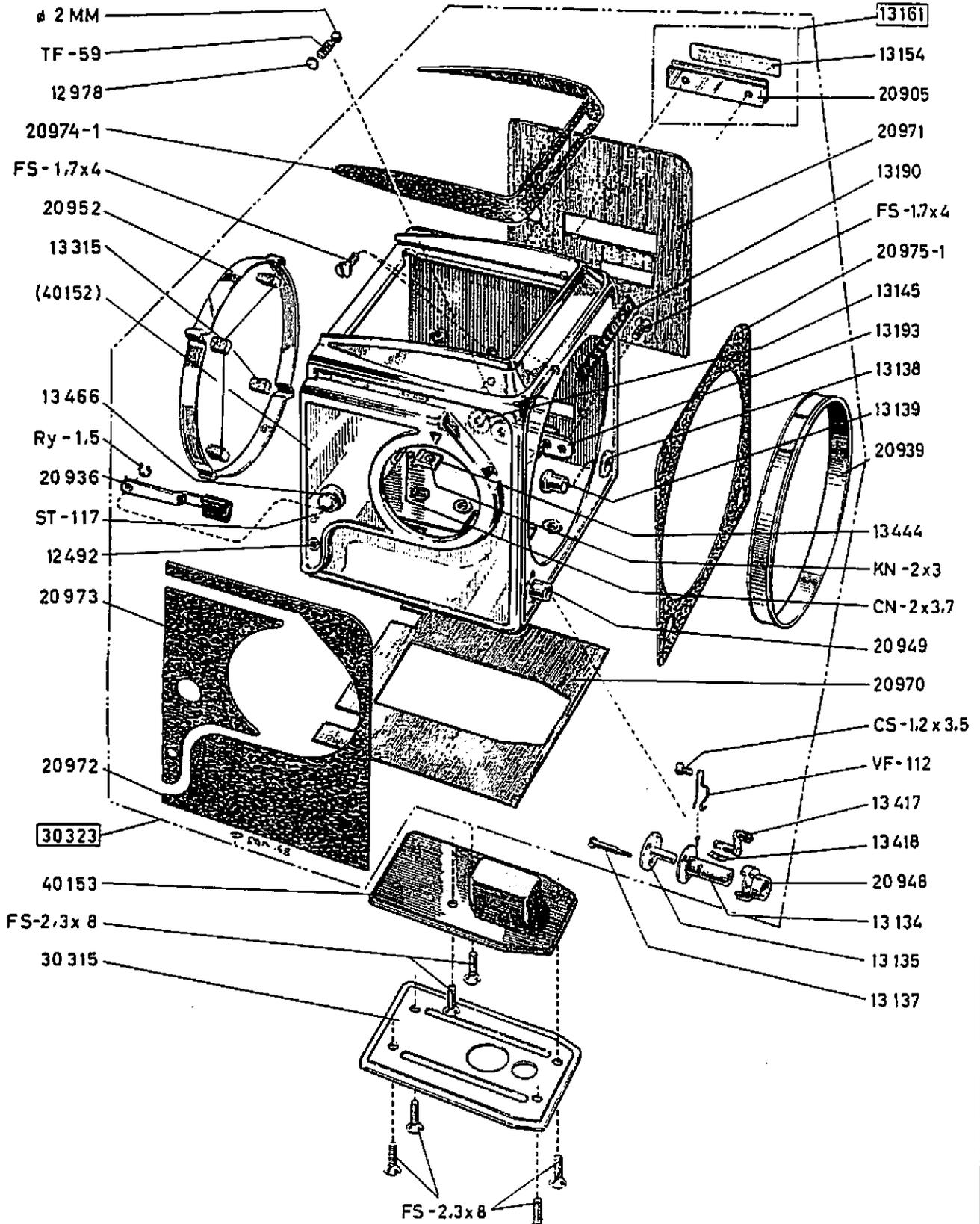
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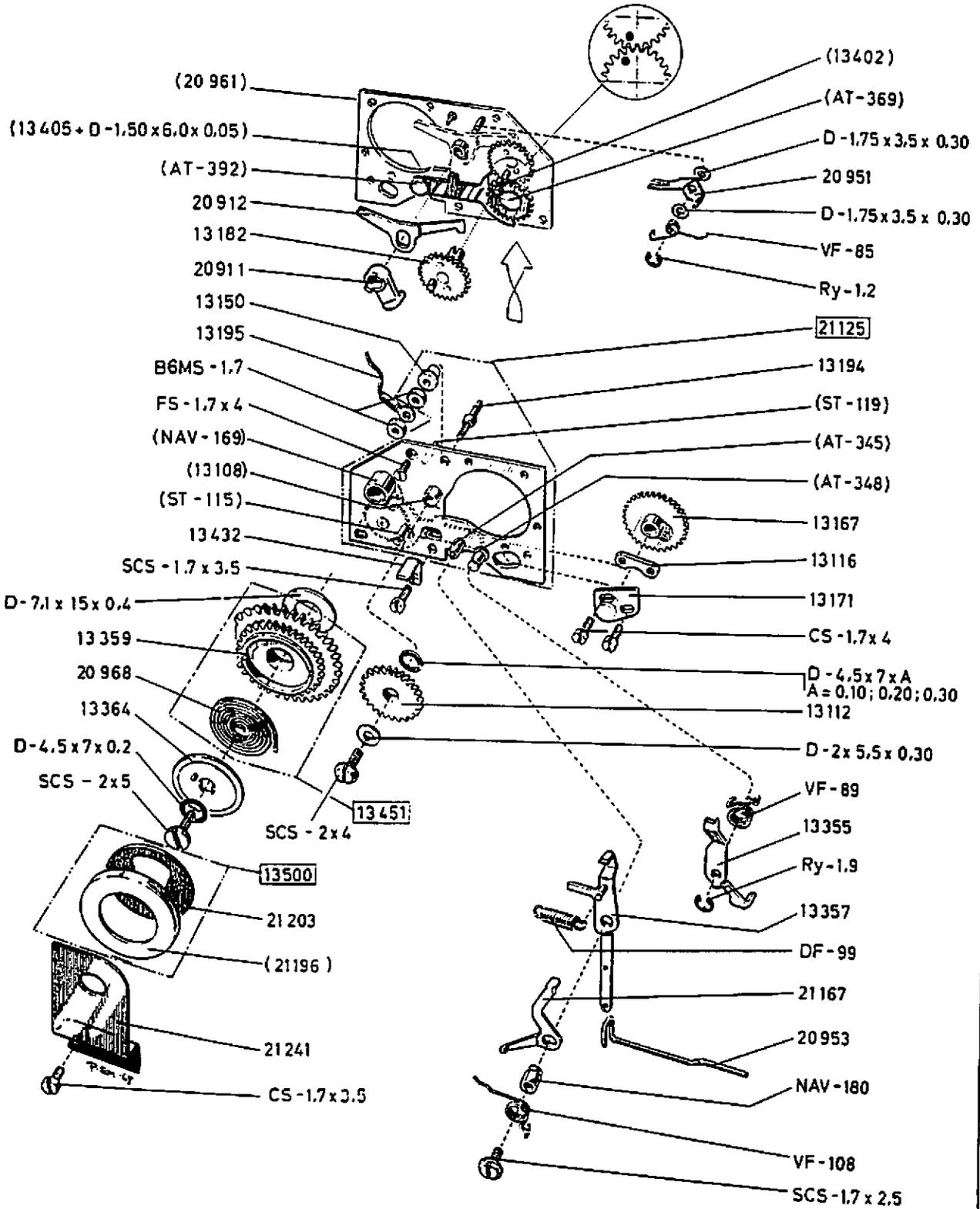
500C

Pcs	Part No.	Description	Price (each)	Next assy.	Remark
1	12492	Window		30323	
2	12978	Plate		30323	
1	13134	Release button		30323	
1	13135	Buffer		30323	
1	13137	Screw		30323	
1	13138	Bushing		30323	
1	13139	Lens release button		40180	
1	13145	Nylon ring		30323	
1	13154	Name plate		13161	
1	13161	Accessory shoe, complete		30323	
1	13190	Name plate		30323	
1	13193	Cable attachment, complete		30323	
4	13315	Foam plastic pad		30323	
1	13417	T-arm		30323	
1	13418	Plate spring		30323	
2	13444	Magazine support		30323	SVL No. 7/63; 19/71
2	13466	Strap button		30323	SVL No. 3/66
1	20905	Accessory shoe		13161	
1	20936	Quick release lever		30323	
1	20939	Front ring		30323	
1	20948	Socket		30323	
1	20949	Bushing		30323	
1	20952	Locking ring		30323	
1	20970	Leather		30323	
1	20971	Leather		30323	
1	20972	Leather		30323	
1	20973	Leather		30323	
1	20974-1	Leather		30323	
1	20975-1	Leather		30323	SVL No. 7/64
1	30315	Slide		40180	
1	30323	Shell, complete		40180	SVL No. 7/64
1	40152	Shell	×	30323	
1	40153	Tripod socket		40180	
1	40180	Camera body, complete	×	—	
2	CN-2×3,7	Rivet		30323	
1	CS-1,2×3,5	Screw		30323	
4	FS-1,7×4	Screw		30323	
6	FS-2,3×8	Screw		40180	
2	KN-2×3	Rivet		30323	
1	RY-1,5	Clip		30323	
1	ST-117	Rivet		30323	
2	TF-59	Pressure spring		30323	
1	VF-112	Torsion spring		30323	
2	∅ 2 mm	Steel ball		30323	

Serial number CE 38592 - US 106700



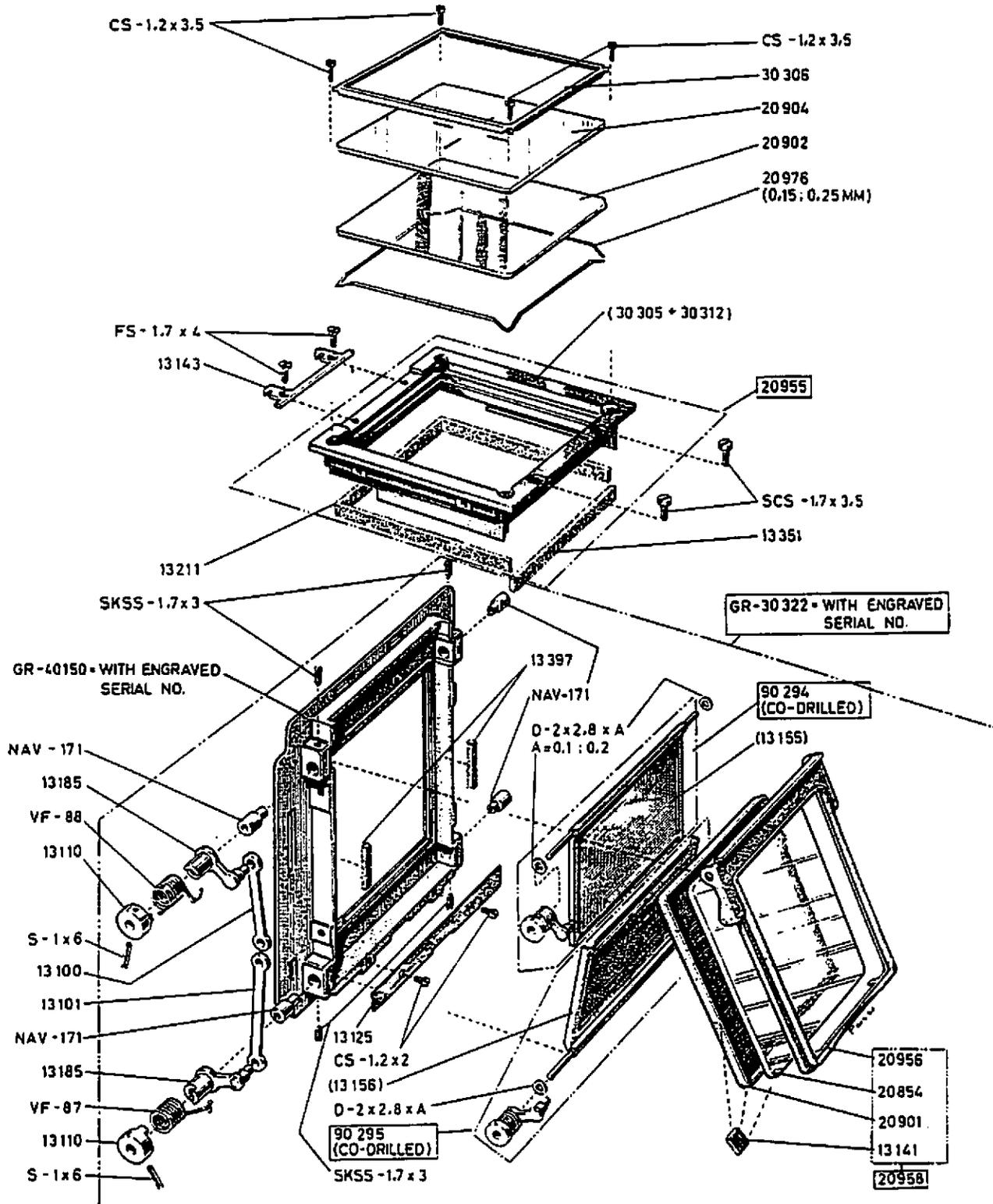
Pcs	Part No.	Description	Price (each)	Next assy.	Remark
1	13108	Hub	×	20961	
1	13112	Gear		50111	
1	13116	Nut		50111	
1	13150	Nylon insulator		21125	
1	13167	Gear		50111	
1	13171	Bearing bracket		50111	
1	13182	Gear with cam		50111	
1	13194	Contact screw		21125	
1	13195	Cable		13193	See page 9 (10)
1	13355	Stop lever		50111	SVL No. 17/67
1	13357	Release arm		50111	
1	13358	Gear		13451	
1	13364	Cover		50111	SVL No. 2/62
1	13402	Gear with cam	×	21125	
1	13405	Coupling	×	21125	SVL No. 1/68
1	13432	Stop angle		50111	
1	13451	Gear, assy.		50111	
1	13500	Damping ring		50111	SVL No. 1/63; 1/71
1	20911	Stop		50111	
1	20912	Bar		50111	
1	20951	Contact spring		50111	
1	20953	Push rod		50111	
1	20961	Mechanism plate	×	21125	
1	20968	Coil spring		13451	
1	21125	Mechanism plate, complete		50111	SVL No. 5/64; 1/66
1	21167	S-arm		50111	SVL No. 1/66
1	21186	Ring	×	13500	
1	21203	Rubber disk		13500	SVL No. 1/63; 1/71
1	21241	Cover		50111	SVL No. 1/63
1	40180	Camera body, complete	×	—	
1	50111	Camera body, assy.	×	40180	
1	AT-345	Pin	×	20961	
1	AT-348	Pin	×	20961	
1	AT-369	Pin	×	21125	
1	AT-392	Pin	×	21125	
2	B6MS-1,7	Nut		21125	SVL No. 5/64
1	CS-1,7×3,5	Screw		50111	
2	CS-1,7×4	Screw		50111	
1	D-1,50×6,0×0,05	Washer	×	21125	SVL No. 5/64
2	D-1,75×3,5×0,30	Washer		50111	
1	D-2×5,5×0,30	Washer		50111	
1	D-4,5×7×0,20	Washer		50111	
1	D-4,5×7×A	Washer		50111	A=0,10; 0,20; 0,30 mm
1	D-7,1×15×0,4	Washer		50111	
1	DF-99	Draw spring		50111	SVL No. 1/66
1	FS-1,7×4	Screw		50111	
1	NAV-169	Hub	×	20961	
1	NAV-180	Hub		50111	
1	RY-1,2	Clip		50111	
1	RY-1,9	Clip		50111	
1	SCS-1,7×2,5	Screw		50111	
1	SCS-1,7×3,5	Screw		50111	
1	SCS-2×4	Screw		50111	
1	SCS-2×5	Screw		50111	
1	ST-115	Rivet	×	20961	
1	ST-119	Rivet	×	20961	
1	VF-85	Torsion spring		50111	
1	VF-89	Torsion spring		50111	
1	VF-108	Torsion spring		50111	SVL No. 1/66



