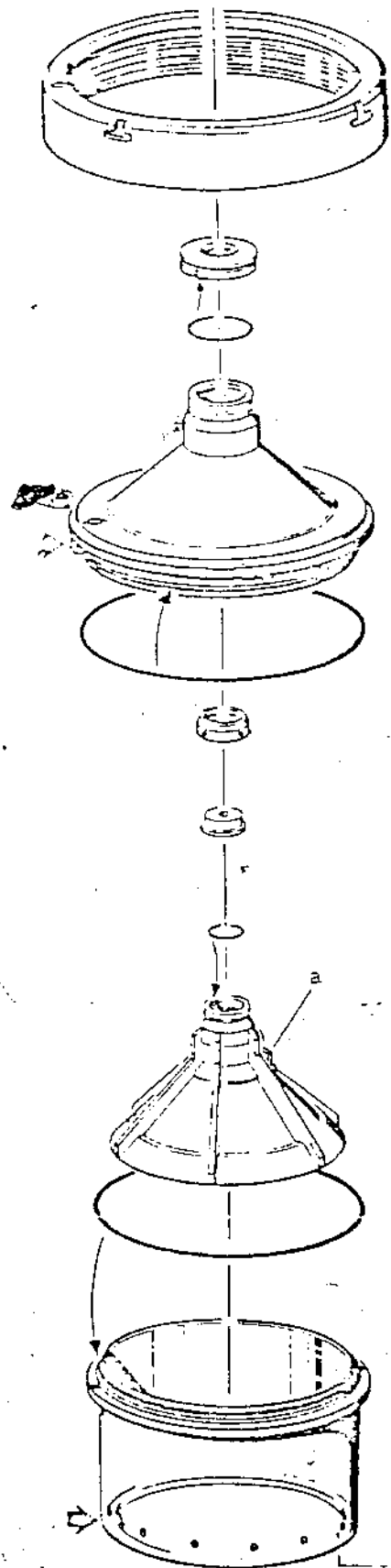


## **Hutchison-Hayes Separators, Inc.**

### **Model SRG 509 Parts List With Diagrams**

**P.O. Box 2965 ♦ Houston, Texas 77252**  
**3520 East Belt ♦ Houston, Texas 77015**  
**(713) 455-9600 ♦ Fax (713) 455-7753**

COMPLETE BOWL -- 527517-82



Lock ring\*)  
-- 11806 8280

Wear ring  
-- 522658-80 10141

Rubber ring  
-- 70941 10070

Bowl hood\*)  
-- 68575 10071

Rubber ring  
-- 36589 8262

Lock ring  
-- 525871-1 10142

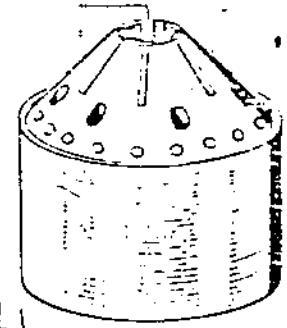
Wear washer  
-- 522657-1 10143

Rubber ring  
-- 64708 7421

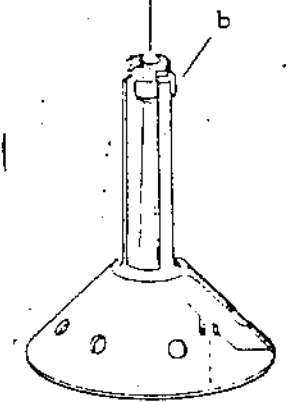
Top disc\*)  
-- 527521-1 10144

Rubber ring  
-- 64104 7175

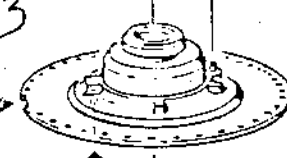
Inset cylinder\*)  
-- 527520-80  
10145



Bowl disc (1)  
(Thickness of  
chaulks = 8 mm.  
To be mounted  
on the top of  
the set)  
-- 520822-90  
10146

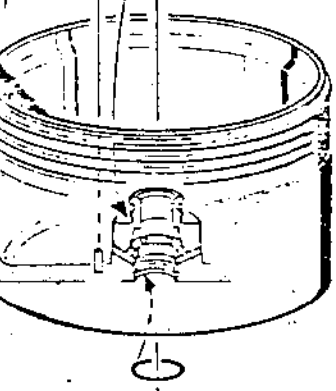


Spare bowl disc  
(Thickness of  
chaulks = 4 mm)  
-- 520822-88  
10147



Upper  
distributor\*)  
-- 71537  
8287

Lower  
distributor\*)  
-- 527519-1 10148



Round nut\*\*)  
-- 71541 8289

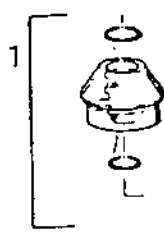
Rubber ring  
-- 70939 8290

Bowl body\*)  
-- 527518-1  
10149

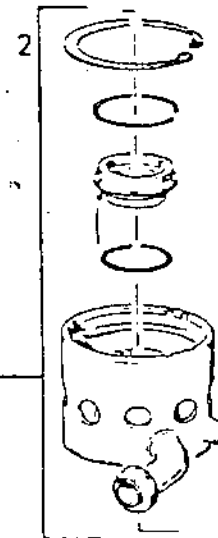
Rubber ring  
-- 70938  
10150

\*) Exchange of this part necessitates rebalancing of the bowl - send the COMPLETE bowl to an authorized ALFA-LAVAL representative.

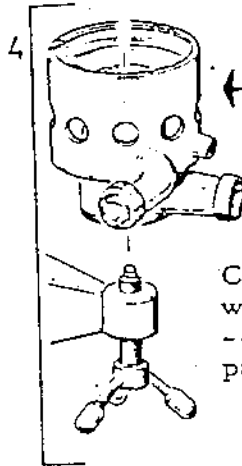
\*\*\*) Not included in the complete-unit-No. of the bowl.



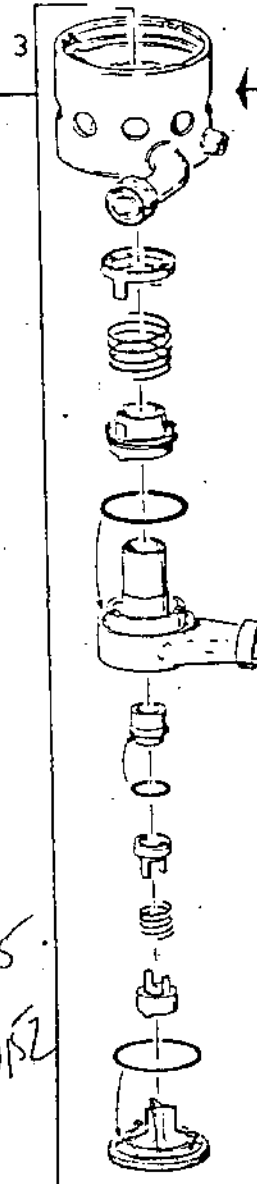
- Rubber ring -- 68085 - 7409
- Wear nut -- 534221-81 10151
- Rubber ring -- 70936 6488



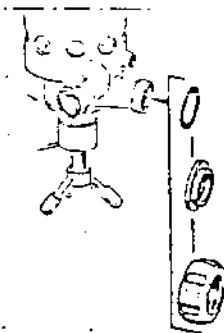
- Height adjusting ring (0-2) -- 517166-1 8307
- Snap ring -- 517183-1 8308
- Outer seal ring -- 517168-1\*1 8309
- Rubber ring -- 70938 10150
- Inlet cap -- 532008-80 10153



