

Hutchison-Hayes Separators, Inc.

Model OSA 7-02-066 Parts List With Diagrams

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Diagram of the Separator Plant

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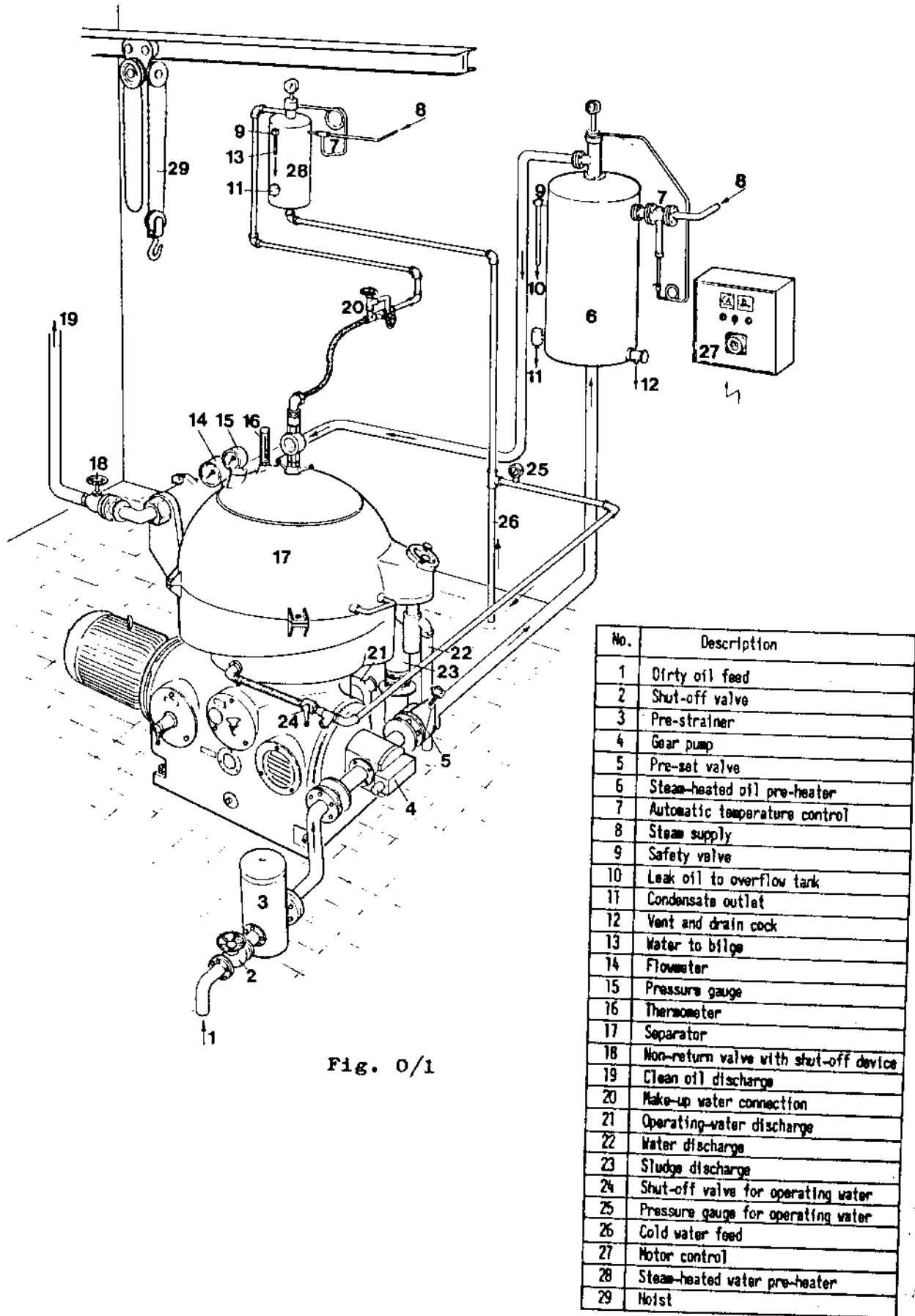


Fig. 0/1

No.	Description
1	Dirty oil feed
2	Shut-off valve
3	Pre-strainer
4	Gear pump
5	Pre-set valve
6	Steam-heated oil pre-heater
7	Automatic temperature control
8	Steam supply
9	Safety valve
10	Leak oil to overflow tank
11	Condensate outlet
12	Vent and drain cock
13	Water to bilge
14	Flowmeter
15	Pressure gauge
16	Thermometer
17	Separator
18	Non-return valve with shut-off device
19	Clean oil discharge
20	Make-up water connection
21	Operating-water discharge
22	Water discharge
23	Sludge discharge
24	Shut-off valve for operating water
25	Pressure gauge for operating water
26	Cold water feed
27	Motor control
28	Steam-heated water pre-heater
29	Hoist