500C

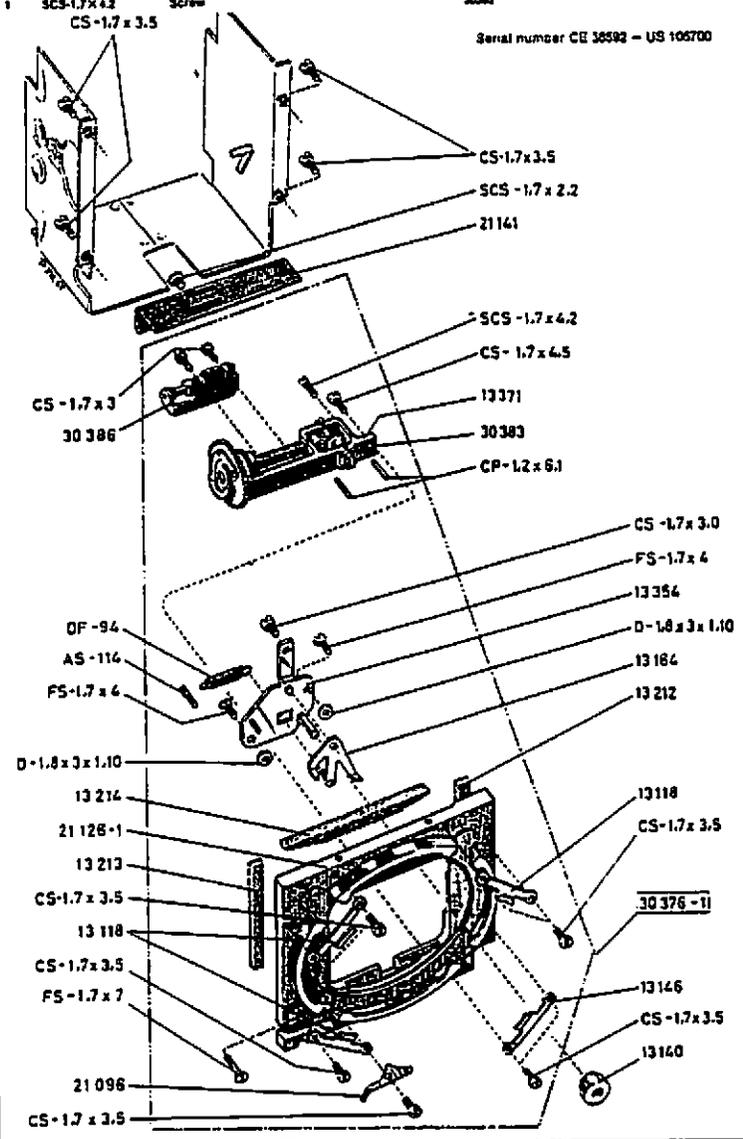
Pcs	Part No.	Description	Price (each)	Next assy.	Remark
1	13100	Connecting rod, upper		50111	
1	13101	Connecting rod, lower		50111	
2	13110	Driving disc		90294/295	
1	13125	Light trap		GR-30322	
3	13141	Foam plastic pad		20958	
1	13143	Magazine hook		50111	
1	13155	Top flap	X	90294	SVL No. 20/67
1	13156	Bottom flap	X	90295	SVL No. 20/67
2	13185	Lever		90294/295	
1	13211	Foam plastic strip		20955	
1	13351	Foam plastic strip		20955	
2	13397	Foam plastic strip		GR-30322	
1	20854	Mirror		20958	SVL No. 22/67
1	20901	Mirror protection		20958	
1	20902	Fresnellens		50111	SVL No. 10/61
1	20904	Ground glass		50111	
1	20955	Frame, complete		50111	SVL No. 1/62; 22/67
1	20956	Frame for mirror		20958	
1	20958	Mirror, complete		GR-30322	
1	20976	Plate spring		50111	A=0.15; 0.25 mm
1	30305	Frame, outer	X	20955	
1	30306	Ground glass holder		50111	
1	30312	Frame, inner	X	20955	
1	GR-30322	Rear plate, complete		50111	State serial No.
1	GR-40150	Rear plate		GR-30322	State serial No.
1	40180	Camera body, complete	X	—	
1	50111	Camera body, assy.	X	40180	
1	90294	Top flap		GR-30322	SVL No. 20/67
1	90295	Bottom flap		GR-30322	SVL No. 20/67
2	CS-1.2x2	Screw		GR-30322	SVL No. 7/69
4	CS-1.2x3.5	Screw		50111	SVL No. 2/67
2	D-2x2.8xA	Washer		GR-30322	A=0.1; 0.2 mm
2	FS-1.7x4	Screw		50111	
4	NAV-171	Hub		GR-30322	SVL No. 4/66
2	S-1x6	Pin		GR-30322	
2	SCS-1.7x3.5	Screw		50111	
4	SKSS-1.7x3	Screw		GR-30322	
1	VF-87	Torsion spring		90294/295	
1	VF-88	Torsion spring		90294/295	

Serial number CE 38592 - US 106700



Qty	Part No.	Description	Price (each)	Part No.	Remark
3	13118	Bayonet flange		30376-1	
1	13140	Teflon button		40180	
1	13146	Bayonet flange		30376-1	
1	13164	Lens catch		30376-1	
1	13212	Foam plastic strip		30376-1	
1	13213	Foam plastic strip		30376-1	
1	13214	Foam plastic strip		30376-1	
1	13354	Mounting plate		30376-1	
1	13371	Ring		30380	SVL No. 8/64
1	21096	Plate spring		30376-1	
1	21126-1	Bayonet front plate		30376-1	
1	21141	Cover		40180	
1	30376-1	Bayonet front plate, complete		50111	SVL No. 13/64; 21/67
1	30383	Front gear mechanism		30376-1	SVL No. 21/67; 27/69; 3/71
1	30386	Governor		30376-1	
1	40160	Camera body, complete	X	-	
1	50111	Camera body,assy.	X	40180	
1	AS-114	Screw		30376-1	
2	CP-1.2x6.1	Cylinder pin		30376-1	
2	CS-1.7x3.0	Screw		30376-1	SVL No. 7/68
8	CS-1.7x3.5	Screw		30376-1	
4	CS-1.7x3.5	Screw		50111	
1	CS-1.7x4.5	Screw		30376-1	
2	D-1.8x3x1.10	Washer		30376-1	
1	DF-94	Draw spring		30376-1	
2	FS-1.7x4	Screw		30376-1	
1	FS-1.7x7	Screw		30376-1	
1	SCS-1.7x2.2	Screw		40180	
1	SCS-1.7x4.2	Screw		30380	

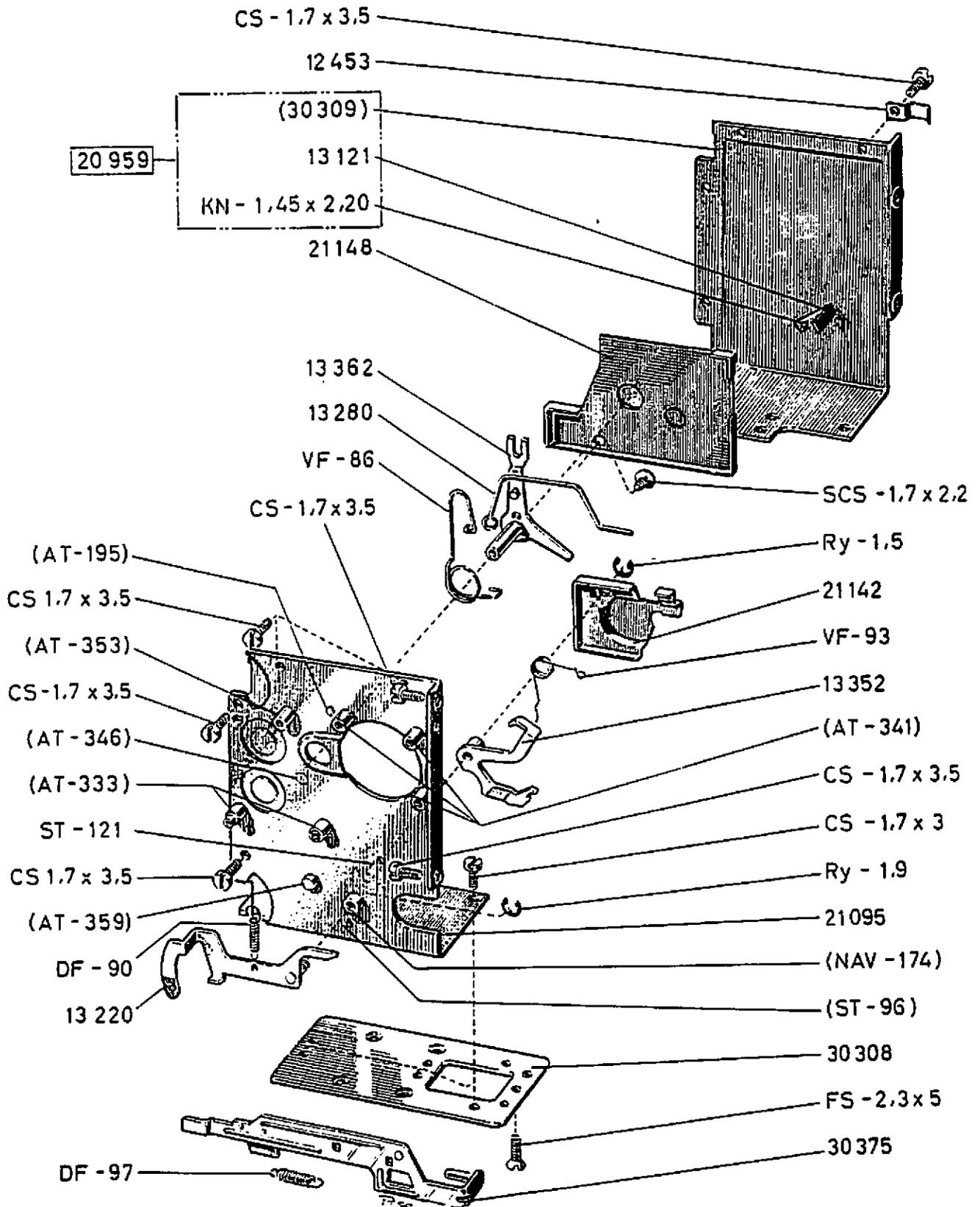
Serial number CE 36592 - US 105700



500C

Pcs	Part No.	Description	Price (each)	Next assy.	Remark
1	12453	Cable holder		50111	
1	13121	Mirror rest		20959	
1	13220	Signal		50111	
1	13280	Lens lock		50111	
1	13352	Mirror catch		50111	SVL No. 2/71
1	13362	Mirror actuating lever		50111	
1	20959	Inner wall, left, assy.		50111	
1	21095	Inner wall, right, assy.		50111	SVL No. 1/67
1	21142	Cover		50111	SVL No. 8/63; 2/71
1	21148	Cover		40180	
1	30308	Bottom plate		50111	
1	30309	Inner wall, left	X	20959	
1	30375	Release arm		50111	
1	40180	Camera body, complete	X	—	
1	50111	Camera body, assy.	X	40180	
1	AT-195	Pin	X	21095	
2	AT-333	Pin	X	21095	
3	AT-341	Pin	X	21095	
1	AT-346	Pin	X	21095	
1	AT-353	Pin	X	21095	
1	AT-359	Pin	X	21095	
6	CS-1,7 X 3	Screw		50111	SVL No. 28/69
12	CS-1,7 X 3,5	Screw		50111	4 screws to page No. 13
1	DF-90	Draw spring		50111	
1	DF-97	Draw spring		50111	SVL No. 10/63
1	FS-2,3 X 5	Screw		50111	SVL No. 12/64
2	KN-1,45 X 2,20	Rivet		20959	
1	NAV-174	Hub	X	21095	
1	RY-1,5	Clip		50111	
1	RY-1,9	Clip		50111	
1	SCS-1,7 X 2,2	Screw		40180	
1	ST-96	Rivet	X	21095	
1	ST-121	Rivet		21095	
1	VF-86	Torsion spring		50111	
1	VF-93	Torsion spring		50111	