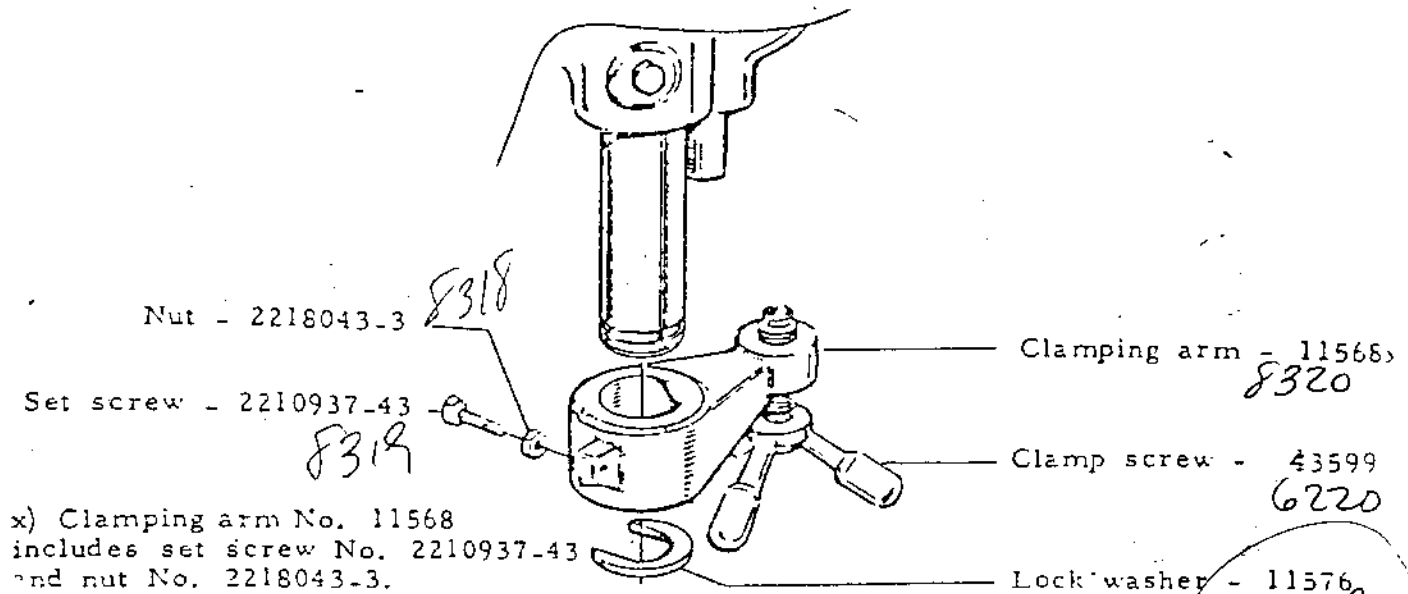
- Clamping arm with clamp screw -- parts see next page



- Outer gland -- 517174-80 8301
- Outer spring -- 226214-85 8302
- Guide sleeve -- 527524-1 10154
- Rubber ring -- 64702 7412
- Connection piece for liquid to be treated -- 71578 8304
- Inner seal ring -- 71556\*1) 8312
- Rubber ring -- 66904 8313
- Inner gland -- 517169-80 8314
- Inner spring -- 226214-83 8315
- Guide sleeve -- 517172-1 8316
- Rubber ring -- 64702 7412
- Bottom plate -- 71580 8317



- Packing -- 190601 8305
- Connecting sleeve -- 41591\*2) 10152
- Coupling nut -- 190613\*2) 7694



Special demands are made on the attendance and checking of seal rings and wear nut, which constitute the axial seal of the inlet - see directions in chapter 304, AXIAL SEALS.

As long as the seal gives satisfactory service the wear nut should be left screwed on and not be removed every time the other inlet parts are dismantled. When the wear nut must be screwed off or on, the bowl spindle is retained either by screwing in the bowl lock screws, if any provided, or by applying the brake.

#### INSTALLATION

The non-rotary inlet parts are not fitted in their places when delivered. Before running the machine the first time, these parts must be dismantled and cleaned. However, leave the wear nut in its place.

#### ASSEMBLING

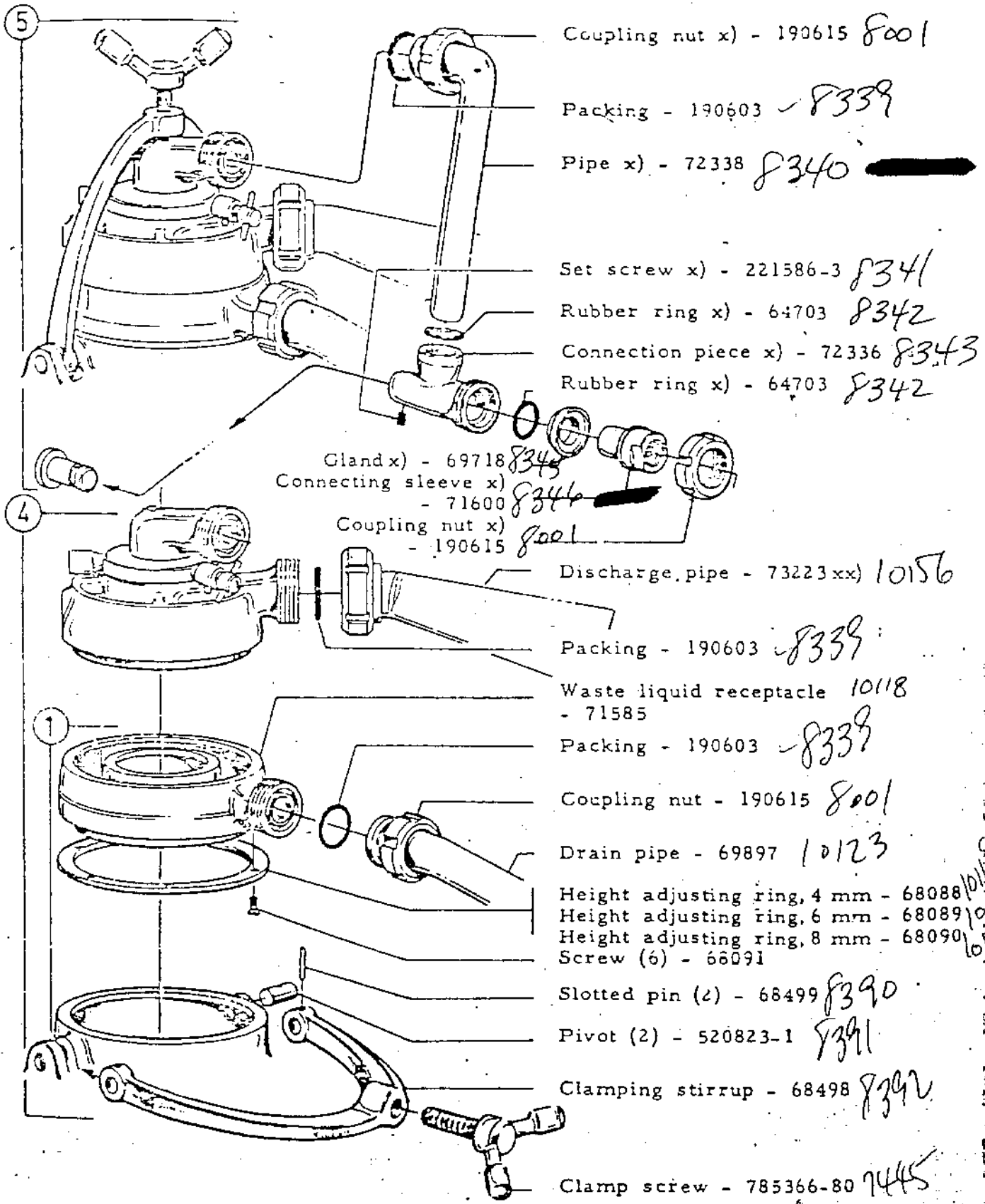
A prerequisite for satisfactory service is that the parts are PERFECTLY cleaned when assembled. This refers particularly to rubber rings, wearing

~~JAM NUMBER USED~~  
surfaces and other sliding surfaces, guide and contact surfaces, and threads. These surfaces must be free from solid impurities. Also make sure that no burrs are knocked up on metal parts.