Sectional View of the Separator

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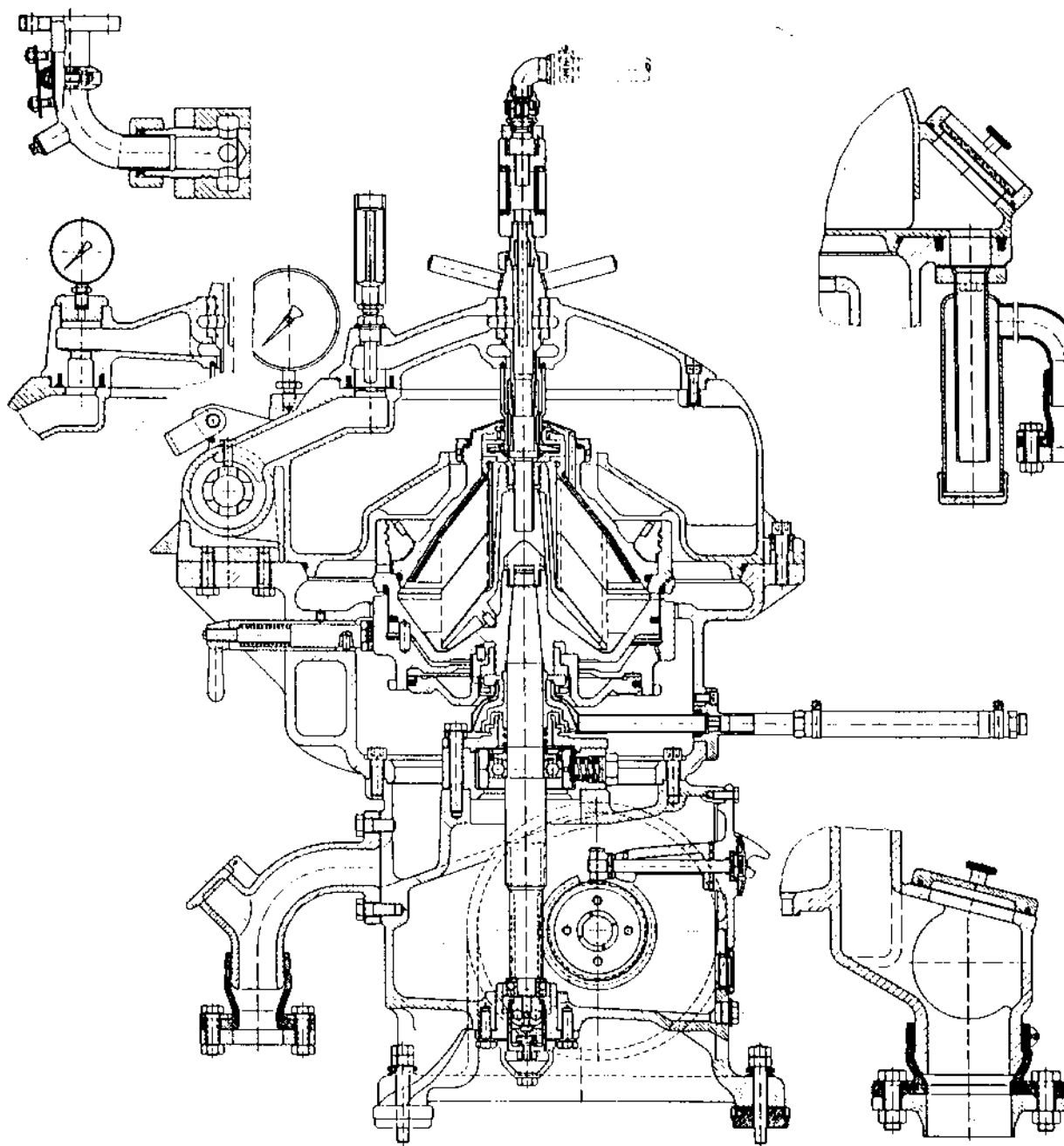


Fig. 0/2

Lower Section of Frame
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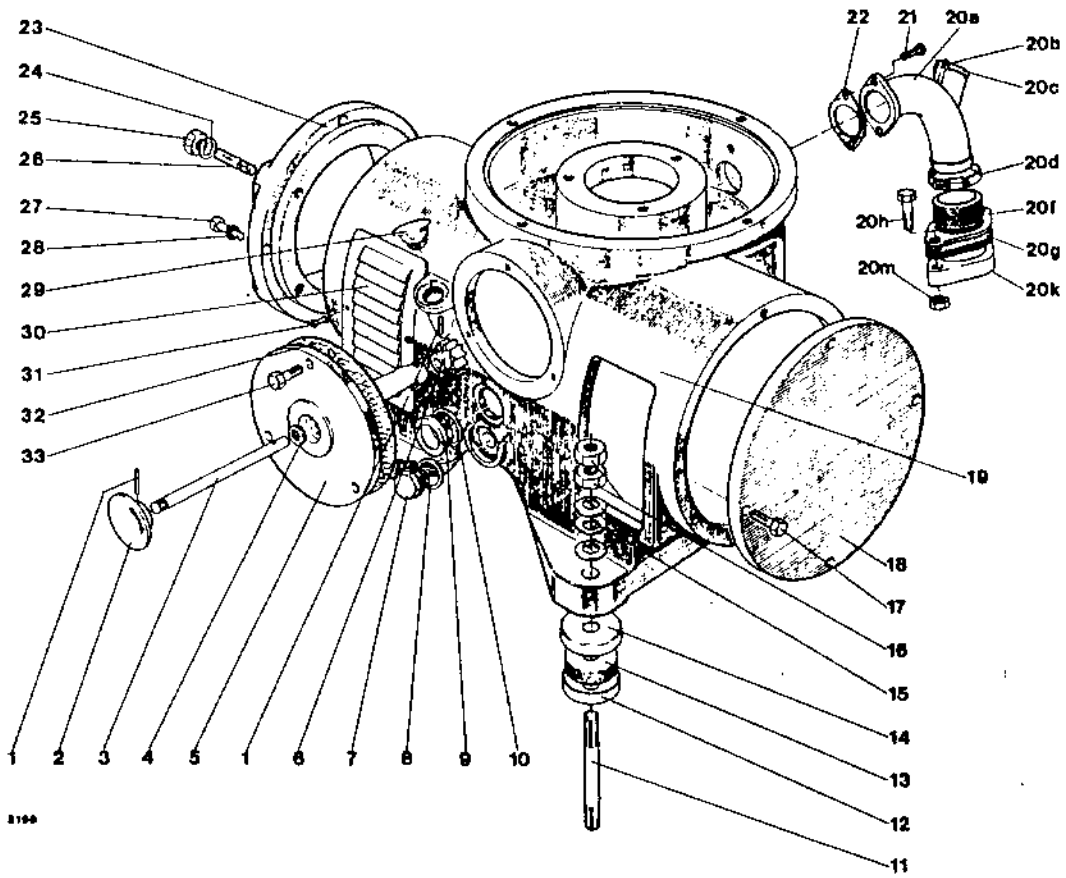