Serial number CE 38592 - US 106700

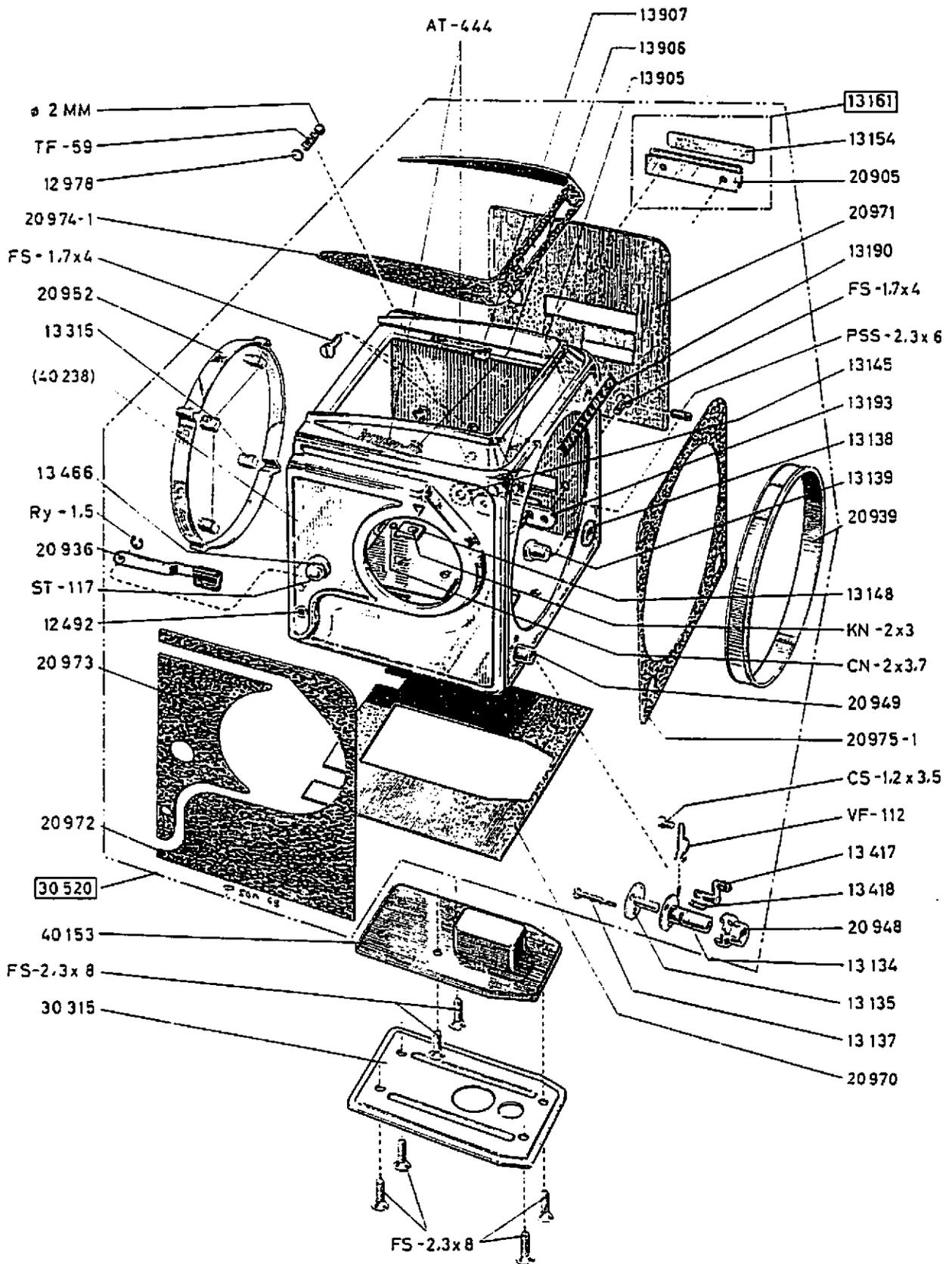


500C/M

Pcs	Part No.	Description	Price (each)	assy. Next	Remark
1	12492	Window		30520	
2	12978	Plate		30520	
1	13134	Release button		30520	
1	13135	Buffer		30520	
1	13137	Screw		30520	
1	13138	Bushing		30520	
1	13139	Lens release button		40239	
1	13145	Nylon ring		30520	
2	13148	Magazine support		30520	SVL No. 19/71
1	13154	Name plate		13161	
1	13161	Accessory shoe, complete		30520	
1	13190	Name plate		30520	
1	13193	Cable attachment, complete		30520	
4	13315	Foam plastic pad		30520	
1	13417	T-arm		30520	
1	13418	Plate spring		30520	
2	13466	Strap button		30520	
2	13905	Pin		30520	SVL No. 17/71
1	13906	Holder, right		30520	SVL No. 17/71
1	13907	Holder, left		30520	SVL No. 17/71
1	20905	Accessory shoe		13161	
1	20936	Quick release lever		30520	
1	20939	Front ring		30520	
1	20948	Socket		30520	
1	20949	Bushing		30520	
1	20952	Locking ring		30520	
1	20970	Leather		30520	
1	20971	Leather		30520	
1	20972	Leather		30520	
1	20973	Leather		30520	
1	20974-1	Leather		30520	
1	20975-1	Leather		30520	
1	30315	Slide		40239	
1	30520	Shell, complete		40239	SVL No. 17/71
1	40153	Tripod socket		40239	
1	40238	Shell		30520	
1	40239	Camera body, complete	X	—	
2	AT-444	Pin	X	30520	SVL No. 17/71
2	CN-2×3,7	Rivet		30520	
1	CS-1,2×3,5	Screw		30520	
4	FS-1,7×4	Screw		30520	
6	FS-2,3×8	Screw		40239	
2	KN-2×3	Rivet		30520	
2	PSS-2,3×6	Screw		30520	SVL No. 17/71
1	RY-1,5	Clip		30520	
1	ST-117	Rivet		30520	
2	TF-59	Pressure spring		30520	
1	VF-112	Torsion spring		30520	
2	∅ 2 mm	Steel ball		30520	

28

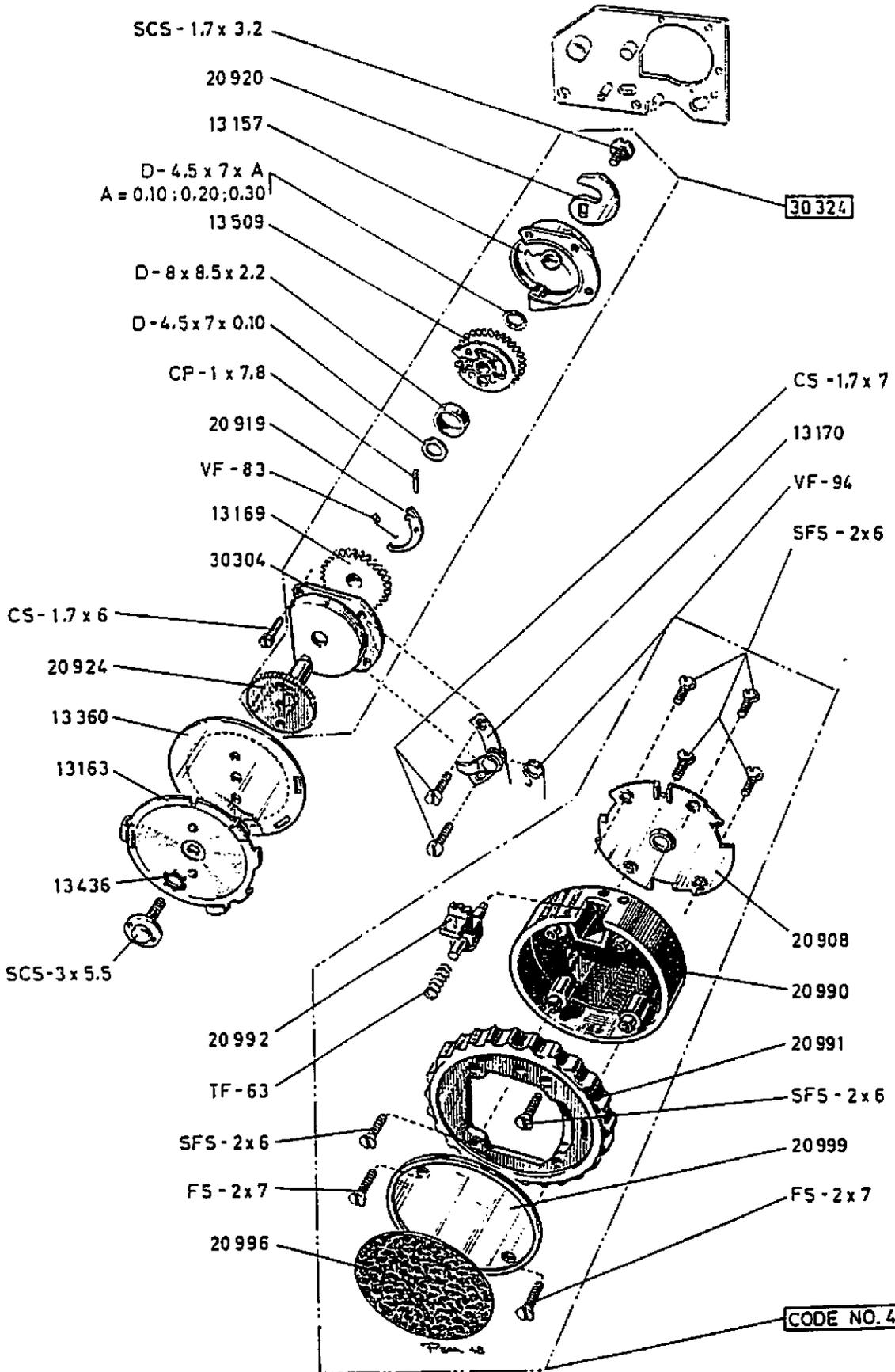
Serial number US 106701 - forwards



500C/M

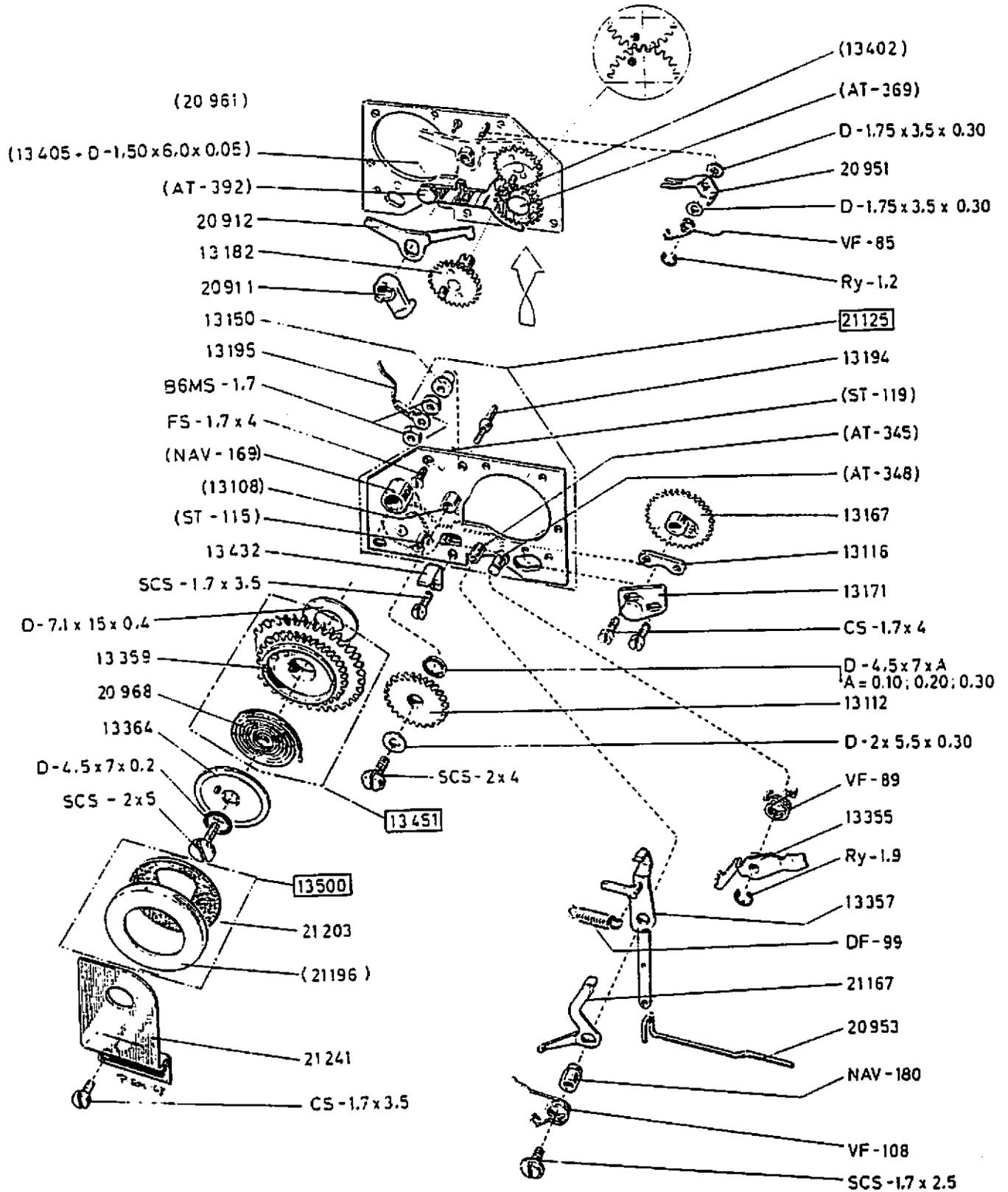
Pcs	Part No.	Description	Price (each)	Next assy.	Remark
1	13157	Gear housing, bottom		30324	
1	13163	Bayonet plate		40239	
1	13169	Gear		30324	
1	13170	Adjustable pawl		50129	
1	13360	Shim		40239	
1	13436	Locking washer		40239	
1	13509	Stop gear		30324	
1	20908	Bayonet plate		30316	
1	20919	Hook		30324	
1	20920	Mirror cam		30324	
1	20924	Ratchet wheel		30324	
1	20980	Housing		30316	
1	20991	Rim		30316	
1	20992	Catch		30316	
1	20996	Leather		30316	
1	20999	Lid		30316	
1	30304	Gear housing, top		30324	
1	30316	Knob, complete		40239	
1	30324	Gear housing, complete		50129	Order Code No. 44024
1	40239	Camera body, complete	X	-	
1	50129	Camera body, assy.	X	40239	
1	CP-1X7,8	Cylinder pin		30324	
1	CS-1,7X6	Screw		50129	
2	CS-1,7X7	Screw		50129	
1	D-4,5X7X0,10	Washer		30324	
1	D-4,5X7XA	Washer		30324	A=0,10; 0,20; 0,30 mm
1	D-8X8,5X2,2	Washer		30324	
2	FS-2X7	Screw		30316	
1	SCS-1,7X3,2	Screw		30324	
1	SCS-3X5,5	Screw		40239	
6	SFS-2X6	Screw		30316	
1	TF-83	Pressure spring		30316	
1	VF-83	Torsion spring		30324	
1	VF-94	Torsion spring		13170	