After fitting a rubber ring check that it lies properly in its groove. Make sure

- o that it fills the groove evenly all around
- o that it is not twisted.

A tool for removal of rubber rings is delivered with the machine. This tool can be used to advantage also when assembling to bring a rubber ring in an external groove into proper position. Put the bent portion of the tool under the rubber ring, pull the latter a little and move the tool around a few times. In this way tensions in the rubber ring will be equalized.



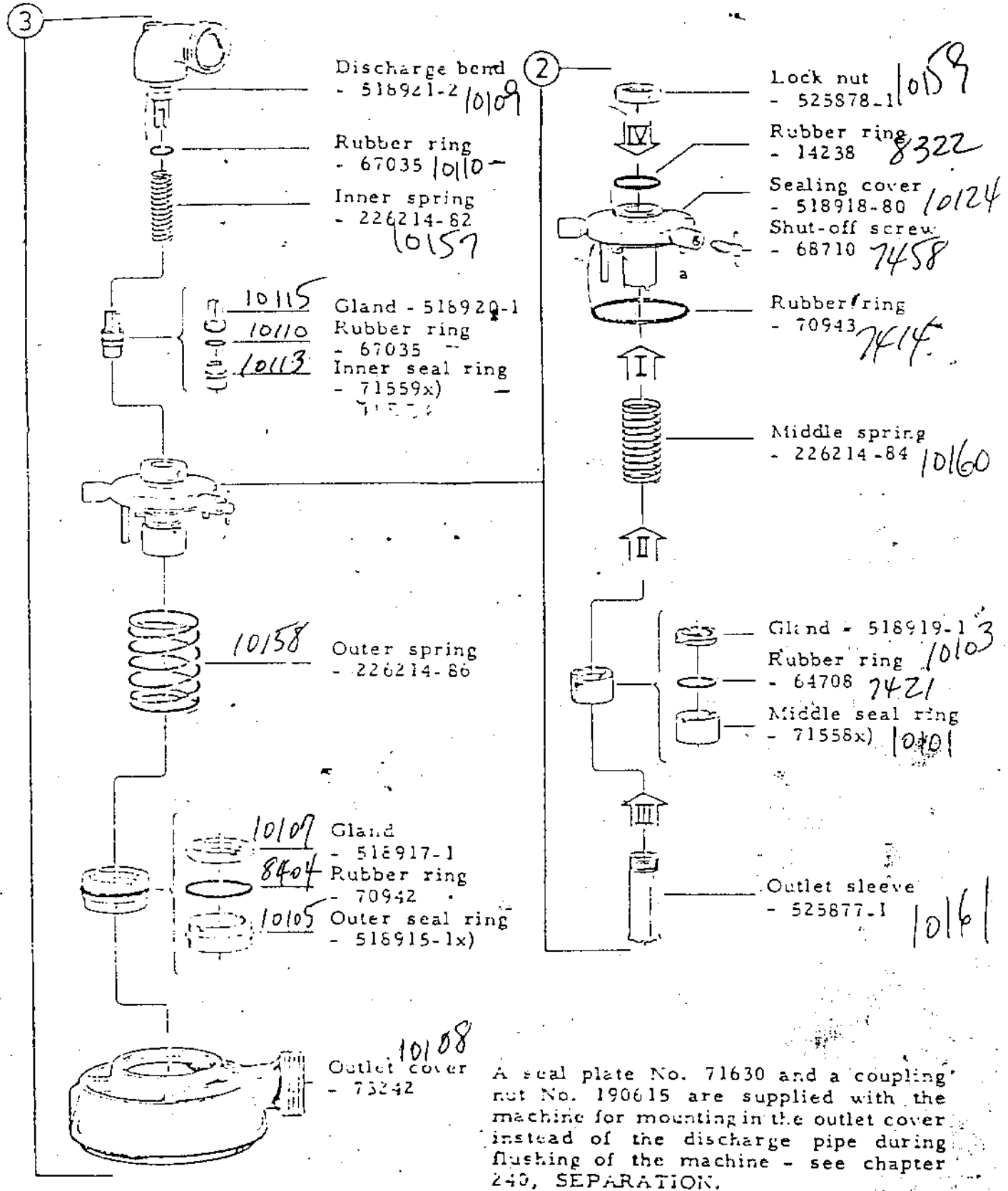
S90898E-3x) These parts constitute the unit "discharge pipe". (794172)

307-1

xx) In machines adapted for fractionation and winterization no discharge pipe is used

10157 - 10161

OUTLET



580899L - 2 x) Leave the ring in protective wrapping till mounting (784172)

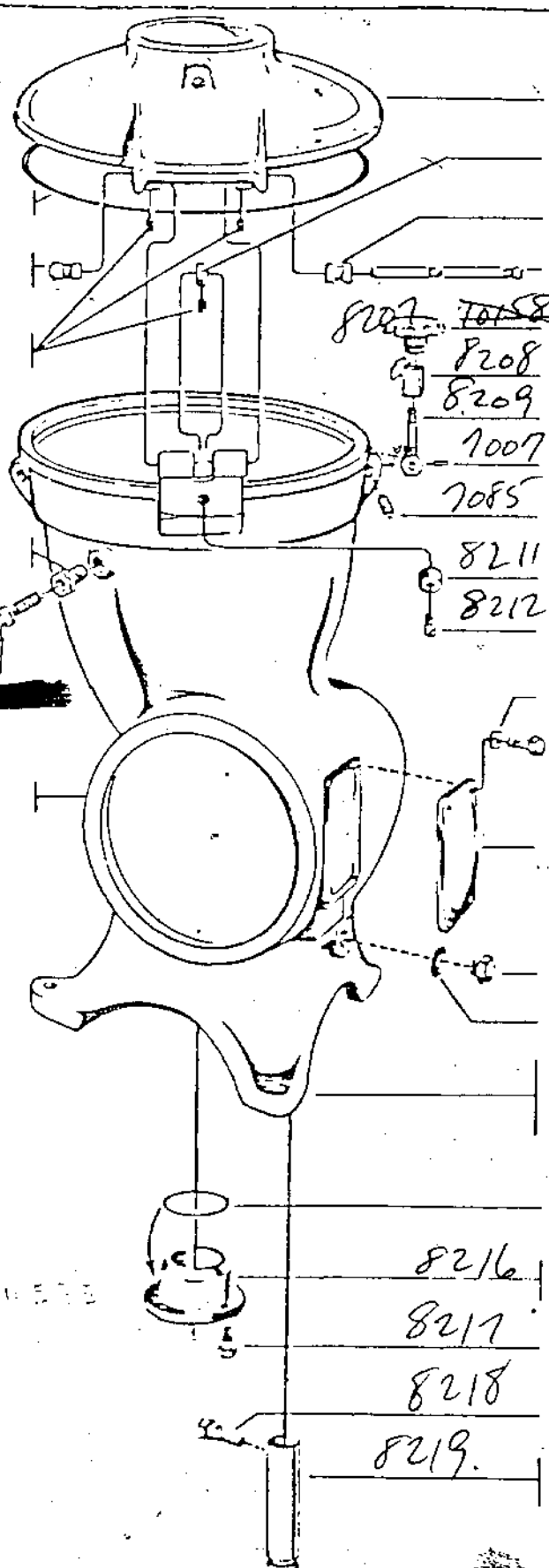
1015 8/16/62

SEPARATOR FRAME, FRAME HOOD

Rubber ring  
8200 - 38343  
Long sleeve  
8201 - 68126  
Set screw (3)  
8202 - 72876

Bushing for  
lock screw (2)  
10008 - 68660  
Bowl lock  
screw (2)  
10009 - 62626