Fig. 4/1

Lower section of frame
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No. in Fig.	Part - No.	Qty.	Part Description	
-	2162-3495-000	1	Revolution indicator assembly (1-6)	
1	0026-1049-030	2	Cylindrical pin 3h8x24 DIN 7	
2	3117-3497-010	1		
3	2162-3488-010	1	Revolution indicator disc	
4	0007-2502-750	1	Shaft	
5	2162-3493-000	1	Gasket 12/3	
6	2162-3487-000	1	Housing	
7	0019-9117-400	1	Worm wheel	
8	0004-1798-550	1	Screw plug M22x1.5 DIN 7604	
9	0001-0006-640	1	Gasket DIN 7603 - C22x27	
10	0004-5034-760	1	Sight glass	
11	0019-7677-150	4	Gasket 35/44x1.5	
11	0019-4864-000	4	Stud M12x80 DIN 939 (for shipboard installation)	
12	0026-2024-030	4	Anchor bolt FM12x200 DIN 529 (for land installation)	
13	0021-3014-750	4	Cap 56	
14	0026-2025-030	4	Rubber cushion	
15	0006-4329-010	4	Cap 58	
16	0013-0280-150	12	Cup spring	
17	0019-6971-150	8	Hexagon nut M12 DIN 934	
18	3033-1066-000	4	Hex head screw M12x35 DIN 933	
19	3033-1001-090	1 *	Cover	
-	2168-1045-000	1	Lower section of frame	
20a	2168-1047-000	1	Inspection nipple assembly (20a-g)	
20b	0026-1556-150	1	Inspection nipple	
20c	2178-1160-000	1	Cylindrical pin 4x25 DIN 1473	
20d	0018-3817-300	1	Cover	
20f	0001-0182-030	1	Hose clamp 50-70	
20g	2178-1124-020	1	Flange 40	
20h	0019-6972-150	1	Flange	
20k	0001-0146-000	2	Hex head screw M12x40 DIN 933	
20m	0013-0280-150	1	Flange	
21	0019-6970-150	2	Hexagon nut M12 DIN 934	
22	0004-5453-740	2	Hex head screw M12x30 DIN 933	
-	2162-1021-L	1	Gasket 44/70x112x2	
23	3033-1028-L	1 **	Flange assembly (23-28)	
24		4	Flange	
25	depending on motor	4	Lock washer } for fastening the motor	
26		4		Hexagon nut }
27	0019-6166-150	4		Stud }
28	0026-1328-190	4	Allen screw M12x35 DIN 912	
29	0019-1741-800	4	Lock washer A12 DIN 127	
30	3033-1085-000	1	Oil fill screw	
31	0019-2248-030	2	Ventilation grid	
32	0004-5228-700	4	Cheese head screw AM 6x12 DIN 84	
33	0019-6903-150	1	Gasket 126/158x1	
		3	Hex head screw M8x20 DIN 933	

* Not used on separators with attached pump.

** When ordering this part, please state also diameter of motor centering rim.

Upper Section of Frame
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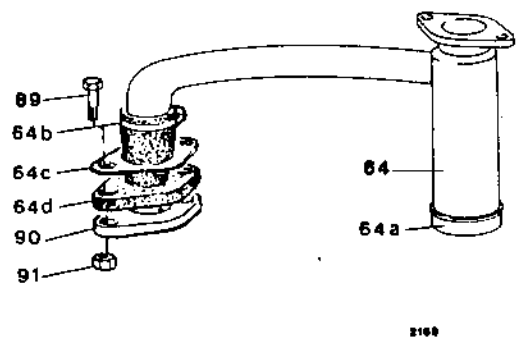
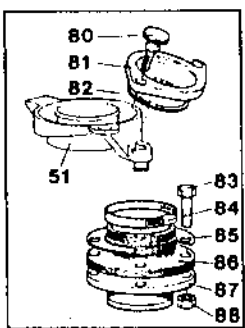
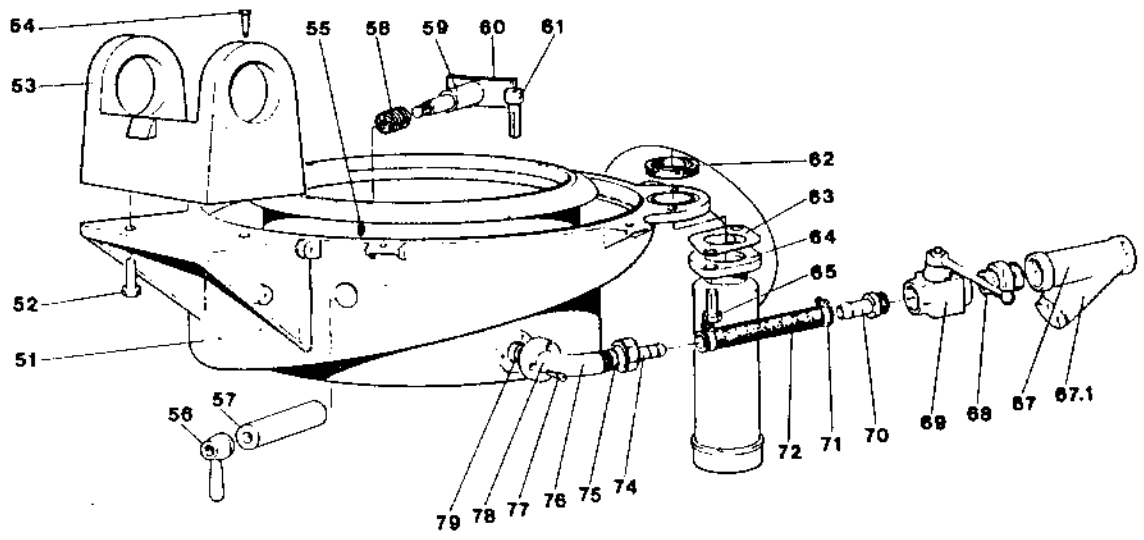


Fig. 4/2

Upper section of frame

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No. in Fig.	Part - No.	Qty...	Part Description
51	2171-1002-040	1	Upper section of frame
52	0019-6972-150	2	Hex head screw M12x40 DIN 933
53	2171-1126-000	1	Support
54	0019-5195-150	2	Hex head screw AM 10x25 DIN 561
55	0019-3973-060	1	Threaded pin M8x10 DIN 438
-	2168-1043-000	1	Brake assembly (56-60)
56	0021-3515-690	1	Handle
57	0021-3542-640	1	Brake housing
58	0006-4195-160	1	Cylindrical pressure spring
59	2168-1031-000	1	Brake bolt, complete
60	0021-4094-860	1	* Brake lining
-	0026-1262-550	2	* Countersunk rivet 4x12 DIN 661
61	0019-6166-150	4	Allen screw M12x35 DIN 912
62	0007-2388-750	1	Gasket 54/68x15
63	0004-5453-740	1	Gasket 44/70x112x2
64	2168-2775-020	1	Siphon
64a	0018-1201-260	1	* Cap 2" - T2 DIN 2950
64b	0018-3666-300	1	* Hose clamp 35-57
64c	0001-0162-030	1	* Oval flange 1"
64d	2168-1124-000	1	* Flange
65	0019-6971-150	2	Hex head screw M12x35 DIN 933
67	0018-2523-600	1	Strainer R 3/4"
67.1	0018-2523-300	1	* Strainer insert
68	0018-0934-260	1	Double nipple 3/4"x1/2" - N8 DIN 2950
69	0018-1712-630	1	Shut-off device 1/2"
-	2168-8769-000	1	Hose, complete (70-74)
70	0018-1796-600	1	Hose connection R 1/2" / 12
71	0018-3816-300	2	Hose clamp 8-22
72	0018-2786-758	1	Hose 13x200
74	0018-3064-600	1	Hose connection R 1/2" / 10
75	0004-5274-740	1	Gasket 12/19x3
76	2171-2184-000	1	Bend
77	0019-6120-150	3	Allen screw M8x16 DIN 912
78	0018-4060-600	1	Nozzle 4.5 (glued in with Loctite)
79	0007-2391-750	1	Gasket 18/4.5
80	0019-4547-090	2	Knurled screw M8x30 DIN 464
81	2178-8851-000	1	Inspection cover
82	0007-1845-750	1	Gasket 106/7
-	2168-1121-000	1	Flange assembly (83-88)
83	0019-7038-150	4	Hex head screw M16x45 DIN 933
84	0018-3819-300	1	Hose clamp
85	0026-0209-040	1	Washer
86	2178-1124-000	1	Flange
87	0001-0771-000	1	Flange
88	0013-0282-150	4	Hexagon nut M16 DIN 934
89	0019-6972-150	2	Hex head screw M12x40 DIN 933
90	0001-0140-000	1	Flange 3/4"
91	0013-0280-150	2	Hexagon nut M12 DIN 934