Serial number US 106701 - forwards



Pcs	Part No.	Description	Price (each)	Next assy.	Remark
1	13108	Hub	×	20961	
1	13112	Gear		50129	
1	13116	Nut		50129	
1	13150	Nylon insulator		21125	
1	13167	Gear		50129	
1	13171	Bearing bracket		50129	
1	13182	Gear with cam		50129	
1	13194	Contact screw		21125	
1	13195	Cable		13193	
1	13355	Stop lever		50129	
1	13357	Release arm		50129	
1	13359	Gear		13451	
1	13364	Cover		50129	
1	13402	Gear with cam	×	21125	
1	13405	Coupling	×	21125	
1	13432	Stop angle		50129	
1	13451	Gear, assy.		50129	
1	13500	Damping ring		50129	SVL No. 1/71
1	20911	Stop		50129	
1	20912	Bar		50129	
1	20951	Contact spring		50129	
1	20953	Push rod		50129	
1	20961	Mechanism plate	×	21125	
1	20968	Coil spring		13451	
1	21125	Mechanism plate, complete		50129	
1	21167	S-arm		50129	
1	21196	Ring	×	13500	
1	21203	Rubber disk		13500	SVL No. 1/71
1	21241	Cover		50129	
1	40239	Camera body, complete	×	—	
1	50129	Camera body, assy.	×	40239	
1	AT-345	Pin	×	20961	
1	AT-348	Pin	×	20961	
1	AT-369	Pin	×	21125	
1	AT-392	Pin	×	21125	
2	B6MS-1,7	Nut		21125	
1	CS-1,7×3,5	Screw		50129	
2	CS-1,7×4	Screw		50129	
1	D-1,50×6,0×0,05	Washer	×	21125	
2	D-1,75×3,5×0,30	Washer		50129	
1	D-2×5,5×0,30	Washer		50129	
1	D-4,5×7×0,20	Washer		50129	
1	D-4,5×7×A	Washer		50129	A = 0,10; 0,20; 0,30 mm
1	D-7,1×15×0,4	Washer		50129	
1	DF-99	Draw spring		50129	
1	FS-1,7×4	Screw		50129	
1	NAV-169	Hub	×	20961	
1	NAV-180	Hub		50129	
1	RY-1,2	Clip		50129	
1	RY-1,9	Clip		50129	
1	SCS-1,7×2,5	Screw		50129	
1	SCS-1,7×3,5	Screw		50129	
1	SCS-2×4	Screw		50129	
1	SCS-2×5	Screw		50129	
1	ST-115	Rivet	×	20961	
1	ST-119	Rivet	×	20961	
1	VF-85	Torsion spring		50129	
1	VF-89	Torsion spring		50129	
1	VF-108	Torsion spring		50129	

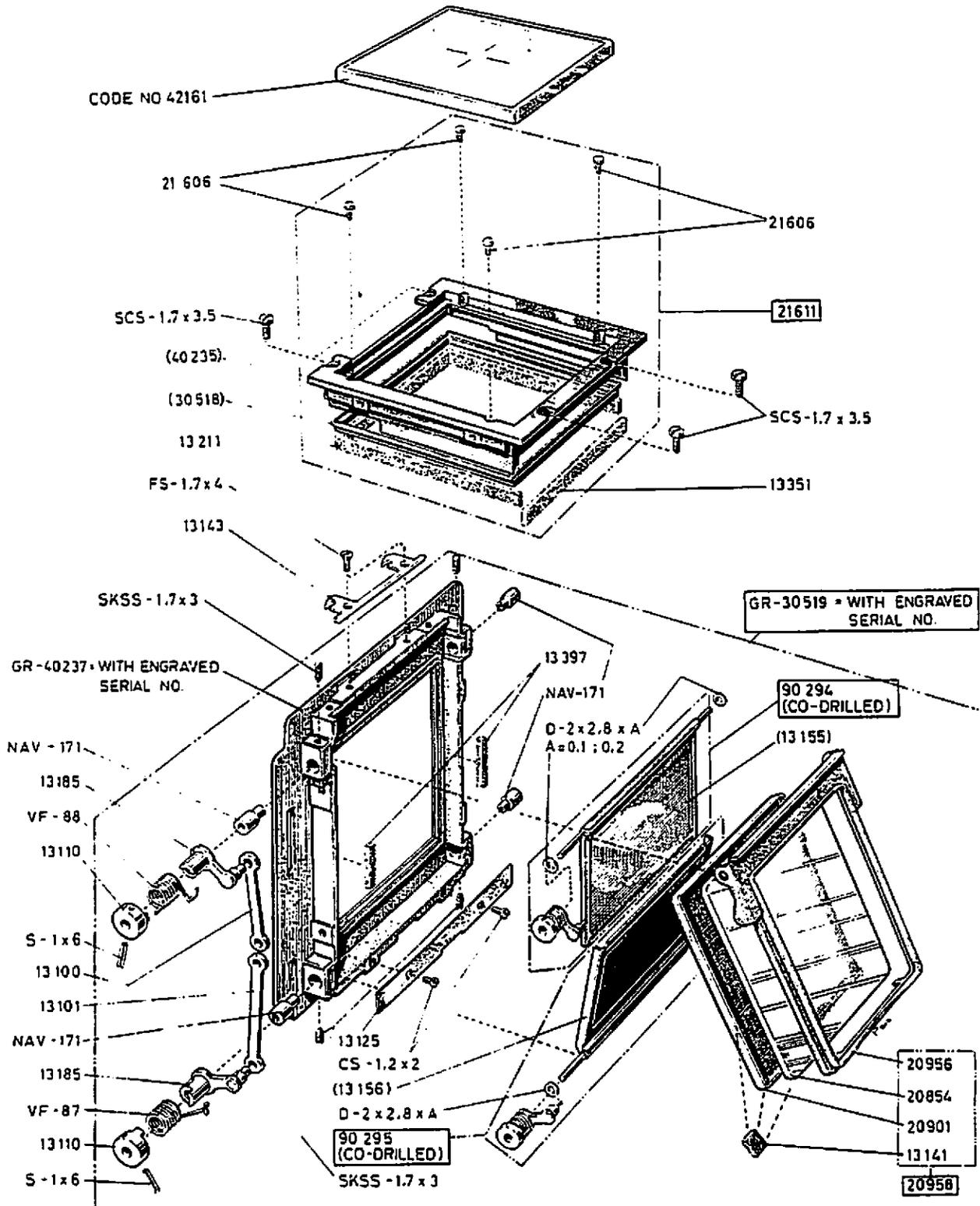
Serial number US 106701 - forwards



## 500C/M

Pcs	Part No.	Description	Price (each)	Next assy.	Remark
1	13100	Connecting rod, upper		50129	
1	13101	Connecting rod, lower		50129	
2	13110	Driving disc		90294/295	
1	13125	Light trap		GR-30519	
3	13141	Foam plastic pad		20958	
1	13143	Magazine hook		50129	
1	13155	Top flap	×	90294	
1	13156	Bottom flap	×	90295	
2	13185	Lever		90294/295	
1	13211	Foam plastic strip		21611	
1	13351	Foam plastic strip		21611	
1	13397	Foam plastic strip		GR-30519	
1	20854	Mirror		20958	
1	20901	Mirror protection		20958	
1	20956	Frame for mirror		20958	
1	20958	Mirror, complete		GR-30519	
4	21606	Screw		21611	SVL No. 1771
1	21611	Frame, complete		50129	SVL No. 1771
1	30518	Frame, inner	×	21611	
1	GR-30519	Rear plate, complete		50129	State serial No.
1	40235	Frame	×	21611	
1	GR-40237	Rear plate		GR-30519	State serial No.
1	40239	Camera body, complete	×	—	
1	50129	Camera body, assy.	×	40239	
1	90294	Top flap		GR-30519	
1	90295	Bottom flap		GR-30519	
2	CS-1,2×2	Screw		GR-30519	
2	D-2×2,8×A	Washer		GR-30519	A = 0,1; 0,2 mm
2	FS-1,7×4	Screw		50129	
4	NAV-171	Bushing		GR-30519	
2	S-1×6	Pin		GR-30519	
4	SCS-1,7×3,5	Screw		50129	
4	SKSS-1,7×3	Screw		GR-30519	
1	VF-87	Torsion spring		90294/295	
1	VF-88	Torsion spring		90294/295	
1		Standard focusing screen	▲	40239	Order Code No. 42161

Serial number US 106701 - forwards

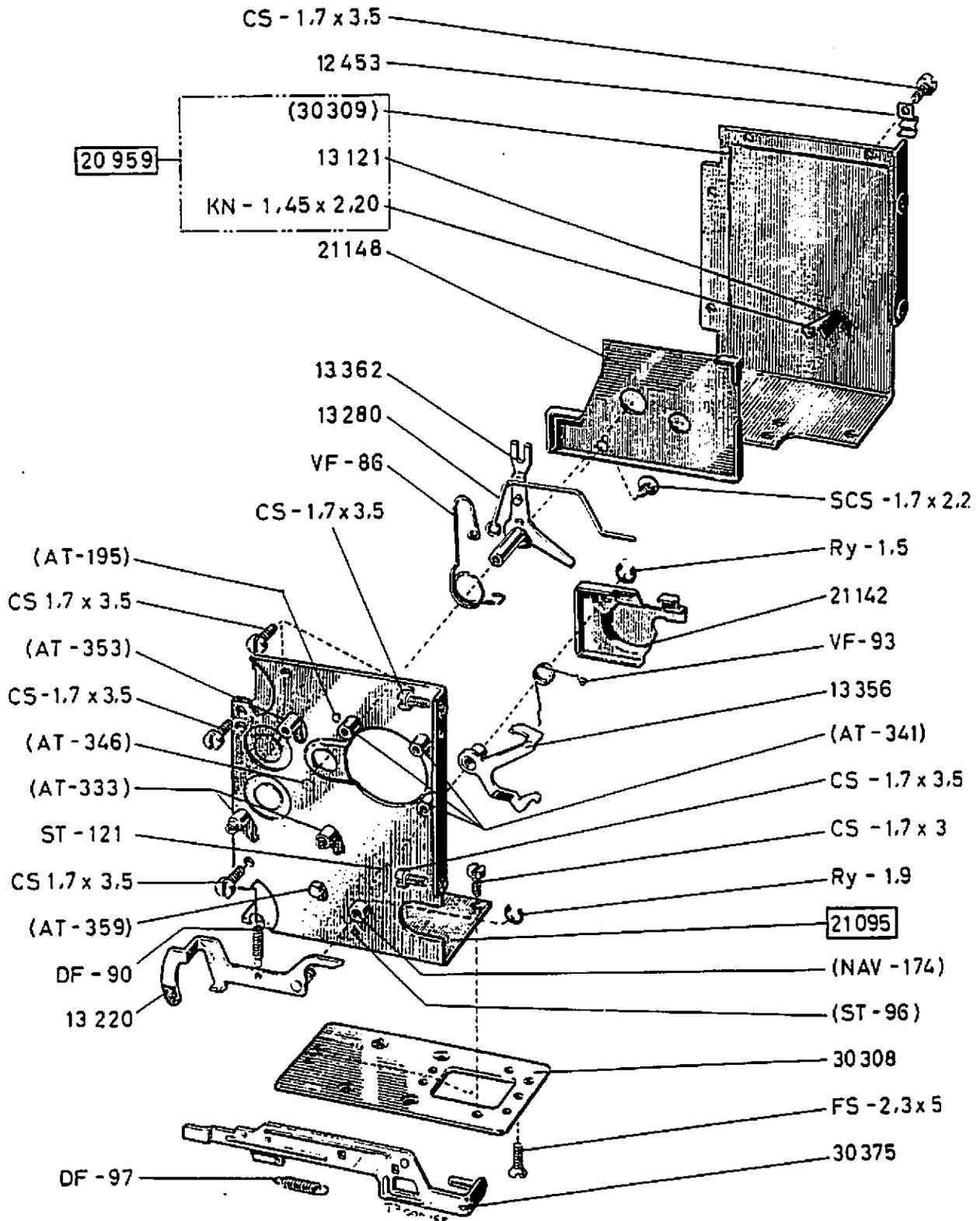




## 500C/M

Pcs	Part No.	Description	Price (each)	Next assy.	Remark
1	12453	Cable holder		50129	
1	13121	Mirror rest		20959	
1	13220	Signal		50129	
1	13280	Lens lock		50129	
1	13356	Mirror catch		50129	SVL No. 2/71
1	13362	Mirror actuating lever		50129	
1	20959	Inner wall, left, assy.		50129	
1	21095	Inner wall, right, assy.		50129	
1	21142	Cover		50129	SVL No. 2/71
1	21148	Cover		40239	
1	30308	Bottom plate		50129	
1	30309	Inner wall, left	×	20959	
1	30375	Release arm		50129	
1	40239	Camera body, complete	×	—	
1	50129	Camera body, assy.	×	40239	
1	AT-195	Pin	×	21095	
2	AT-333	Pin	×	21095	
3	AT-341	Pin	×	21095	
1	AT-346	Pin	×	21095	
1	AT-353	Pin	×	21095	
1	AT-359	Pin	×	21095	
6	CS-1,7×3	Screw		50129	
12	CS-1,7×3,5	Screw		50129	
1	DF-90	Draw spring		50129	
1	DF-97	Draw spring		50129	
1	FS-2,3×5	Screw		50129	
2	KN-1,45×2,20	Rivet		20959	
1	NAV-174	Hub	×	21095	
1	RY-1,5	Clip		50129	
1	RY-1,9	Clip		50129	
1	SCS-1,7×2,2	Screw		40239	
1	ST-96	Rivet	×	21095	
1	ST-121	Rivet		21095	
1	VF-86	Torsion spring		50129	
1	VF-93	Torsion spring		50129	