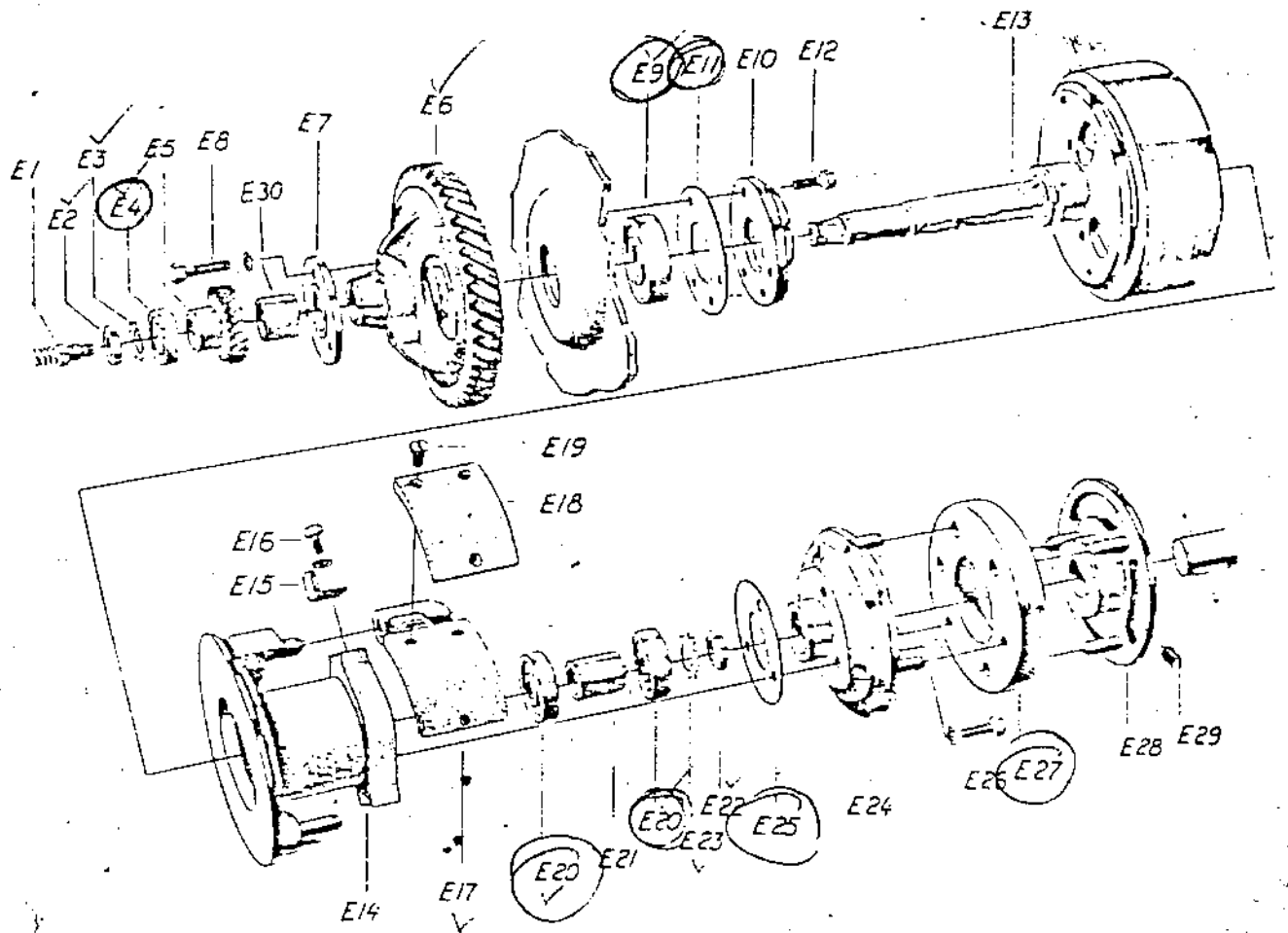
Separator frame



- Frame hood - 68101 8203
- Stop ring - 68128 8204
- Short sleeve - 68127 8205
- Hinge pin - 64532 8206
- Hand wheel (2) - 520491-6
- Clamping shoe (2) - 67382
- Hinged pin (2) - 225444-17
- Slotted pin (2)  
- 67783
- Hinge pin (2) - 67789
- Buffer - 71617
- Screw - 2211722-18
- Washer (4) - 65451 7052
- Screw (4) - 2210942-38 705
- Frame cover  
- 11531 8213
- Drain screw 8214  
- 11494
- Packing - 35002 6321
- Frame foot (anchoring  
parts - see chapter  
780)
- Rubber ring - 74356 7114
- Bushing for bottom of  
bowl spindle - 517150-80
- Screw (6) - 2217759-22
- Screw - 8949
- Pivot for inlet clamping  
arm - 67653

8207  
70158  
8208  
8209  
7007  
7085  
8211  
8212

ALFA-LAYAL



10166-10171

ALFA-LAVAL

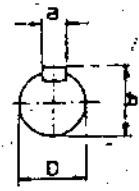
DRIVING DEVICE, HORIZONTAL

Letter- ing	Part number	Quan- tity	
6323	E1 11545	1	Worm gear for revolution counter
7275	E2 67472 (SKF KM 5)	1	Round nut
7274	E3 38159 (SKF MB 5)	1	Lock washer for round nut E2
6338	E4 11455 (SKF 6205*1)	1	Ball bearing, "loose"
8250	E5 11548	1	Gear wheel for tachometer
	E6 see table	1	Worm wheel
	E7 8253 11540	1	Lock ring for worm wheel
	E8 8254 2210941-36	3	Screw for lock ring
	1253 40040	3	Spring washer
8255	E9 6611 (SKF 6307*1)	1	Ball bearing, "fixed"
8256	E10 11546	1	Protecting cover for ball bearing E9
8257	E11 11547	1	Packing for protecting cover
7279	E12 72933	3	Screw for protecting cover
10019	E13 69871	1	Worm wheel shaft with conveyor pulley and round nuts
10020	E14 11504	1	Nave for coupling pulley
6433	E15 65158	2	Holding bracket for friction block
7267	E16 73801	2	Screw for holding bracket
7253	40040	2	Spring washer for screw E16
	E17 see table	2	Friction block with pad and screws
	E18 10022 71627	2	Pad (with screws)
	E19 7271 8341	6	Screw for pad
6338	E20 11455 (SKF 6205*1)	2	Ball bearing for nave
	E21 10023 11506	1	Spacing sleeve for ball bearing E20
7275	E22 67472 (SKF KM 5)	1	Round nut for ball bearing E20
7274	E23 38159 (SKF MB 5)	1	Lock washer for round nut E22
	E24 10024 11507	1	Coupling pulley for worm wheel shaft
	E25 10167 11509 10170	1	Packing for coupling pulley
	E26 7279 72933	3	Screw for coupling pulley
	1253 40040	3	Spring washer
	E27 10025 36121	1	Elastic plate
10171	E28 10169 11517*2)	1	Coupling pulley for drive shaft
	E29 7380 71145	1	Screw
	E30 8261 43583	1	Spacing sleeve

D. C.	A. C.	
	50 C/S	60 C/S
67673	67673	69537

D. C.	A. C.	
	50 C/S	60 C/S
520576-81	520576-81	69892

- \*1) or equivalent bearing of an other make.
- \*2) Supplied with shaft bore center drilled. On request the bore can be turned to exact size and be provided with key groove. In such a case state measurements a, b and D of motor shaft, mark and type denomination of the motor