* This part is contained in the previous "complete" part, but it can also be ordered separately.

H o o d

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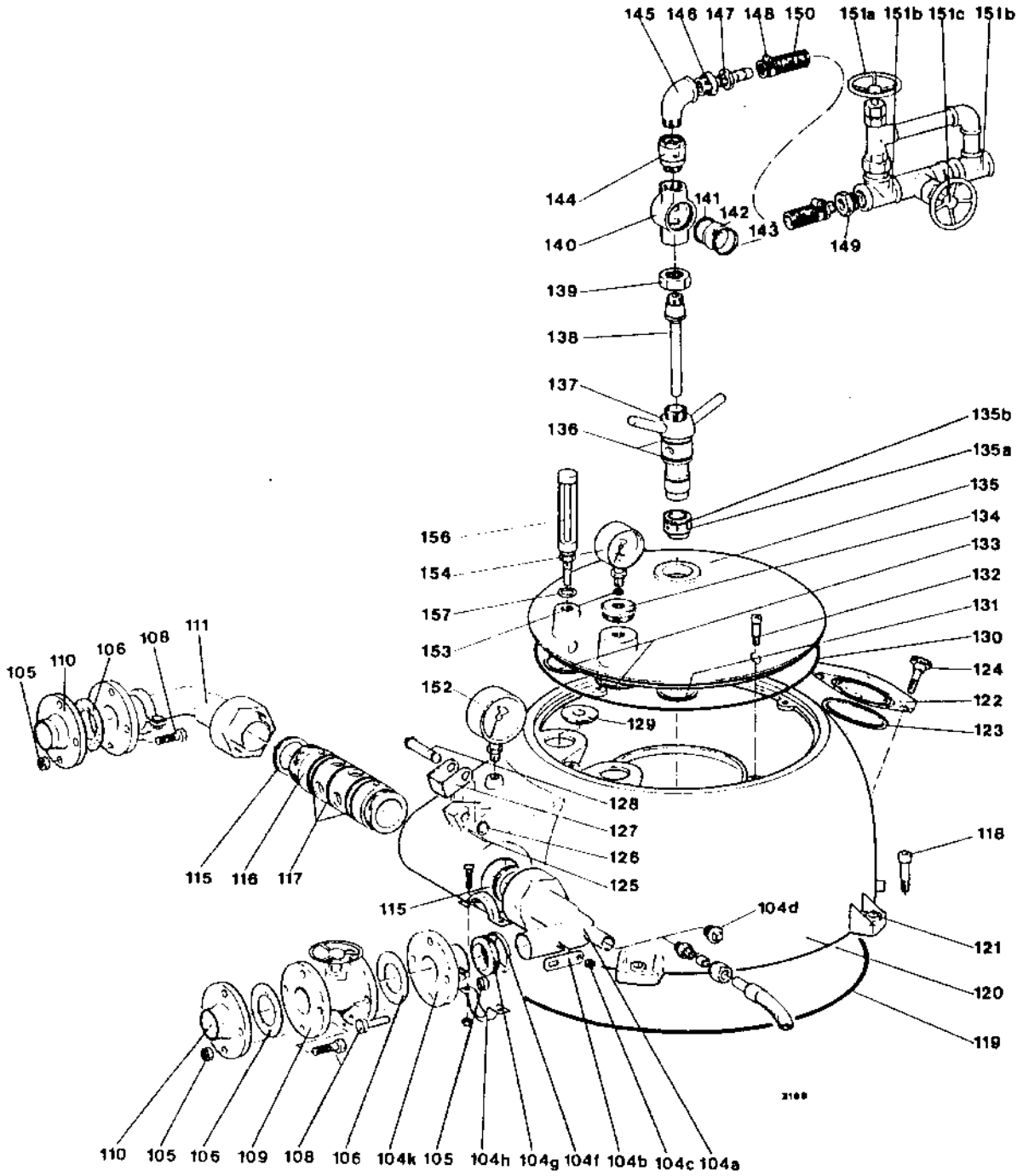