Serial number US 106701 - forwards

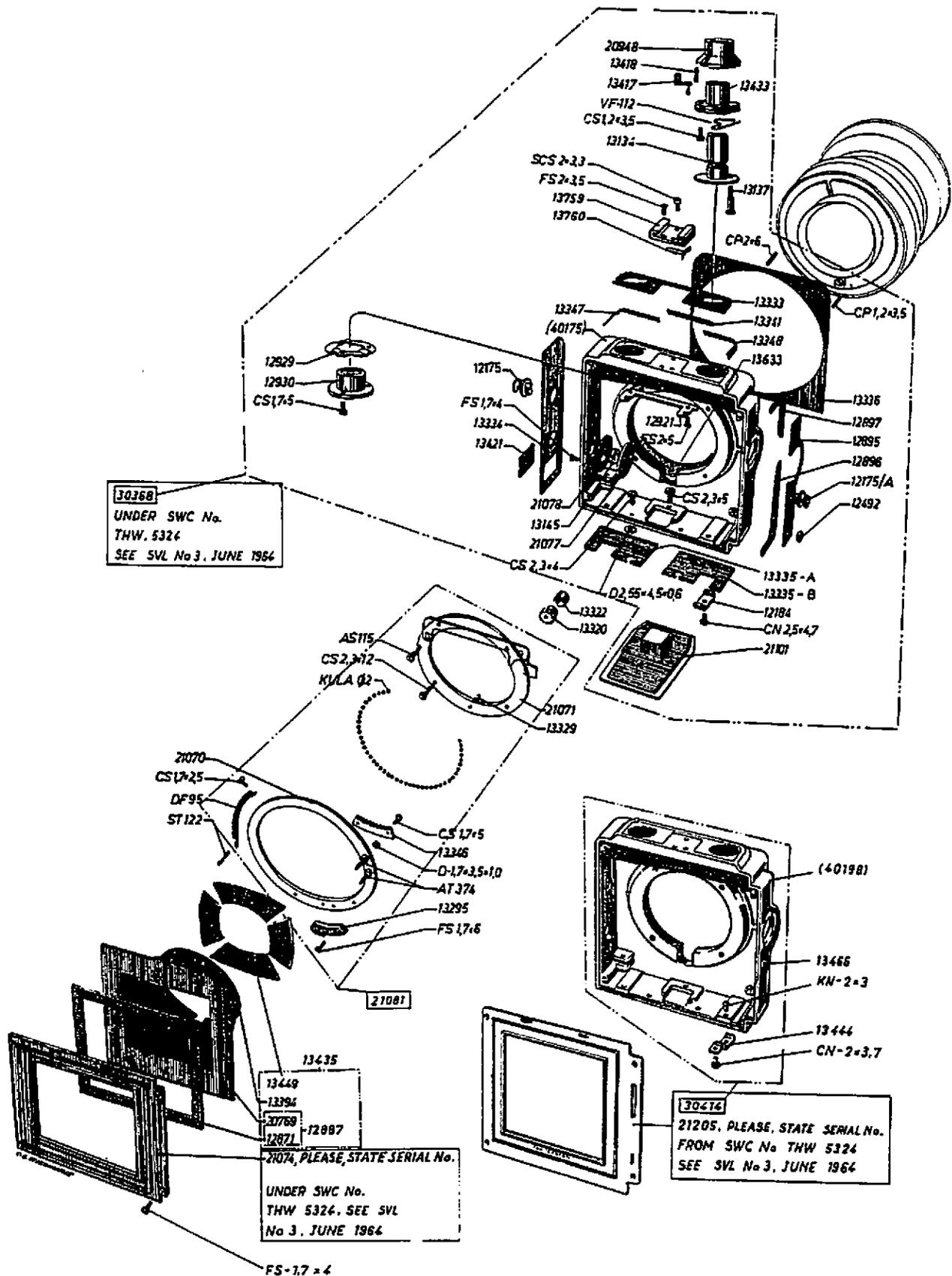


SWC

Pcs	Part No.	Description	Price (each)	Next assy.	Remark
1	12175	Strap button		30368	
1	12175/A	Strap button		30368	
2	12184	Magazine support		30368	
1	12492	Window		30368/414	
1	12871	Foam plastic frame		12887	
1	12887	Frame		13435	
1	12895	Leather		30368/414	
1	12896	Leather		30368/414	
1	12897	Leather		30368/414	
1	12921	Magazine hook		30368/414	
1	12929	Washer		30368/414	
1	12930	Level		30368/414	
1	13134	Release button		30368/414	
1	13137	Screw		30368/414	
1	13145	Nylon ring		30368/414	
1	13295	Nylon stop		21081	
1	13320	Gear		30369/415	
1	13322	Guide ring		30369/415	
1	13329	Pin		21071	
1	13333	Leather		30368/414	
1	13334	Leather		30368/414	
1	13335/A	Leather		30368/414	
1	13335/B	Leather		30368/414	
1	13336	Leather		30368/414	
1	13341	Name plate		30368/414	
1	13346	Toothed segment		21081	
1	13347	Leather		30368/414	
1	13348	Leather		30368/414	
1	13394	Light trap		13435	
1	13417	T-arm		30368/414	
1	13418	Plate spring		30368/414	
1	13421	Name plate		30368/414	
1	13433	Bushing		30368/414	
1	13435	Cone, complete		30369/415	
2	13444	Magazine support		30414	
4	13449	Reflection damper		13435	SVL No. 11/61
2	13466	Strap button		30414	
1	13633	Foam plastic strip		30368/414	SVL No. 5/66
1	13759	Shoe		30368/414	SVL No. 3/69
1	13760	Plate spring		30368/414	SVL No. 3/69
1	20769	Frame		12887	
1	20948	Socket		30368/414	
1	21070	Outer ballrace		21081	
1	21071	Inner ballrace		21081	
1	21074	Rear plate	X	GR-21074	SVL No. 3/64
1	GR-21074	Rear plate, engraved		30369	State serial No.
1	21077	Cover		30368/414	
1	21078	Shield		30368/414	
1	21081	Driving ring		30369/415	
1	21101	Tripod socket		30368/414	

Pcs	Part No.	Description	Price (each)	Next assy.	Remark
1	21205	Rear plate	×	GR-21205	SVL No. 3/64
1	GR-21205	Rear plate, engraved		30415	State serial No.
1	30368	Shell, complete		30369	SVL No. 3/64
1	30369	Camera body, complete	×	—	
1	30414	Shell, complete		30415	SVL No. 3/64
1	30415	Camera body, complete	×	—	
1	40175	Shell	×	30368	
1	40198	Shell	×	30414	
1	AS-115	Screw		30369/415	
1	AT-374	Pin	×	21070	
100	○ 2 mm	Steel ball		21081	
2	CN-2×3,7	Rivet		30414	
2	CN-2,5×4,7	Rivet		30368	
1	CP-1,2×3,5	Cylinder pin		30368/414	
1	CP-2×6	Cylinder pin		30368/414	
1	CS-1,2×3,5	Screw		30368/414	
1	CS-1,7×2,5	Screw		21081	
2	CS-1,7×5	Screw		21081	
3	CS-1,7×5	Screw		30368/414	
2	CS-2,3×4	Screw		30368/414	
1	CS-2,3×5	Screw		30368/414	
3	CS-2,3×12	Screw		30369/415	
2	D-1,7×3,5×1,0	Spacer		21081	
2	D-2,55×4,5×0,6	Washer		30368/414	
1	DF-95	Draw spring		21081	
4	FS-1,7×4	Screw		30369/415	
2	FS-1,7×6	Screw		21081	
2	FS-2×3,5	Screw		30368/414	
2	FS-2×5	Screw		30368/414	
2	KN-2×3	Rivet		30414	
1	SCS-2×3,3	Screw		30368/414	SVL No. 8/71
1	ST-122	Pin		30369/415	
1	VF-112	Torsion spring		30368/414	