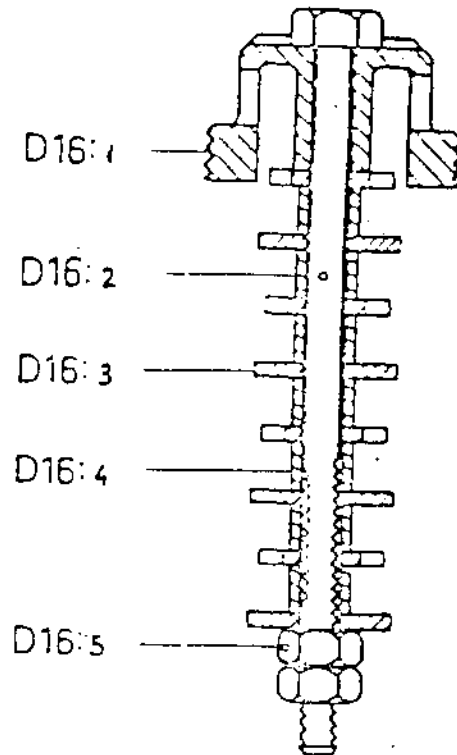
10158/10162-10165

Letter- Part ing number	Quan- tity	
D1 8220 11482	1	Throw-off collar
8221 2211722-11	4	Screw
8222 11529	1	Packing (throw-off collar - top bearing cap)
D2 8223 11485	1	Top bearing cap
8221 2211722-11	6	Screw (top bearing cap - spring casing)
D3 8225 11526	1	Lock nut
D4 8226 11524	1	Spring casing
8227 2210941-3 ADD	6	Screw (spring casing - frame)
8228 41381	6	Spring washer for screw
8229 11528	1	Packing (spring casing - frame)
8230 10593	6	Buffer
8231 31366	6	Spring
8232 11525	6	Screw plug
D5 8233 10795	1	Protecting disc
8234 9878	1	Elastic steel ring
8235 9699	4	Stop spring
D6 1001269547 (SKF 6310 MA/P63)*	1	Ball bearing
D7 8237 9880	1	Ball bearing sleeve
D8 8238 11527	1	Ring
8235 9699	6	Supporting spring
D10 10158 527515-2 10162	1	Bowl spindle (71501 FOR MARLBOROUGH MACH NO-5)
D11 see table	1	Worm
D12 8244 11522	1	Round nut
D13 8245 11464 (SKF 1206 M)*	1	Ball bearing
D14 8246 17155-1 ADD	1	Lock nut
D16 **	1	Liquid mixer, complete. Parts - see next page
D17 10161 527516-80 10165 8249 70937	1	Tube
	1	Rubber ring (tube D17 - bowl spindle)
		Round nut - see SEPARATOR BOWL

D. C.	A. C.	
	50 C/S	60 C/S
67654	67654	69536

\* or equivalent bearing of an other make.  
 \*\* Machines adapted for fractionation and winterization are not equipped with liquid mixer. In these designs the tube is locked by a nipple - see page 630-3.

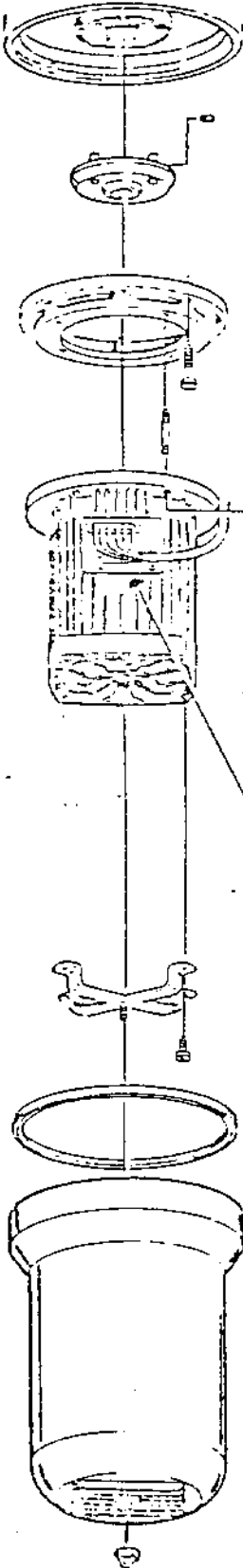
10172-10177



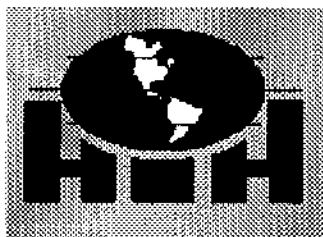
Lettering	Part number	Quantity	Description
10172 D16	71511	1	Liquid mixer, complete, comprising:
10173 D16:1	71512	1	Nipple
10174 D16:2	71513	1	Screw
10175 D16:3	71514	8	Washer
10176 D16:4	71515	7	Sleeve
10177 D16:5	221503-18	2	Nut
10173 D16:1	71512	1	Extra nipple (to be used when separating without liquid mixer - not supplied for design SSG)

10178 - 10184

DIRECT DRIVE - flange motor



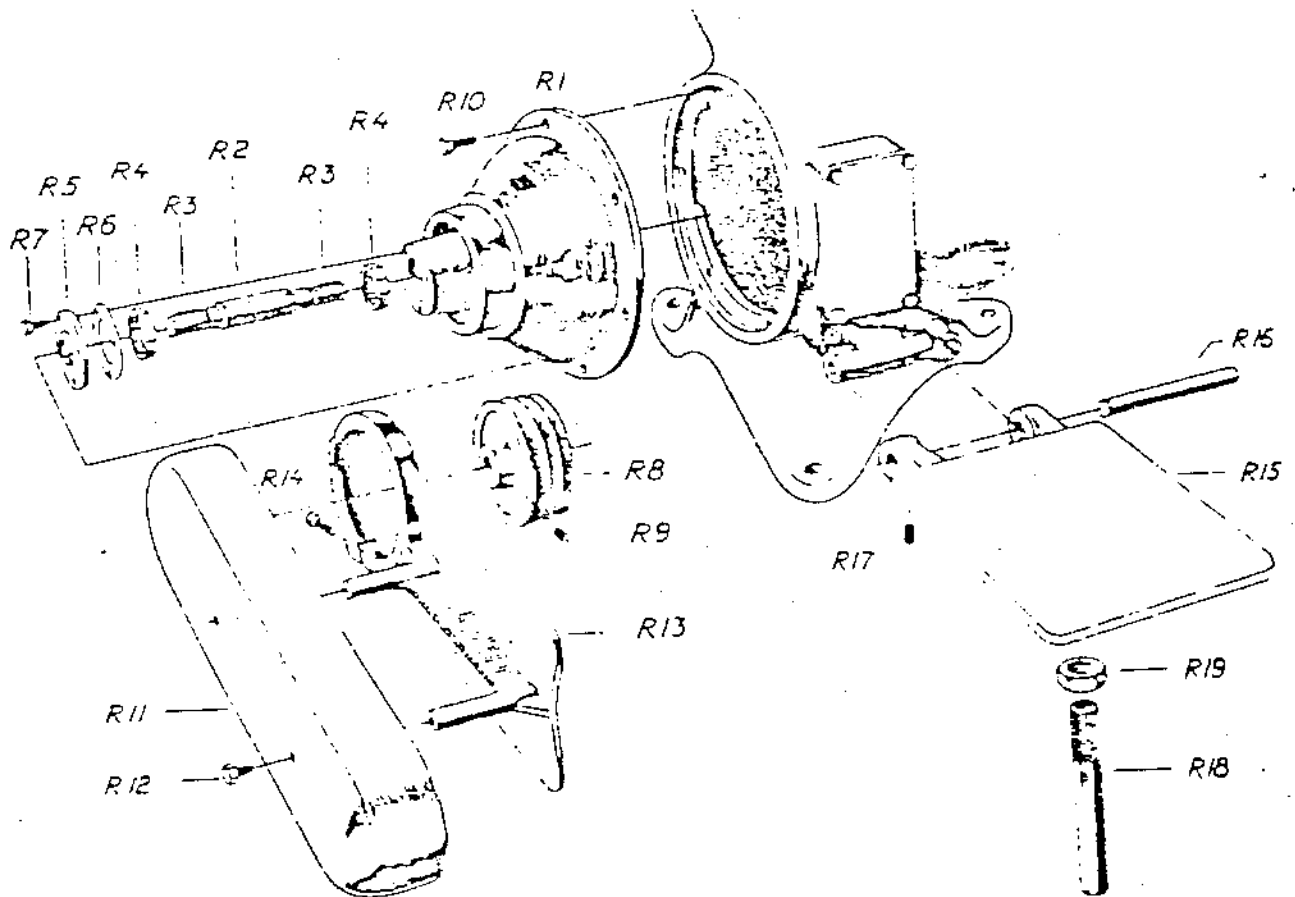
- Frame -
- Set screw -- see chapter 640
- Coupling pulley with set screw -- see chapter 640
- Motor adapter -- 786125-2 10178
- Screw (6) -- 72933 7279
- Stud bolt (4) -- 2216261-3 6613
- Nut (4) -- 72946 6614
- Motor
- Screw -- 221126-33 10179
- Cable clamp -- 786173-1 10180
- Earthing wire -- 786176-1 10181
- Plastic tube -- 786170-1 10182
- Holder for protecting hood 10183 -- 786145-80
- Screws -- belong to motor
- Seal strip -- 11591 6615
- Protecting hood 10184 -- 786181-80
- Cap nut -- 72947 7597