Fig. 4/3

No. in Fig.	Part - No.	Qty.	Part Description
-	2168-2805-050	1	Junction assembly (104a-110)
-	2168-2832-000	1	Expansion joint (104a-k)
104a	2168-2831-060	1	Expansion joint with coupling nut
104b	2178-1108-000	1	Plate
104c	0013-0291-150	2	Hexagon nut M8 DIN 985
104d	0018-0990-260	1	Plug 1/2" T9 DIN 2950
104f	0018-4842-010	1	Gasket holder 25
104g	0018-4842-750	1	Gasket 25
104h	0018-4842-020	1	Clamp 25
104k	2168-2831-050	1	Expansion joint
105	0013-0279-150	8	Hexagon nut M10 DIN 934
106	0004-2186-740	2	Gasket 20 ND 40 DIN 2690
108	0019-6512-150	8	Hex head screw M10x40 DIN 931
109	0018-1392-500	1	Straight-way valve 25
110	0001-0770-000	1	Flange 25/30 DIN 2631
-	2168-2805-060	1	Junction assembly
105	0013-0279-150	4	Hexagon nut M10 DIN 934
106	0004-2186-740	1	Gasket 20 ND 40 DIN 2690
108	0019-6512-150	4	Hex head screw M10x40 DIN 931
110	0001-0770-000	1	Flange 25/30 DIN 2631
111	2168-2832-000	1	Expansion joint (Part-Nos. of components see 104a-k)
115	0007-2277-750	2	Gasket 32/42x5
116	2171-1222-000	1	Hinge sleeve
117	0007-2925-750	5	Gasket 36.2/3
118	0019-6169-400	3	Allen screw M12x50 DIN 912
-	2168-8800-010	1	Hood assembly (119-146)
119	0007-2620-750	1	Gasket 376/4
-	2168-8815-010	1	Lower section of hood (120-128)
120	2168-8801-010	1	Lower section of hood with inserted bushes
121	0003-0690-000	3	Bush A 13.5x16 DIN 172
122	2163-8850-010	1	Inspection cover
123	0007-2114-750	1	Gasket 106/114x6
124	0019-4548-090	2	Knurled screw M8x40 DIN 464
125	0026-1075-030	1	Cylindrical pin 5h8x24 DIN 7
-	0026-2101-000	1	Holding ring assembly (126-128)
126	0026-5856-170	2	Securing ring
127	0026-2091-020	1	Bow
128	0026-0721-090	1	Bolt
129	0026-1826-300	1	Centering disc
130	0007-2571-750	1	Gasket 297/4
131	0007-2517-850	1	Gasket 36/44x4
132	0019-6125-150	4	Allen screw M8x30 DIN 912
133	0007-2181-750	2	Gasket 38/46x15
134	2171-8839-000	1	Threaded piece
135	2171-8805-000	1	Upper section of hood with distance sleeve
135a	2171-2239-000	1	Distance sleeve
135b	0007-1904-750	1	Gasket 40.2/3
136	0007-1936-750	2	Gasket 29.2/3
137	2171-2191-010	1	Handle connection piece
-	2168-8816-000	1	Make-up water supply line, compl. (138-146)
138	2168-8448-000	1	Pipe
139	0013-1006-260	1	Coupling nut R 1" P1 DIN 2950
140	2168-8840-000	1	Sight glass housing
141	0004-1915-740	2	Gasket 38/45.5x2
142	0001-0040-820	2	Sight glass
143	0019-1621-030	2	Threaded ring
144	0018-2015-000	1	Breather 3/8"
145	0018-0021-260	1	Angle 1/2" A4 DIN 2950
146	0018-0871-260	1	Reducing nipple 1"x1/2" - N4 DIN 2950
-	2168-8769-010	1	Hose, complete (147-150)
147	0018-1796-600	2	Hose connection R 1/2" / 12
148	0018-3816-300	2	Hose clamp 22
149	0018-0867-260	1	Reducing nipple 3/4"x1/2" - N4 DIN 2950
150	0018-2786-758	1	Hose 13
151	2168-8215-000	1	Make-up water connection
151a	0018-1676-600	1	* Needle valve 1/2"
151b	0018-0207-260	2	* T-Piece 3/4"x1/2"x3/4" -B1 DIN 2950
151c	0018-1409-650	1	* Shut-off valve 3/4"
152	0001-0576-600	1	Flowmeter 2500 1/h
153	0007-2099-850	1	Gasket 5/11x4
154	0001-0304-600	1	Pressure gauge M63 - 10 bar
156	0001-0326-280	1	Thermometer (0 - 120 °C)
157	0004-5030-590	1	Gasket 21/32x2

* This part is contained in the previous "complete" part, but it can be ordered separately.