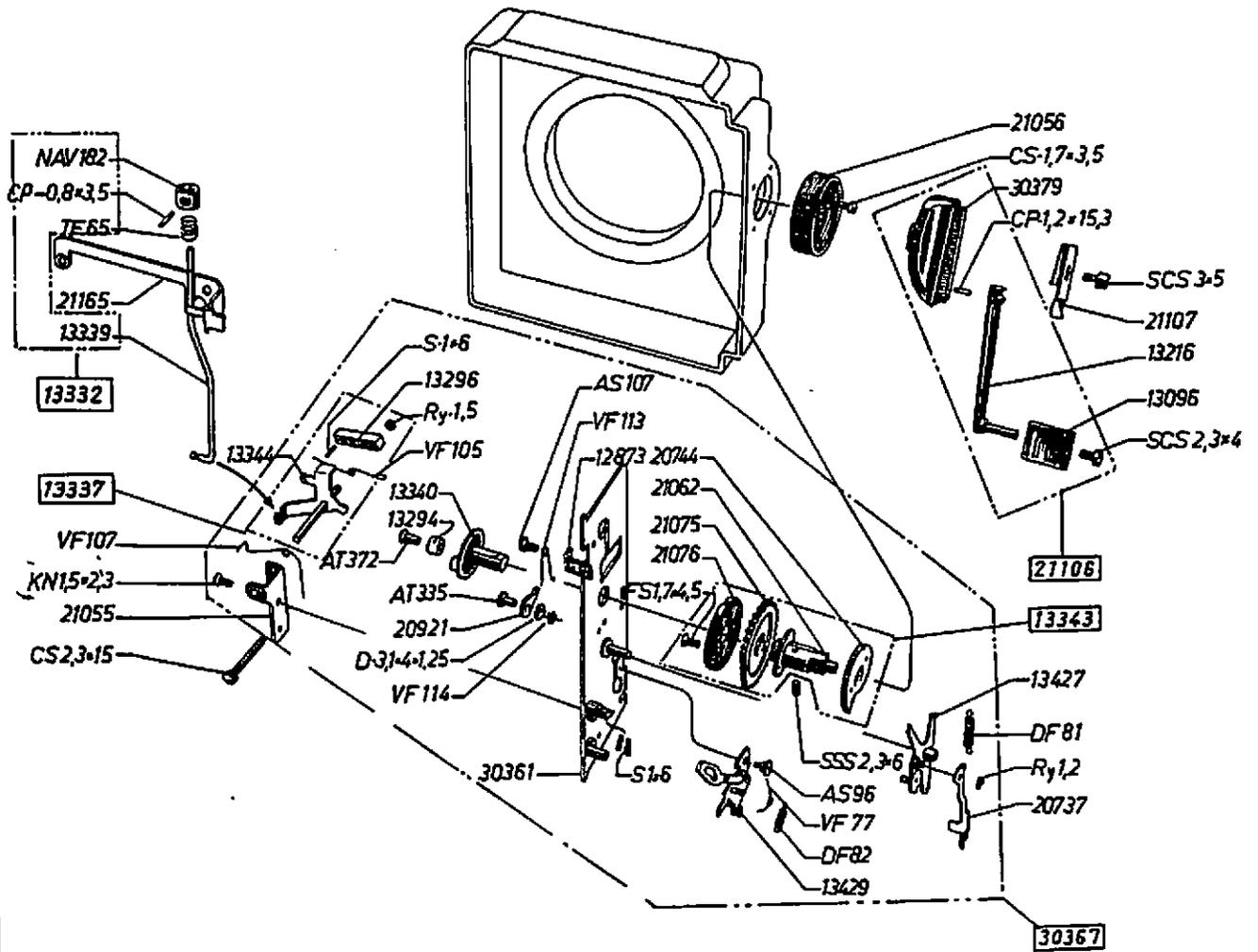
Serial number CEW 3001 - forwards



SWC

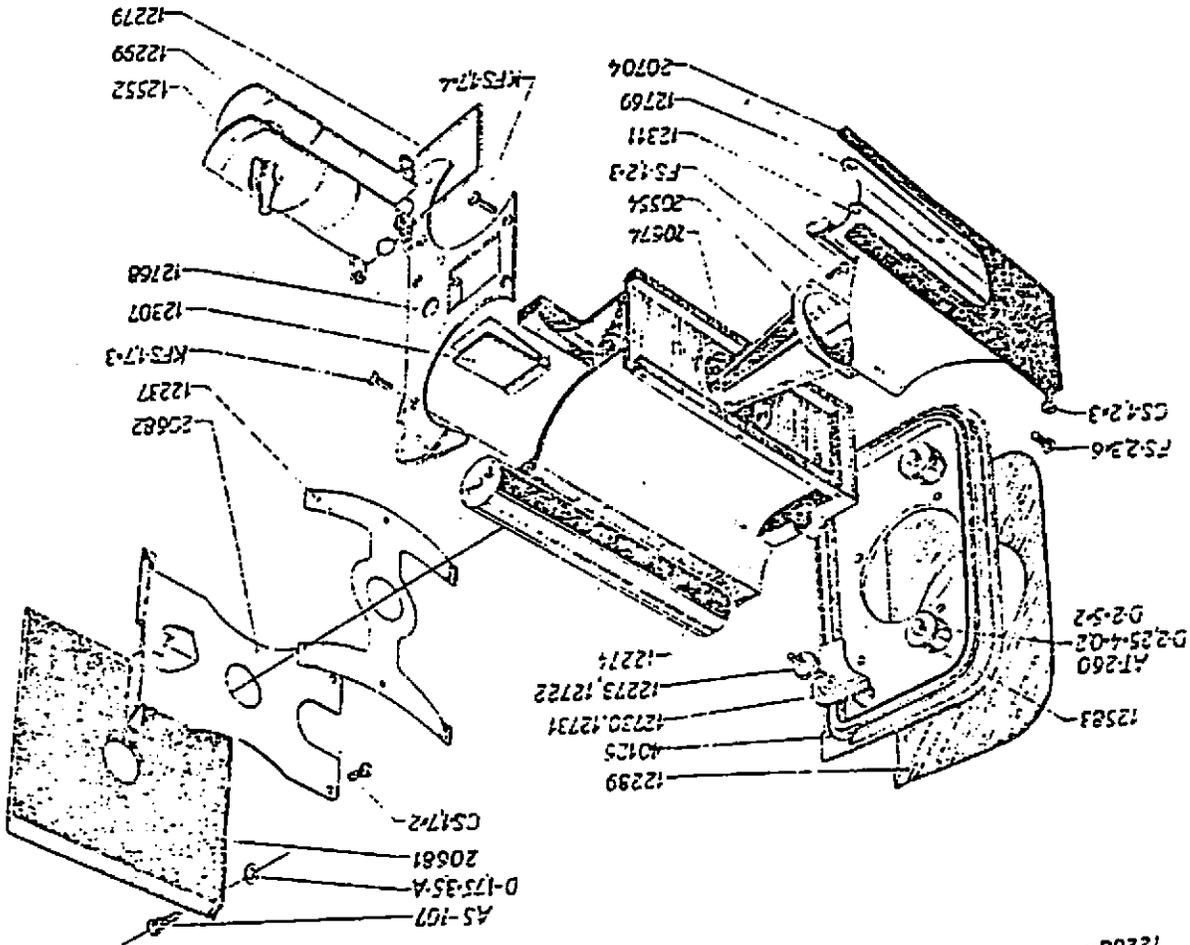
Pcs	Part No.	Description	Price (each)	Next assy.	Remark
1	12873	Bracket		30367	
1	13096	Handle		21108	
1	13216	Crank		21106	
2	13294	Nylon roller	×	13340	
1	13296	Catch		13337	
1	13332	Release lever, complete		30369/415	
1	13337	Release mechanism		30367	
1	13339	Release lever		13332	
1	13340	Driving ratchet wheel		30367	
1	13343	Driving shaft, complete		30367	
1	13344	Release		13337	
1	13427	Catch		30367	
1	13429	Signal release mechanism		30367	
1	20737	Signal		30367	
1	20744	Cam		13343	
1	20921	Pawl		30361	
1	21055	Bracket		30361	
1	21058	Housing		30369/415	
1	21082	Driving shaft		13343	
1	21076	Gear		13343	
1	21076	Latch plate		13343	
1	21106	Crank, complete		30369/415	
1	21107	Spring		30369/415	
1	21165	Latch		30369/415	
1	30361	Mechanism plate, assy.		30367	
1	30367	Mechanism plate, complete		30369/415	
1	30369	Camera body, complete	×	—	
1	30379	Base		21106	
1	30415	Camera body, complete	×	—	
1	AS-96	Screw		30367	
1	AS-107	Screw		30367	
1	AT-335	Pin		30361	
2	AT-372	Pin	×	13340	
1	CP-0.8×3.5	Cylinder pin		13332	
1	CP-1.2×15.3	Cylinder pin		21106	
4	CS-1.7×3.5	Screw		30415	
1	CS-2.3×15	Screw		30415	
1	D-3.1×4×1.25	Spacer		30361	
1	DF-81	Draw spring		30367	
1	DF-82	Draw spring		13429	
2	FS-1.7×4.5	Screw		13343	SVL No, 29/69
2	KN-1.5×2.3	Rivet		30361	
1	NAV-182	Hub		13332	
1	RY-1,2	Clip		30367	
1	RY-1,5	Clip		13337	
3	S-1×8	Pin		13337/30367	
1	SCS-2,3×4	Screw		21108	
1	SCS-3×5	Screw		30369/415	
1	SSS-2,3×6	Screw		30367	SVL No, 29/69
1	TF-65	Pressure spring		13332	
1	VF-77	Torsion spring		13429	
1	VF-105	Torsion spring		30367	
1	VF-107	Torsion spring		30367	
1	VF-113	Torsion spring		30367	
1	VF-114	Torsion spring		30361	

Serial number CEW 3001 - forwards

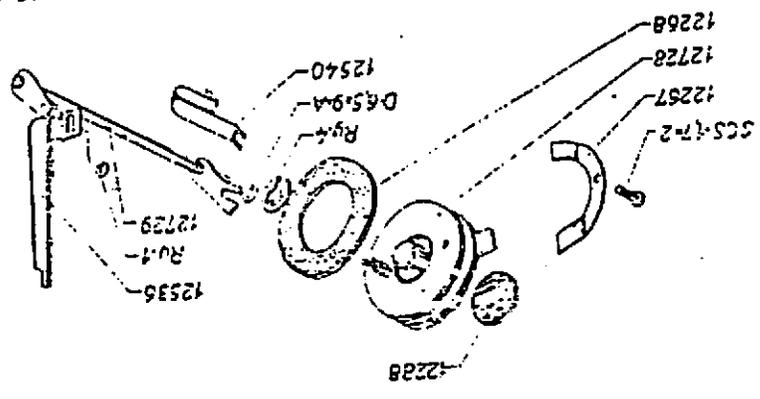


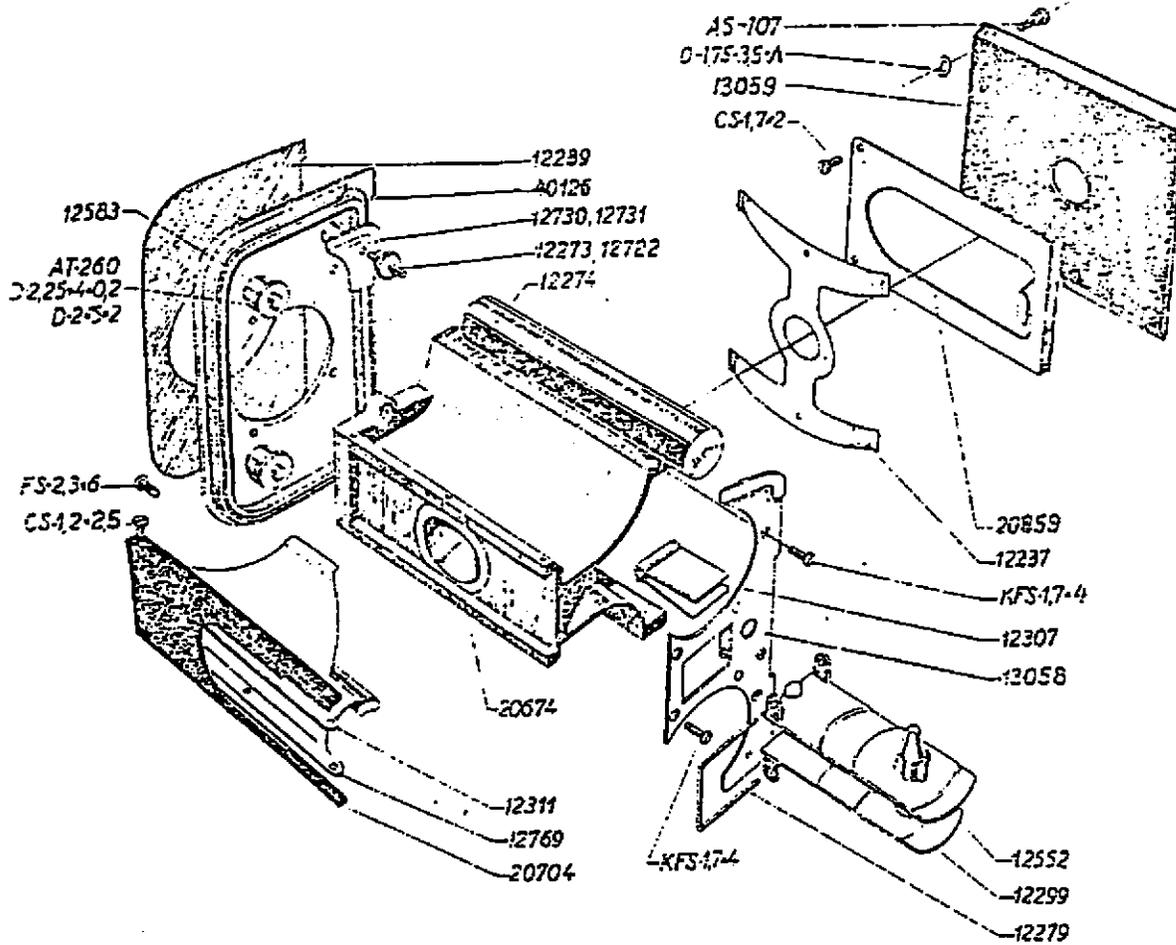
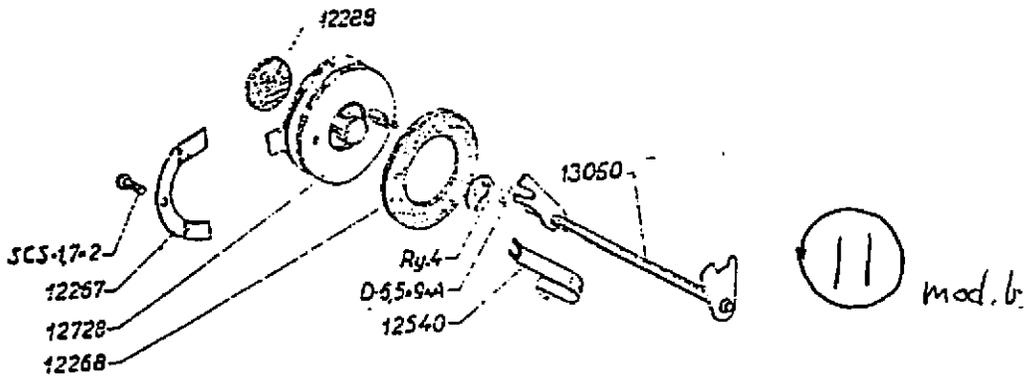
# Repair Guide for the Film Magazine

Fault	Possible Causes
M1 <i>Scratches on the film.</i>	<ol style="list-style-type: none"> <li>1 Focal-plane rollers defective.</li> <li>2 Film passes over the focal plane with insufficient freedom.</li> </ol>
M2 <i>Light leakage.</i>	<ol style="list-style-type: none"> <li>1 Defective light-traps (P.12 12253, 12382, 12259, 12260) for magazine safety-slide (P.12 12519).</li> <li>2 Light leaks in D-shaped track between spool-holder cover and magazine.</li> <li>3 Light leaks between magazine body (P.12 20709) and front plate (P.12 12551).</li> <li>4 Pinhole defects in die-casted magazine body.</li> </ol>
M3 <i>Magazine loose or stuck.</i>	<ol style="list-style-type: none"> <li>1 Loose locking-pin located in the center of plate (P.12 30223).</li> <li>2 Defective locking-bar (P.11 12357).</li> </ol>
M4 <i>Magazine does not lock on the camera body.</i>	<ol style="list-style-type: none"> <li>1 Locking-bar (P.12 12251) does not function properly.</li> <li>2 Catch (P.12 12257) works stiffly and obstructs locking-bar (P.12 12251).</li> </ol>
M5 <i>Magazine has play after being locked to camera body.</i>	<ol style="list-style-type: none"> <li>1 Locking-bar (P.12 12251) fits in too deeply upon double-hooked top-clasp (P.6 12178).</li> <li>2 Play in slots fitting over bottom hooks (P.1 12184).</li> </ol>
M6 <i>Movement from winding-knob does not advance the film.</i>	<ol style="list-style-type: none"> <li>1 Gear-wheel (P.12 12216) does not spring back (compare C15-2).</li> <li>2 Spline-couplings (between P.11 12552 and P.12 12209) defective or not in alignment.</li> <li>3 Sheared pin in spline-coupling (P.11 12552).</li> </ol>
M7 <i>Wrong film spacing (has the customer checked that magazine has been started at numeral 1?).</i>	<ol style="list-style-type: none"> <li>1 Defective number-spacing arm (P.12 12230).</li> <li>2 Counter-dial (P.12 12220) loosened from its riveted hub.</li> <li>3 Defective catch (P.12 12224) for counter-dial (P.12 12220).</li> </ol>
M8 <i>Film cannot be wound on loading.</i>	<ol style="list-style-type: none"> <li>1 Broken coupling-spring (P.12 on 12206).</li> <li>2 Film winds obliquely because film guide is missing.</li> <li>3 Spline-coupling defective, or spline-coupling casing (P.12 in 12209) slips.</li> <li>4 Pin in spline-coupling (P.11 12552) is sheared off (compare M6-3).</li> </ol>
<b>11</b> <b>Fault</b>	<b>Possible Causes</b>
M9 <i>Red-white signal does not change.</i>	<ol style="list-style-type: none"> <li>1 Signal (P.12 12235) works stiffly.</li> <li>2 Spring (P.12 DF-57) not in place.</li> </ol>
M10 <i>Counter-dial does not stop at numeral 1.</i>	<ol style="list-style-type: none"> <li>1 Catch (P.12 12241) does not function.</li> <li>2 Broken coupling-spring (P.12 VF-27) on center gear-wheel (P.12 12204).</li> <li>3 Counter-dial (P.12 12220) loosened from its riveted hub (compare M7-2).</li> </ol>
M11 <i>Defects in appearance.</i>	<ol style="list-style-type: none"> <li>1 Magazine body.</li> <li>2 Magazine front-plate (P.12 12551).</li> <li>3 Covering.</li> </ol>
M12 <i>General overhauling.</i>	<ol style="list-style-type: none"> <li>1 Adjustments.</li> <li>2 Rebuilding.</li> </ol>