## **Hutchison-Hayes Separators, Inc.**

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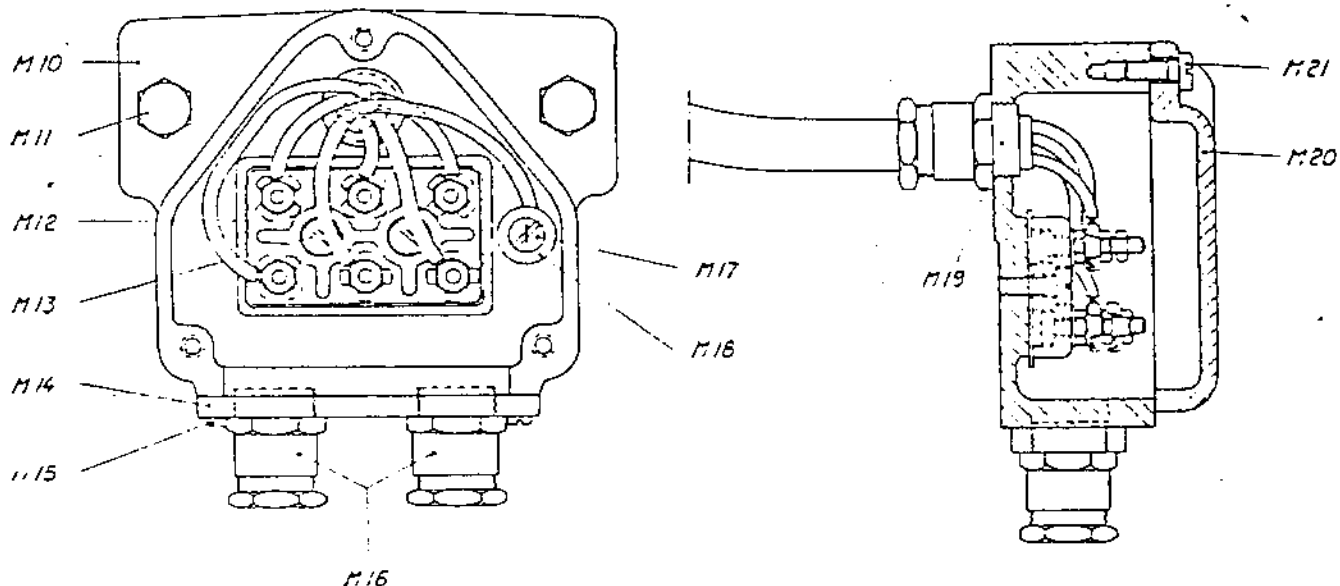


## V BELT DRIVE - motor on adjustable plate

Letter-	Part	Quan-		
ing	number	tity		
10033		1	11603	Belt gearing, complete
10034	R1	1	11604	End shield
10035	R2	1	11605	Shaft with keys
10036	R3	2	11607	Flat key for shaft R2
10037	R4	2	7142	Single row rigid ball bearing
			(SKF 6207) <sup>x</sup>	
10038	R5	1	11608	Protecting cover
7357	R6	1	11609	Packing for protecting cover R5
10185	R7	3	2210941-34	Screw for protecting cover R5
10040	R8	1	11610	V belt pulley with set screw
8202	R9	1	72876	Set screw for V belt pulley R8
7053	R10	6	2210942-38	Screw for belt gearing
7052		6	65451	Washer for screw
10041	R11	1	11617	Belt guard
10185	R12	2	2210941-34	Screw for belt guard R11
10042	R13	1	11620	Support for belt guard R11
10186	R14	1	2210941-2	Screw for support R13
10044	R15	1	11612	Motor plate
10045	-	1	11614	Support for motor plate R15
7053	-	2	2210942-38	Screw for support
7052		2	65451	Washer for screw
10046	R16	1	11613	Shaft
8202	R17	1	72876	Set screw for shaft R16
10047	R18	1	11615	Adjusting screw for motor plate R15
10049	R19	1	11616	Nut for adjusting screw R18
8051	-	4	2210947-16	Screw for motor
10050	-	3	63159	V belt
10051	-	1	11658	V belt pulley for motor, with set screw (shaft bore centre-drilled or turned and key groove according to order)
8202	-	1	72876	Set screw for V belt pulley

x) or equivalent bearing of an other make.

## DIRECT DRIVE - flange motor



Lettering	Part number	Quantity
-----------	-------------	----------

	10187 11952	1
M10	10188 11621	1
M11	2210942-37	2
	65451	2
M12	10189 11623	1
M13	10190 17524	2
M14	10191 786113-1	1
M15	10192 66442	4
M16	10193 528924-80	2
M17	10194 17447	1
M18	10195 223101-17	1
M19	10196 521139-1 <sup>x)</sup>	1
M20	10197 11624	1
M21	10198 2211721-8	3

Connection box for cable, complete

Connection box

Screw for connection box (not included in connection box, complete)

Washer for screw (not included in connection box, complete)