Vertical Gear Parts

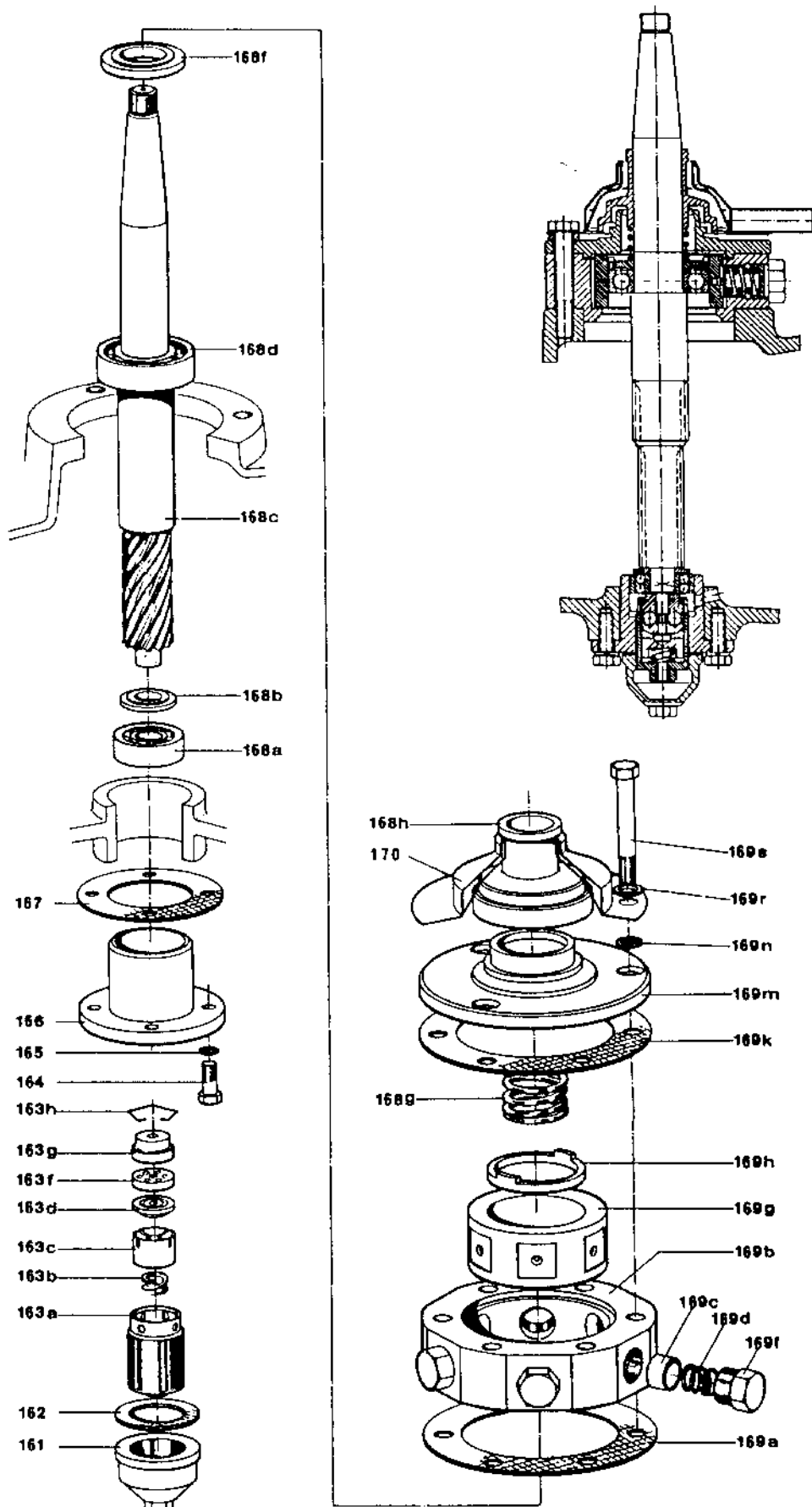


Fig. 4/4

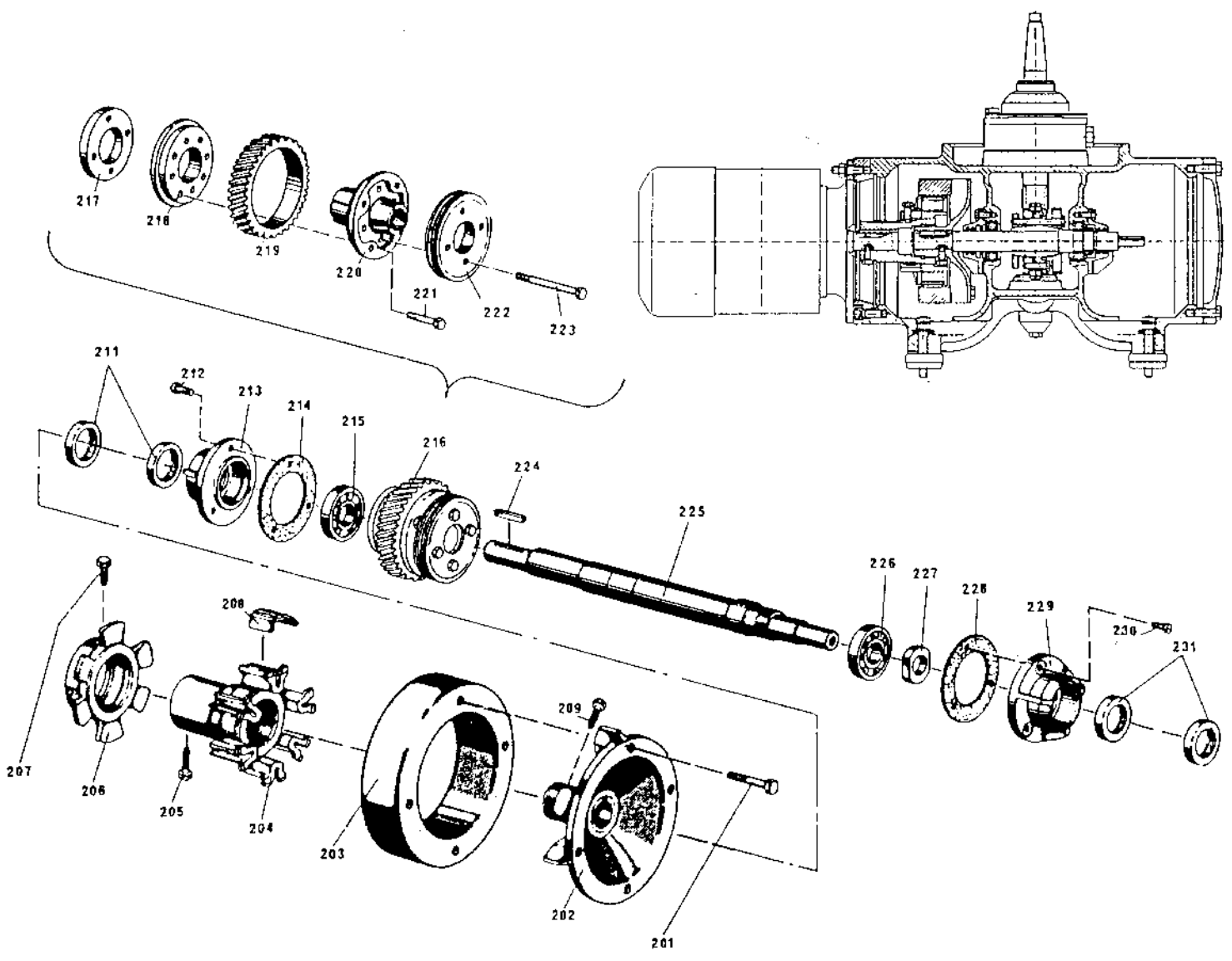
Vertical Gear Parts
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No. in Fig.	Part - No.	Qty.	Part Description
161	0010-3003-200	1	Bottom bearing cap
162	0004-1891-740	1	Gasket 38/57x2
-	0010-3000-000	1	Bottom bearing assembly (163a-h)
163a	0010-3002-000	1	Bottom bearing threaded piece
163b	0006-4209-160	1	Cylindrical pressure spring
163c	0010-3001-200	1	Bottom bearing pressure piece
-	0010-3010-000	1	Set of bottom bearing running parts (163d-g)
163d	-	1	* Bottom bearing pressure disc
163f	-	1	* Ball cage
163g	-	1	* Bottom bearing running disc
163h	0026-1473-170	1	Snap ring
164	0019-6935-150	4	Hex head screw M 10x25 DIN 933 - 8.8
165	0026-1337-190	4	Lock washer A 10 DIN 127
166	3033-1112-010	1	Bottom bearing housing
167	0004-5254-770	1	Gasket 61/102x0.3
-	2162-3429-L	1	*** Worm spindle assembly (168a-h)
168a	0011-1303-030	1	Pendulum ball bearing 1303 M/P 62 DIN 630
168b	0008-1708-000	1	Ball bearing protection ring
168c	see page 4/12	1	*** Worm spindle
168d	0011-6207-010	1	Grooved ball bearing 6207 / P62 DIN 625
168f	0008-3508-000	1	Ball bearing protection ring
168g	0006-4226-160	1	Spindle spring
168h	0008-3501-580	1	Spindle cap
-	0008-3500-230	1	Neck bearing bridge assembly (169a-s)
169a	0004-5002-770	1	Gasket 110/162x0.3
-	0008-3510-220	1	Neck bearing bridge, complete (169b-g)
169b	0008-3506-000	1	Neck bearing bridge
169c	0026-1286-110	6	Spring piston
169d	0006-4375-060	1	Set of neck bearing springs
169f	0019-1420-030	6	Threaded plug
169g	0008-3507-090	1	Pressure ring
169h	0008-3509-020	1	Distance ring
169k	0004-5002-770	1	Gasket 110/162x0.3
169m	0008-3502-070	1	Neck bearing protection cap
169n	0007-2502-750	3	Gasket 12/3
169r	0026-1371-030	3	Washer 13 DIN 125
169s	0019-6541-150	3	Hex head screw M 12x75 DIN 931 - 8.8
170	2171-1219-010	1	Operating-water feeding device

* This part is not available as separate item, but only assembled with parts 163d-g.