mod.a

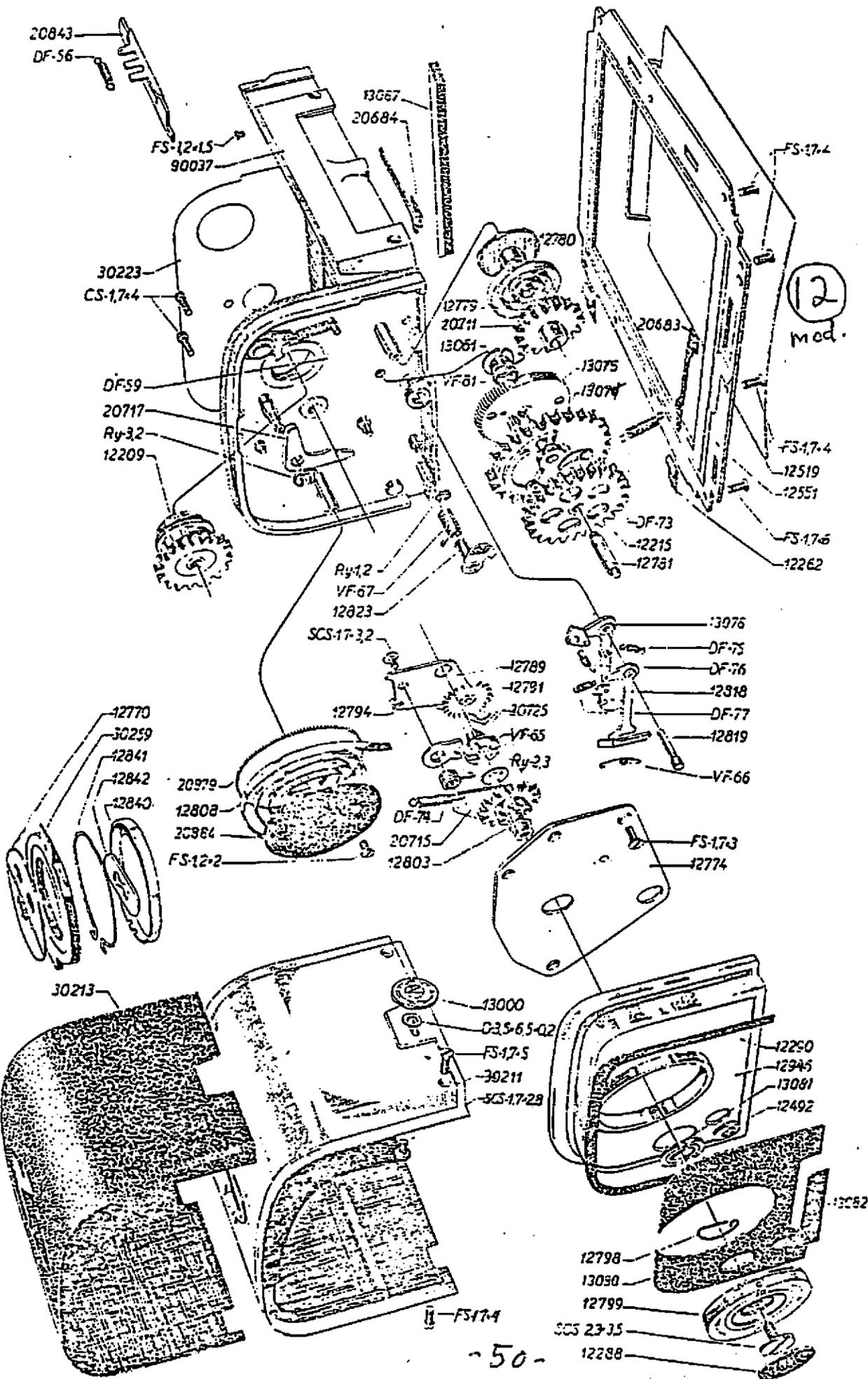












12  
mod.

# Assembly Instructions for the Hasselblad magazine type C

## Step 1. P12.

The magazine consists of two units, the spool holder P11 and the mechanism P12. These are matched at the factory and the magazine serial number is engraved on the film pressure plate 20681. If non-paired units are used the efficiency of the camera, especially that of the light traps, may be reduced. The mechanism is mounted on a cast support 30276. Various bearing pinions and the reverse stop for the gear wheel 12209 are riveted onto this support.

When assembling, check first that the support is free from faults, that all the rivets are secure and that the two film rollers are straight, that the tolerance provides easy running without binding and that there is no corrosion or other surface imperfections to damage the film. Attach the nylon stop 20717 and the retainer Ry-3.2 and check that there is no side play. Attach spring DF-59 and see that the catch for 12209 runs easily, but without side play. Check that the two transverse grooves in the cover 30211 are light-proof, that the corner on the lower side does not protrude outwards and that the edge by the locking knob is straight. Attach locking knob 13900 and washer D-3.5×6.5×0.2 with the screw SCS-1.7×2.8. Place the casing on the support and secure with 3 FS-1.7×4 and 3 FS-1.7×5 screws. Check that the light traps is free from faults. Insert support 12926 and secure with 2 CS-1.7×4 screws. Check with plate 12551 that the edges of the casing engage correctly and cover the edges of the plate. Check that the upper and lower edges are perfectly straight and that the front of the magazine is flat. Correct and adjust if necessary. Panel 30259, film indicator 12770 and spring 12841 are assembled and held together by the groove retainer 12842. The cover is now secured to the casing by pressing together the two ends of the spring and inserting them in the lug by the opening on casing 30259. The bottom 12840 is then pressed into position.

## Step 2. P12.

The light traps 12253, 12259 and 12260 are placed in the slots on 30246. Check that the traps are free from damage. Attach the holder 12258 and secure from the inside of the magazine with 4 FS-1.2×1.5 screws. Attach spring DF-56 and insert locking arm 20843. Place the 2 spring plates, 12262, the exposure check arm 20683 and the locking catch 20684 in position. If required, adjust by bending the tensioners on the catches and bending the locking lug on the locking catch slightly downwards. The 4 leather stops 12382, are lightly glued on the outer edge and inserted in their respective positions. The frame 12551 is then carefully attached by placing it slightly away from the edge and then moving it into position towards the light trap. Secure the frame with 7 FS-1.7×4 screws. Note that screw FS-1.7×4 at

the top of the left-hand row and FS-1.7×6 at the bottom of the row are tightened during step 5.

## Step 3. P12.

Attach DF-76 and suspend spring DF-75 from arm 12814 and insert this component. Assemble spring 12808 and gear wheel 20721 and see that the spring is properly engaged in the bearing pinion. Suspend the spring DF-77 on the link 12818 and insert into the magazine. Pinion 12819 is then pressed into position and forms a seating for components 12814 and 12818. Attach the retainer Ry-1.2 and see that the links move easily and without binding. Assemble unit 20716 and secure with plate 20715 and screw FS-1.7×3.2. The link on 12789 is inserted so that the keyway engages on the stop pinion on the support, after which 20716 is placed in the seating. Check the engagement of gear wheel 12794 with 20721. This can be adjusted with the slot on 12789. Attach springs DF-75 and DF-77. Secure the number disc to wheel 20721 with 2 FS-1.2×2 screws. Mount the frame division wheel 12783 on the gear wheel 12782 and press the slotted sleeve 13061, around which the spring VF-81 is mounted, onto the gear wheel hub. The play in wheel 12783 should be 0.1 mm and the spring moderately tensioned. Check that the sleeve is properly secured and that the end of the spring does not cause binding. Place spring 12779 in wheel 20711 and attach the spring retainer 12780, checking that the centre of the spring engages properly with the retainer. Place the unit on its centre pinion and secure with the retainer pinion in the hole in the support. Tension spring 12779 about two turns. Insert 12783 and secure with shaft 12781. Insert gear wheels 12209 and 12215. Apply a trace of oil to the moving parts. Attach spring DF-74 and end plate 12774. Check that the links and the gear wheel do not bind.

## Step 4. P12.

Secure end plate 12774 with 3 FS-1.7×3 screws. Check again by turning the film feed wheel 12782 that the engagement does not bind. Check that the wheel cannot bind against the edges of the frame and the support. Check the spring tension of 20711 by turning wheel 12207. The gear wheel 12783 should not move. Check the spring tension of the number disc and the movement of arms 12814 and 12818. Place the end plate 12916 in position. Check the film feed and the position of the numbers on the film counter. Remove the end plate, attach crank 12799 with a FS-1.7×3.5 screw. Attach signal indicator 12923 and spring DF-67. Tension the spring lightly. Check the feed and zero position and the signal and exposure catch.

Check through the opening for the signal link that the signal does not change at a 4-mm in-

pulse but that it does change at 4.5 mm. Attach the covering 12288 and the text plate 30223.

#### Step 5. P12.

Check the lightproofness in the light trap grooves around the mechanism. Place end plate 12946 in position and secure with a 1.7×4 screw from the bottom of the magazine. Tighten screws 1.7×4 and FS-1.7×6 on the frame 12551.

#### Step 6. P11.

Attach the end plate 40126 on the centrepiece with 4 FS-2.3×6 screws. Secure spring 12267 by the locking crank 12728 with a FS-1.7×2 screw. Check that the crank comes to a definite open and closed position. Attach with sealing ring 12268 and retainer Ry-4. Attach tube 20554 with 4 FS-1.2×3 screws. The support 20704 with film spool springs 12311 and 12769 is secured with 6 CS-1.2×3 screws.

#### Step 7. P11.

Attach film guides 12730 and 12731 and secure to centre pinion for the film guide holders 12273. (M1V-12273). Rivet the film spool centre 12583 pinion and the washer D-2.5×4×0.2 with AT 260 and the washer 2×5×2 to end plate 40126. Check carefully that the film spool centre pinion is not out of true and that it runs easily. Attach the coverings 12289 and 12288.

#### Step 8. P11.

Attach the holders for the film spool centre pinions 12299 and 12552 to plate 12768 with bracket 12279. Mount link 12536 on shaft 12729 with the retainer Ry-1. Insert the shaft and adjuster washer D-6.5×9×A in the seating in end plate

40126 with the tip of link 12536 in the hole in the centrepiece. Place both film guide rollers 12274 on their respective centre pinions. Place spring 12307 on its guide pinion. Attach plate 12768, holding spring 12307 together so that the free ends can be inserted between holders 12299 and 12552. Check that the film guide rollers and shaft 12729 are centered and secure the end plate with 3 KFS-1.7×4 and 1 KFS-1.7×3 screws. Attach spring 12540.

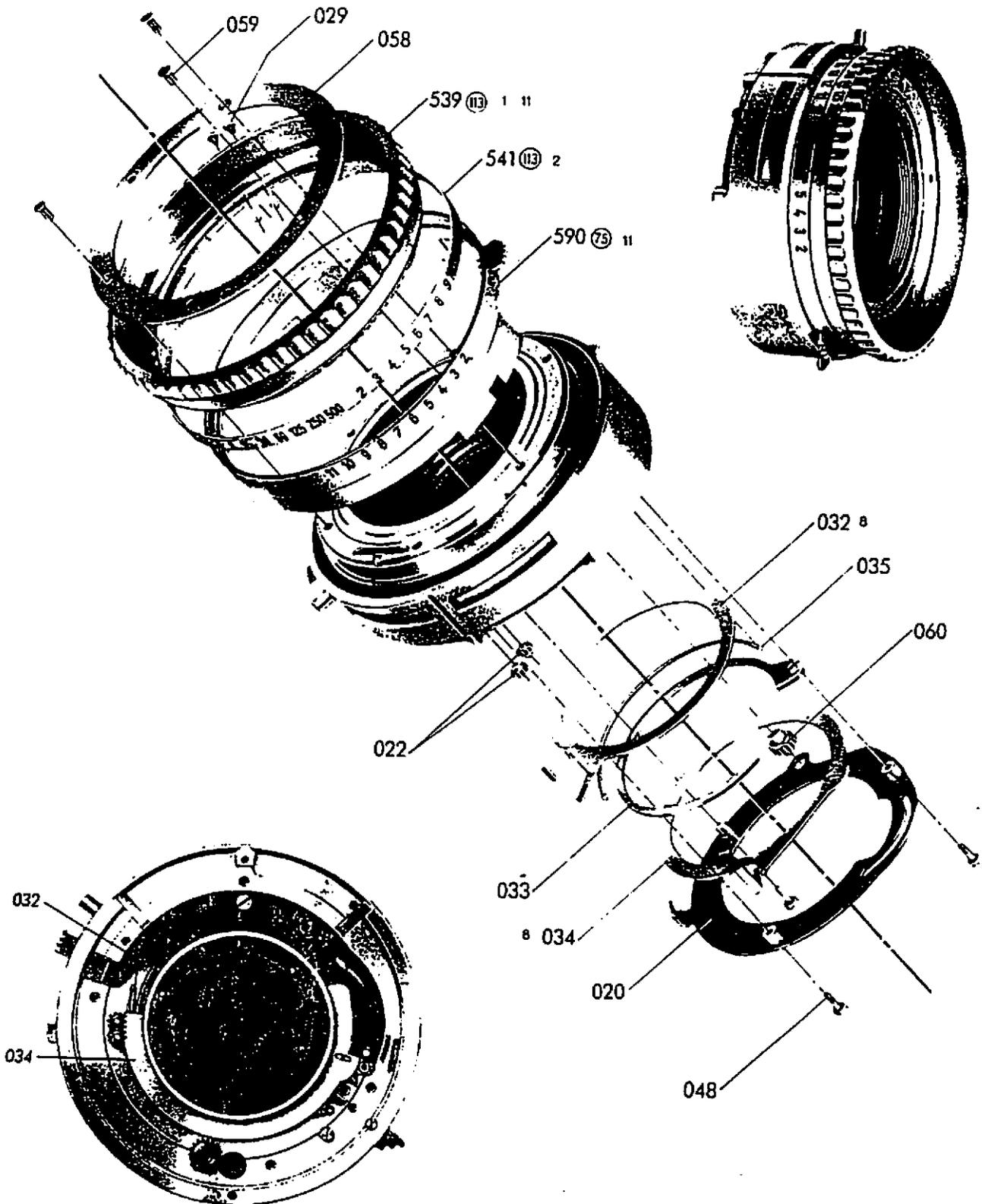
#### Step 9. P11.

Mount film paper holder 20682 on pressure plate 20681 with 2 CS-1.2×2 screws. Place adjuster washers D-1.75×3.5×A in position (2 A = 0.2 by the end plate and 2 A = 0.1 by the clamp 12768). Insert spring 12237 and adjust the pressure plate assembly 12723, carefully so that the tongue on the film paper holder can be engaged with link 12536. Place the pressure plate in position, checking that washers D-1.75×3.5×A are not dislodged, and secure with 4 AS-107 screws. Check that the pressure plate lies against the heads of all 4 screws. Check that the distance between the film paper holder and the plate is 0.5 mm. Place a small metal strip, 0.4 in thickness, between the paper holder and the pressure plate, clamp fast with the crank and check that the spool holder fits easily into the magazine without coming against the film frame. Remove the metal strip and insert the spool holder again. Check with a metal strip of thickness 0.15 mm that the rollers turn when the strip is placed between the pressure plate and the rollers. Check the light seals and inspect the magazine as a whole. Attach the magazine to the camera, check the function of the locking catch and the exposure stop. Insert a film and check the frame division, the film counter and the signal.