Terminal block

Screw for terminal block

Tube flange

Screw for tube flange

Sealing sleeve

Grounding screw

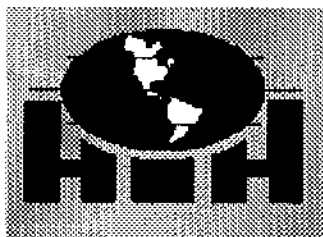
Washer for grounding screw

Sealing sleeve

Cover for connection box

Screw for cover

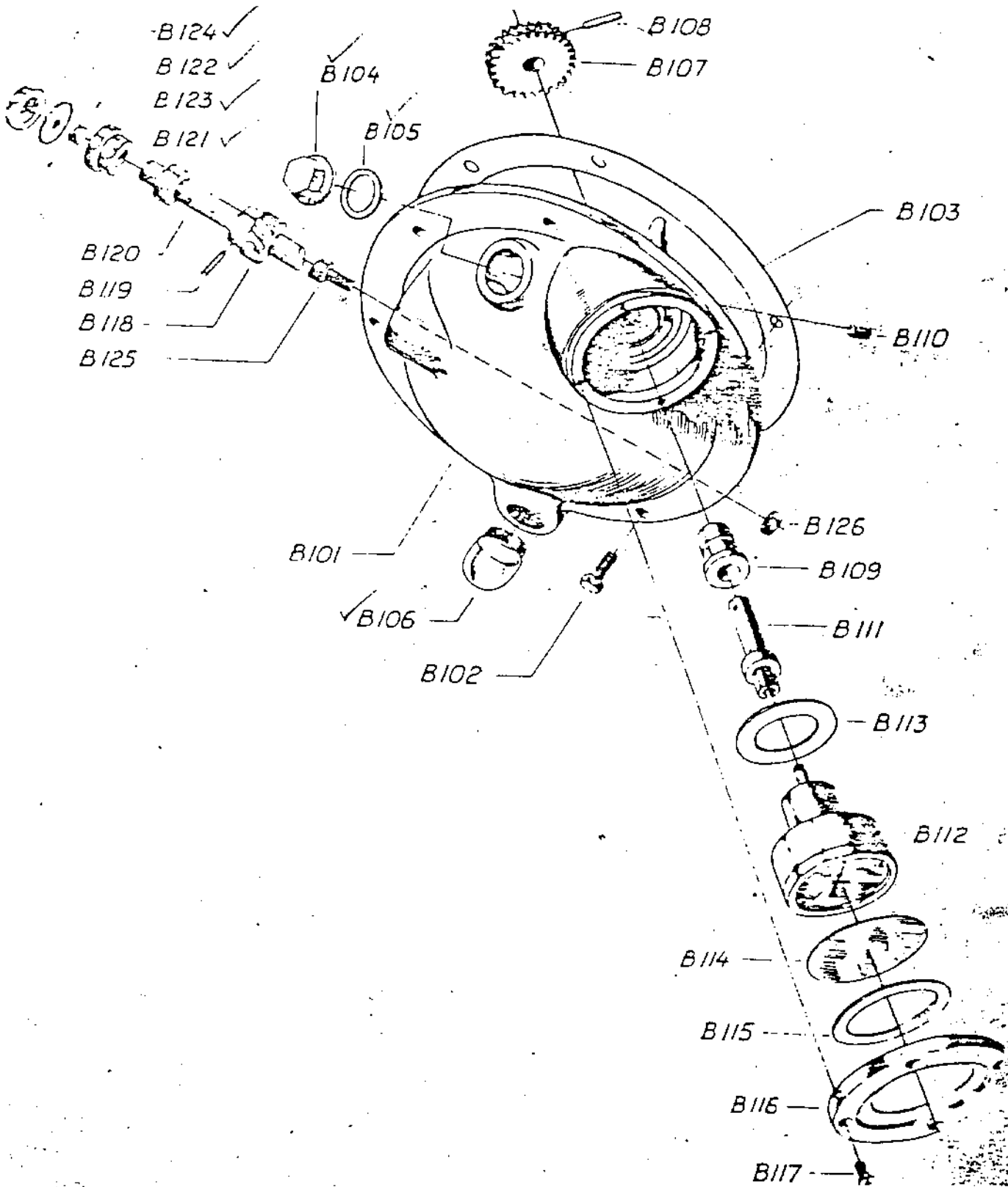
<sup>x)</sup> not included in connection box, complete



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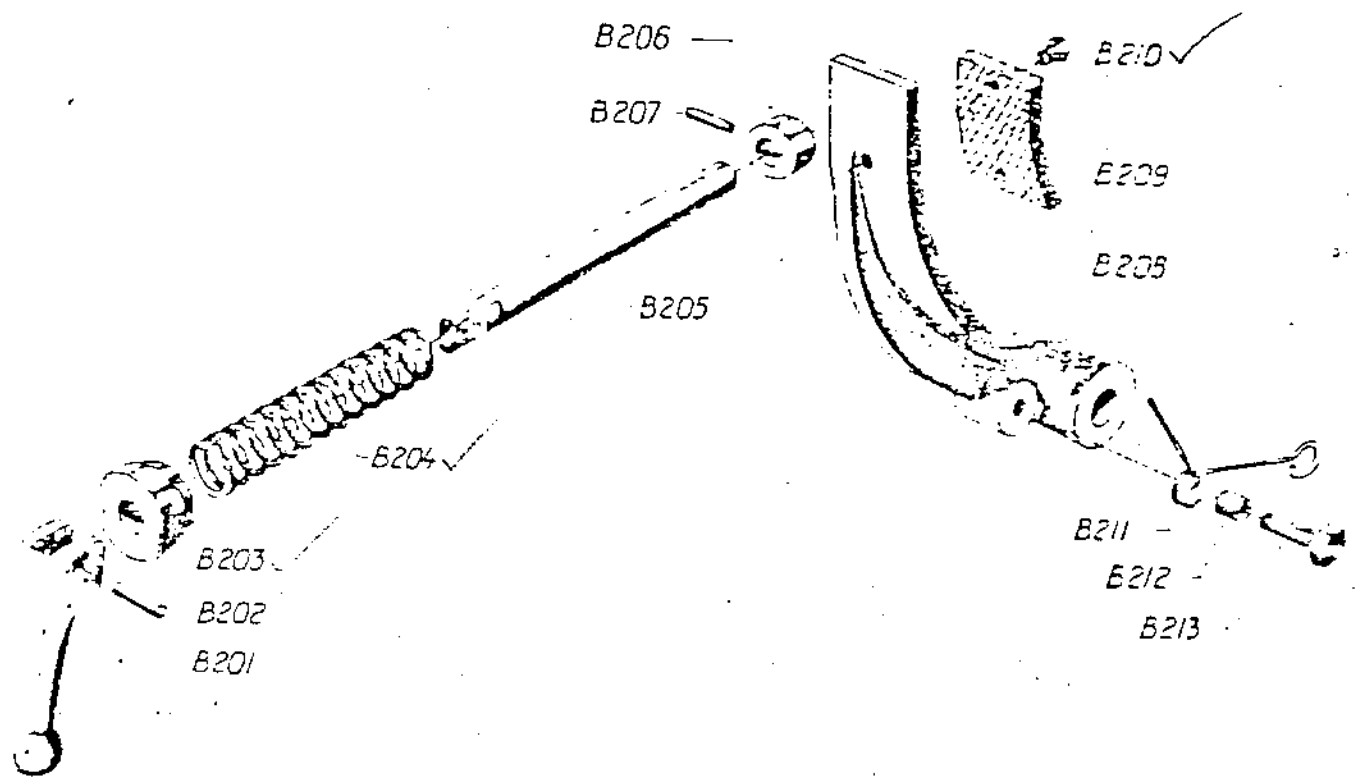


10199

REVOLUTION COUNTER - TACHOMETER

ALFA-LAVAL

Letter- ing	Part number	Quan- tity		
8262	B101	11549	1	Cover for gear housing
7053	B102	2210942-38	8	Screw
7052		65451	8	Washer for B102
10052	B103	11566	1	Packing
10053	B104	65293	1	Screw plug for oil filling hole
6320	B105	33787	1	Packing
8263	B106	11493	1	Gauge glass for lubricating oil
8264	B107	11563	1	Gear wheel
8265	B108	12526	1	Pin
8266	B109	11559	1	Bushing for B111
10055	B110	60655	1	Stop screw
8267	B111	11560	1	Tachometer shaft
8268	B112	8366	1	Tachometer with glass
10199		9491	1	Glass
8269	B113	11564	1	Packing for B112
8270	B114	73204	1	Protecting glass
8271	B115	8068	1	Packing
8272	B116	8066	1	Lock ring
7567	B117	11565	4	Screw for lock ring B116
8273	B118-120	11551	1	Revolution counter shaft, complete
8274	B118	11554	1	Gear wheel
6317	B119	63796	1	Pin
8275	B120	11552	1	Shaft
8276	B121	11555	1	Bushing for revolution counter shaft
6334	B122	11556	1	Packing
6330	B123	11557	1	Push-button
6333	B124	11558	1	Lock ring
8277	B125	11550	1	Plug
8278	B126	2218043-23	1	Nut