*** The number of this part depends on the motor speed as well as on the bowl speed stated on the name-plate of the separator (see page 4/12). In case of reduced bowl speed be sure to refer to sect. 3.1.3.
IMPORTANT: When replacing this part, be sure to replace also worm wheel 216.

Horizontal Gear Parts



Horizontal Gear Parts

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No. in Fig.	Part - No.	Qty.	Part Description
-	3033-3385-020	1	Centrifugal clutch assembly (201-209)
201	0019-6941-150	4	Hex head screw M 10x50 DIN 933 - 8.8
202	3033-3365-000	1	Clutch drum
203	3033-3366-000	1	Ring
204	3033-3468-L	1	* Clutch driver
205	0019-5194-150	1	Hex head screw AM 10x20 DIN 561 - 8.8
206	3033-3479-000	1	Clutch cover
207	0019-5195-150	1	Hex head screw AM 10x25 DIN 561 - 8.8
208	3033-3397-000	4)	Clutch shoe
209	0019-5194-150	1	Hex head screw AM 10x20 DIN 561 - 8.8
211	0004-1945-830	2	Felt ring 30 DIN 5419
212	0019-0717-150	3	Hex head screw M 8x22 DIN 933 - 8.8
213	3033-3376-000	1	Bearing cover
214	0004-5353-700	1	Gasket 62/100x1
215	0011-6206-000	1	Grooved ball bearing 6206 DIN 625
216	see page 4/12	1	*** Worm wheel assembly (217-223)
217		1	** Clamp plate
218	Not available individually	1	** Pressure ring
219		1	** Toothed rim
220		1	** Wheel body
221	0019-6502-150	4	Hex head screw M 8x80 DIN 931 - 8.8
222	Not available individually	1	** Clamp plate with toothing
223	0019-6502-150	4	Hex head screw M 8x80 DIN 931 - 8.8
224	0026-1743-160	1	Key A 8x7x40 DIN 6885
225	3033-3400-010	1	Worm wheel shaft
226	0011-6206-000	1	Grooved ball bearing 6206 DIN 625
227	0013-3011-060	1	Nut M 35x1.5
228	0004-5353-700	1	Gasket 62/100x1
229	3033-3375-000	1	Bearing cover
230	0019-0717-150	3	Hex head screw M 8x22 DIN 933 - 8.8
231	0004-1943-830	2	Felt ring 28 DIN 5419

+) The number of clutch shoes (2 or 3 or 4) depends on the driving force required for the separator as well as on the motor speed.

* When ordering this part, please state also diameter of motor shaft end and width of key.

** This part is not available as separate item, but only assembled with the parts 217-223.

*** The number of this part depends on the motor speed as well as on the bowl speed as stated on the name-plate of the separator (see page 4/12). In case of reduced bowl speed be sure to refer to sect. 3.1.3.

IMPORTANT: When replacing this part, replace worm spindle 168c at the same time.

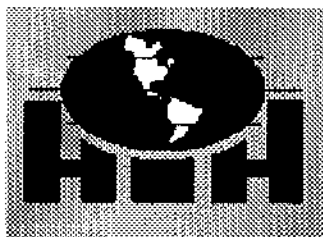
Available Gear Parts

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No. in Fig.	Fig.	Part Description	Motor speed n - 1455 rpm (50 Hz)	Motor speed n - 1765 rpm (60 Hz)
			Part - No. Bowl speed = 8520 rpm	Part - No. Bowl speed = 8510 rpm
-	4/4	*** Worm spindle assy.	2162-3429-000	2162-3429-010
168c	4/4	*** Worm spindle	3033-3420-010	3033-3420-000
217-223	4/5	*** Worm wheel assy.	2162-3449-000	2162-3449-010
219	4/5	*** Toothed rim	3033-3443-019	3033-3443-009

*** The number of this part depends on the motor speed as well as on the bowl speed as stated on the name-plate of the separator.
In case of reduced bowl speed be sure to refer to sect. 3.1.3.

IMPORTANT: Worm spindle 168c and worm wheel assembly 217 - 223 should always be replaced at the same time (see 3.4.2.), No. 5 and 3.4.10, No.4).



Hutchison-Hayes Separators, Inc.