SYNCHRO-COMPUR 0-MXV  
GH-Reflex 103

CN-1210-022  
Tafel 1

Anmerkung Nr. siehe Abschnitt der Reparaturanleitung  
Supplement No. See section of instructions for repairs





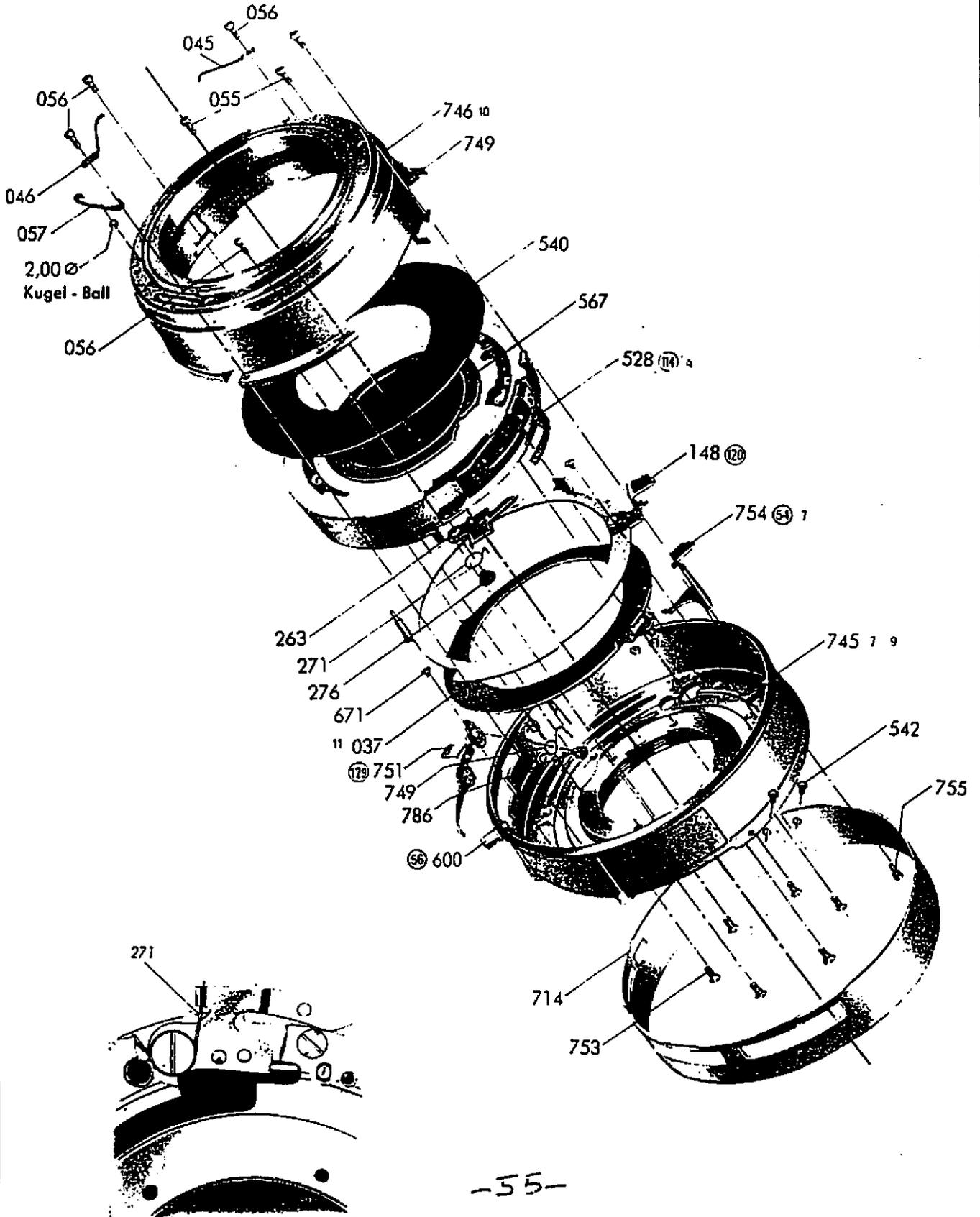
SYNCHRO-COMPUR 0-MXV  
GH-Reflex 103

CN-1210-022  
Tafel 2a

Anmerkung Nr. 1 siehe Abschnitt 1 der Reparaturanleitung

Supplement No. 1 See section 1 of instructions for repairs

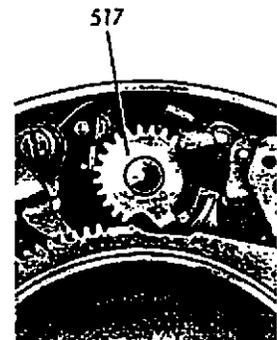
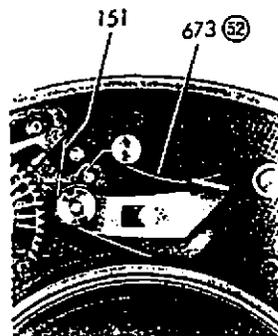
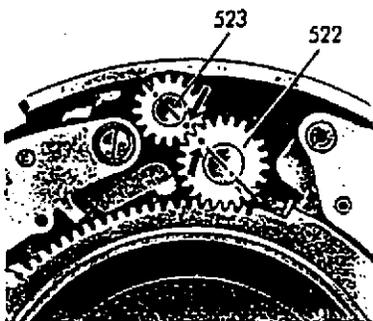
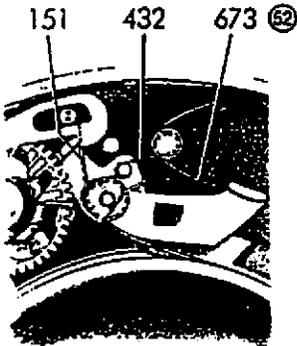
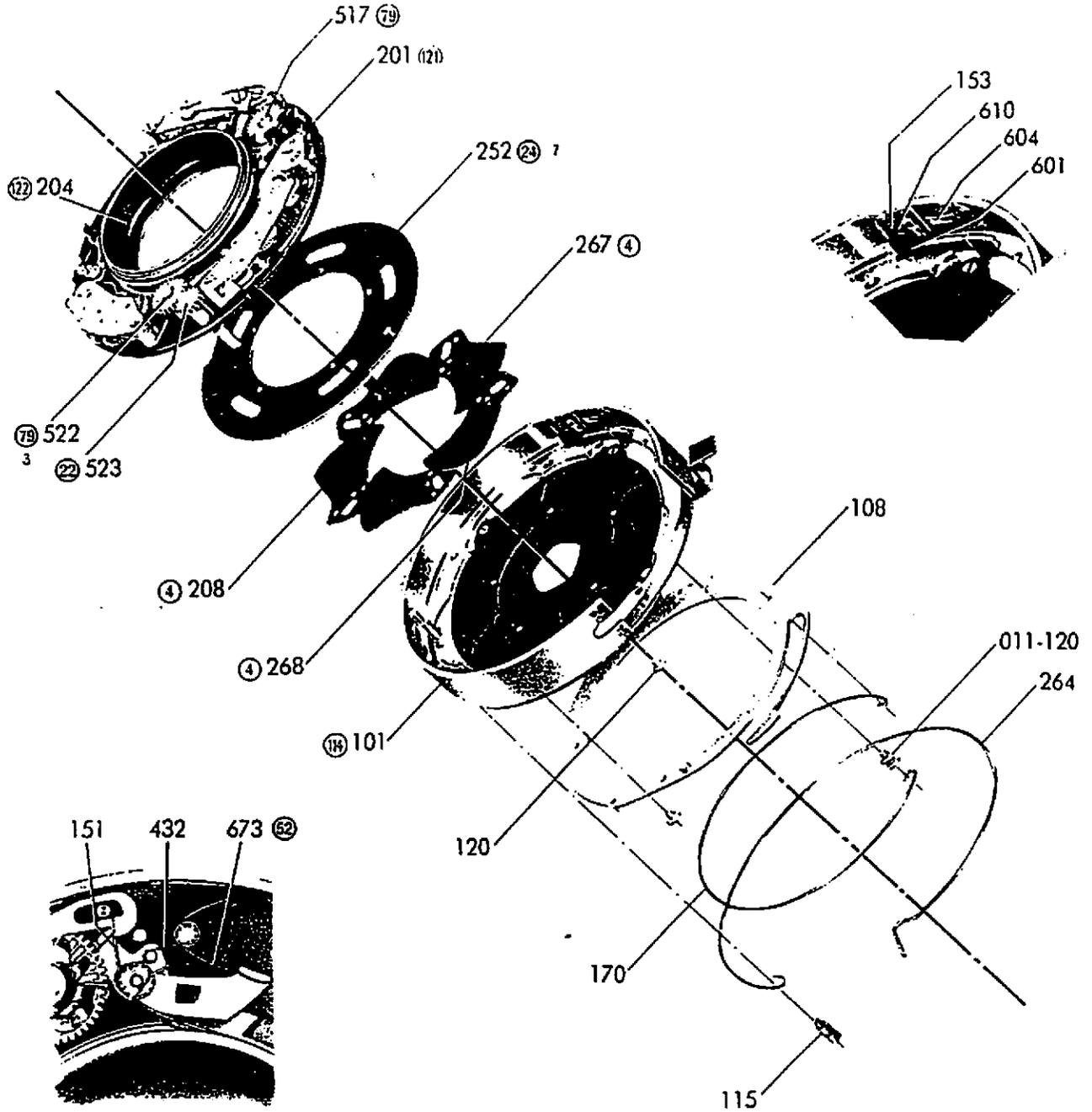
Diese Ausführung wird seit 1965 gefertigt - This design has been manufactured since 1965



SYNCHRO-COMPUR 0-MXV  
GH-Reflex 103

CN-1210-022  
Tafel 3

Anmerkung Nr. siehe Zeichnung oder Reparaturanleitung;  
Supplement No. See Section 1 of instruction, for 103-1035

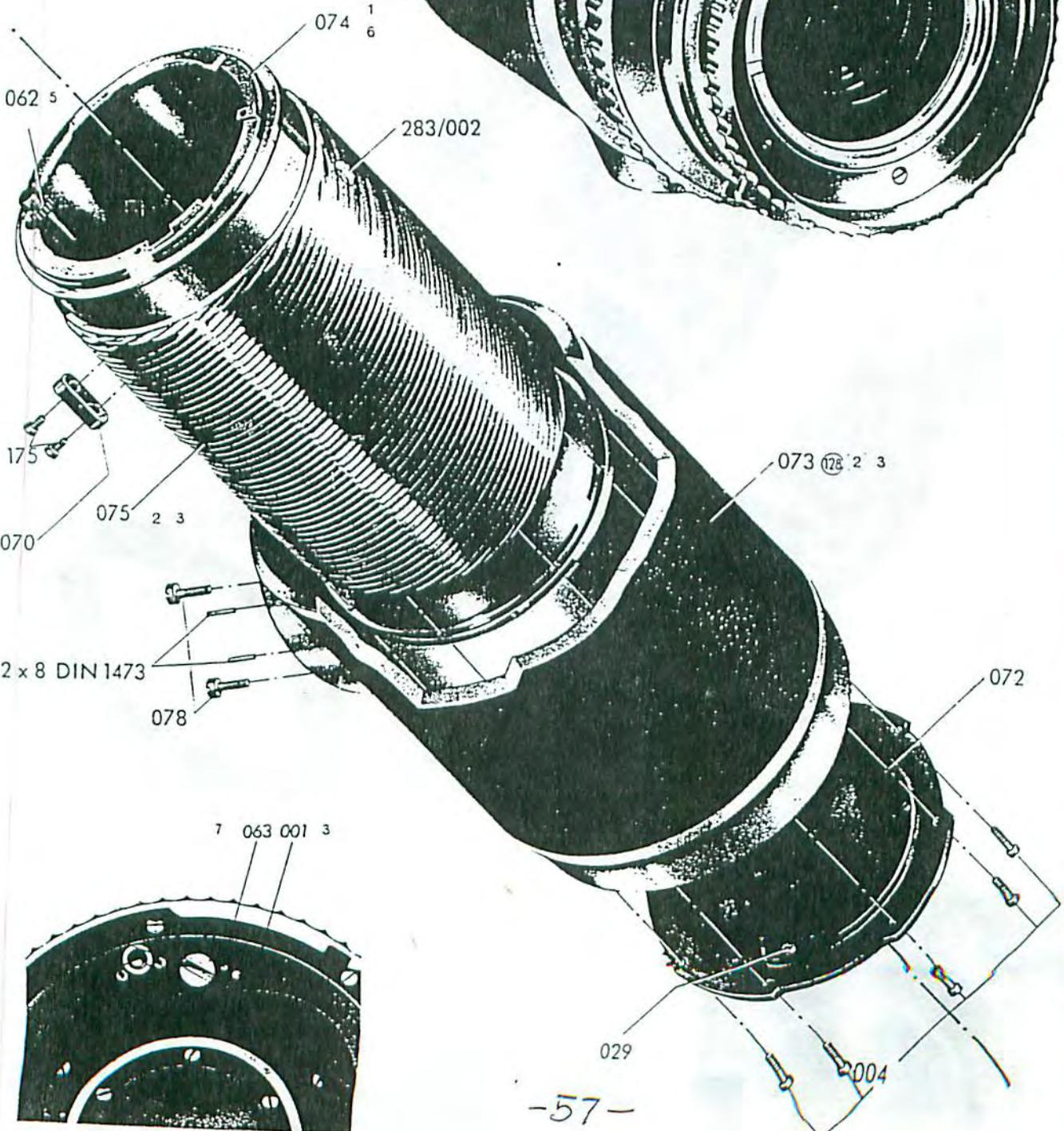


SYNCHRO-COMPUR O-MXV  
GH-Reflex-Wechsel f:500

CN-1210-047  
Tafel 1

Anmerkung Nr.  
siehe Abschnitt | | der Reparaturanleitung  
Supplement No.  
See section | | of instructions for repairs

Verschlussbefestigung  
siehe CN-1210-041 Tafel 1  
Shutter mounting  
see CN-1210-041 plate 1



SYNCHRO-COMPUR 0-MXV  
GH-Reflex-Wechsel 107

CN-1210-041

Tafel 2

Anmerkung Nr. 1 siehe Abschnitt 1 der Reparaturanleitung

Supplement No. 1 See section 1 of instructions for repairs