## BRAKE

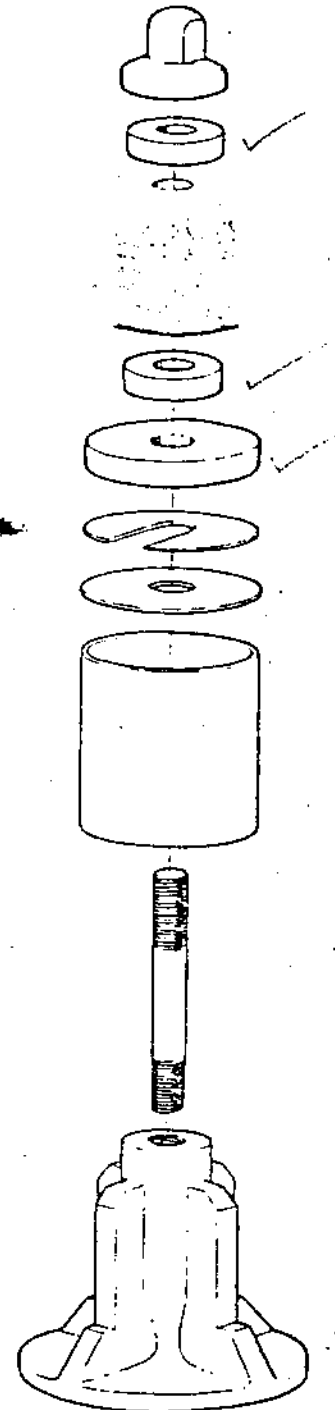
10200

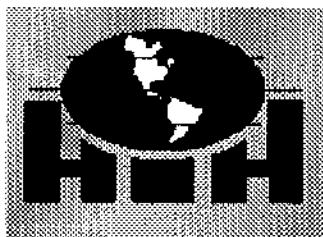
ALFA-LAVAL

Letter- ing	Part number	Quan- tity	
10057	B201-207	69869	Operating means for brake, complete
7210	B201	67609	1 Brake handle
10058	B202	11532	1 Pin
10059	B203	11503	1 Guide plug
7216	B204	39096	1 Spring
10060	B205	69870	1 Brake spindle
10061	B206	11501	1 Collar
10062	B207	11502	1 Pin
10063	B208-213	69867	Brake shoe, complete
10064	B208	69868	1 Brake shoe
10065	B209	66548	1 Lining for brake, with screws
7277	B210	8341	2 Screw
10066	B211	11497	1 Stop spring
10067	B212	11498	1 Spacing sleeve
10200	B213	2210937-41	1 Screw

Part number      Quan-  
tity

10201	11669	3	Cup nut
10202	11668	3	Small rubber cushion
10202	11668	3	Small rubber cushion
10203	11667	3	Large rubber cushion
10204	11666	6	Spacing washer
10205	11665	3	Steel washer
10206	11664	3	Sleeve
10207	11663	3	Anchor screw
10208	11662	3	Anchoring foot





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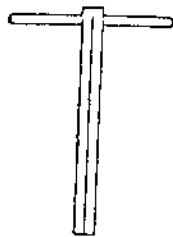
V1



V2



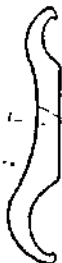
V3



V4



V5, V6



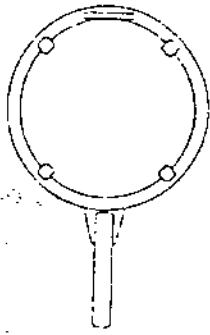
V7



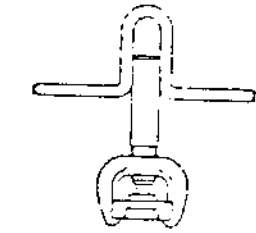
V8



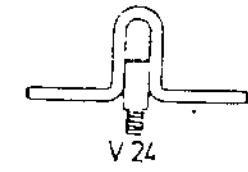
V9



V21



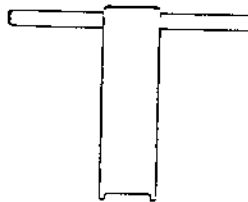
V22



V24



V23



V25



V26, V27



V28



V29



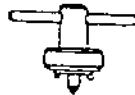
V71



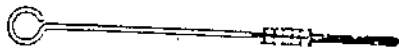
V72



V73



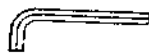
V74



V61



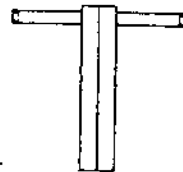
V62



V63



V64



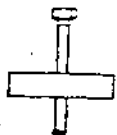
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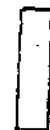
V66



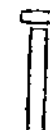
V67



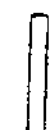
V81



V82



V83



V84



V85

10209 - 10215

Letter- ing	Part number	Quan- tity	
V1	8871 66772	1	Screw driver
V2	7699 64324	1	Tin mallet
V3	10125 8432	1	Screw spanner - 29/32" - 1 5/32" (23-31 mm)
V4	10126 11647	1	Socket wrench - 19/32" (15 mm)
V5	10127 66770	1	Screw spanner - 1/2" - 19/32" (13-15 mm)
V6	10128 66784	1	Screw spanner - 13/16" - 29/32" (21-23 mm)
V7	10129 73800	1	Hook spanner
V8	8873 4279	1	Drift
V9	8393 517188-1	1	Tool for removal of rubber rings
FOR SEPARATOR BOWL			
V21	8355 68500 -	1	Spanner for bowl lock ring
V22	8356 71612 -	1	Lifting tool for bowl body
V23	523999-80-	1	Lifting tool for bowl hood
V24	8357 71608 -	1	Lifting tool for distributor (SSG) and upper distrib- utor (SRG) respectively
V25	8358 68143	1	Pin spanner - nut diam. 2 3/8" (60 mm) - for round nut
V26	10131 1647	1	Hook spanner - nut diam. 3 7/8" (98 mm) - for wear ring
V27	8359 64574	1	Hook spanner for lock ring of wear washer
V28	8360 71605 -	1	Lifting tool for lower distributor - only for SRG
V29	2210937-14	2	Screw for lifting inset cylinder
FOR INLET AND OUTLET			
V41	8394 64511	1	Hook spanner - nut. diam. 1 31/32" (50 mm) - for lock nut of outlet sleeve
V42	36290	1	Screw spanner - 5/8"-1 15/32" (16-37 mm) - for connecting sleeve of discharge pipe
V43	8349 66445	1	Snap ring pliers for height adjusting ring
V44	8350 517185-80	1	Pin spanner - pin spacing 1 17/32" (39 mm) - for wear nut
FOR VERTICAL DRIVING DEVICE			
V61	10133 9689	1	Brush for bowl spindle
V62	8351 11738	1	Protecting sleeve for bowl spindle
V63	10134 60416	1	Hexagonal hole wrench - 5/16" (8 mm) - for screw of bottom bearing bushing
V64	8352 66988	1	Hook spanner - nut diam. 3 5/32" (82 mm) for lock nut of ball bearing for top bearing
V63	10212 71603x)	1	Socket wrench - 1 1/32" (26 mm) - for liquid mixer
V66	67159x)	1	Screw spanner - 3/8" (10 mm) - for liquid mixer
V67	32633	1	Pull-off screw for tube
FOR HORIZONTAL DRIVING DEVICE AND MOTOR			
V81	8353 11645	1	Puller tool for nave of friction coupling
V82	8354 62522	1	Pin spanner - nut diam. 1 1/2" (38 mm) - for round nut for ball bearings of worm wheel shaft
V83	7254 65389	2	Jack screw for pulling off fixed ball bearing of worm wheel shaft
V84	10135 11649	2	Guide bolt for motor - only for flange motor ("4"-drive)
V85	7084 39456	1	Screw spanner - 5/8"-27/32" (16-47 mm) - for nut for the adjusting screw of motor plate - only for motor on adjustable plate ("6"-drive)

x) For SSG only when the machine is equipped with liquid mixer.