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Bowl

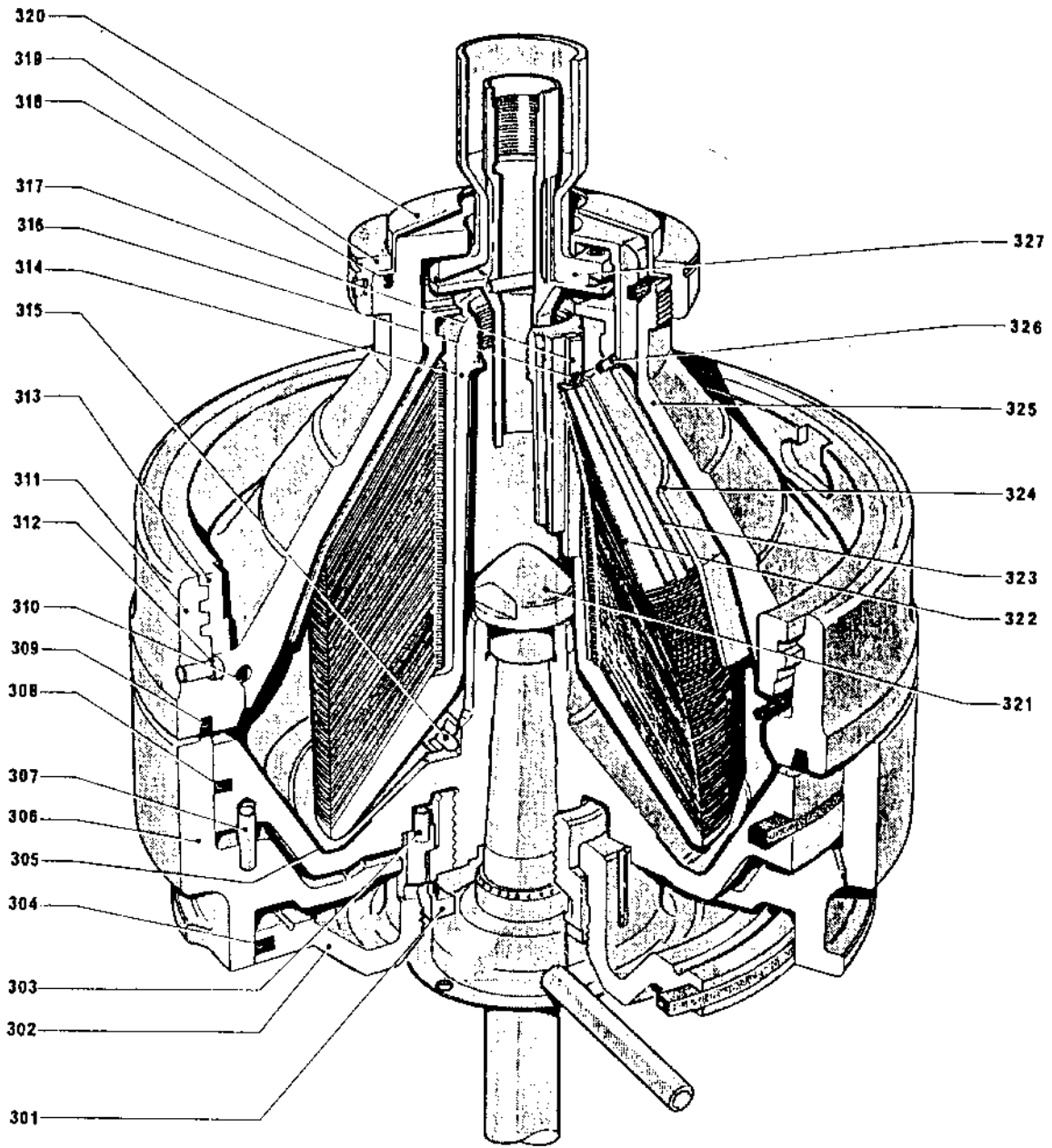


Fig. 4/6

B o w l
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No. in Fig.	Part - No.	Qty.	Part Description
-	2168-6600-000	1	Bowl, complete (301-326)
301	2171-6627-000	1	Threaded ring
302	2171-6425-000	1	* Sealing chamber bottom, complete
303	0026-1106-400	1	+) Cylindrical pin 8h8x12 DIN 7
304	0007-2421-750	1	Gasket 209/225x6
305	3205-6490-000	1	Wear liner
306	2171-6500-060	1	* Sliding piston, complete
307	0026-1106-400	3	+) Cylindrical pin 8h8x24 DIN 7
308	0007-2420-750	1	Gasket 242/258x6
309	0007-2855-840	1	Gasket 264x8.2
310	0007-2084-750	1	Gasket 235/7
311	3205-6604-020	1	* Bowl bottom, complete
312	3181-6647-000	1	+) Arresting pin
313	3205-6631-000	1	* Bowl lock ring
314	2171-6620-000	1	* Distributor, complete
315	0026-1610-300	1	+) Cylindrical pin 8h8x14
316	0019-0347-400	9	+) Countersunk screw M 4.5x8
317	0020-7406-300	3	+) Guide rib
318	0007-2583-750	1	Gasket 100/5
319	0821-6631-030	1	Lock ring
320	2171-6691-000	1	Set of regulating rings
321	0013-3109-400	1	Spindle nut
-	2171-6660-000	1	Set of discs (322-323)
322	2171-6663-000	61	[Disc
323	2171-6666-000	1	[Compensating disc
324	2168-6650-000	1	Separating disc
325	2168-6611-010	1	* Bowl top
326	0007-2057-750	1	Gasket 71/4.5
327	2171-2213-000	1	Centripetal pump

* This part can only be replaced by a WESTFALIA factory engineer or by a special repair shop authorized by WESTFALIA, because of special re-fitting to machine and possible re-balancing of bowl.

+) This part is included in the preceding "complete" part, but it is also available as separate item.

Pre - strainer

The pre-strainer protects the dirty-oil gear pump from coarse impurities
(On special order only)

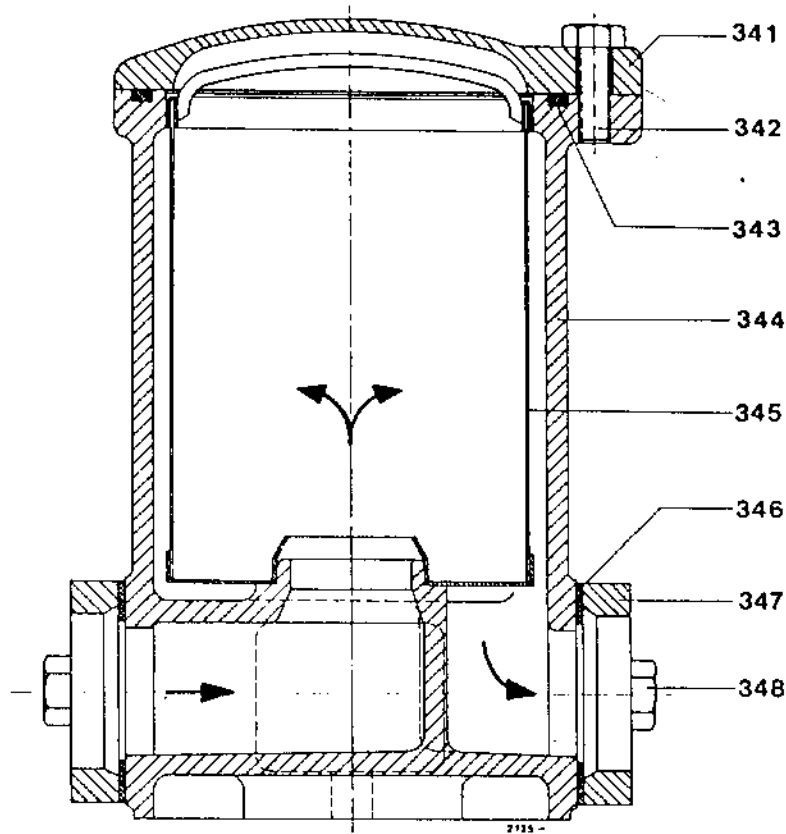


Fig. 4/7

No. in Fig.	Part - No.				Qty	Part Description
	up to 2000 l/h NW 25	3000-4500 l/h NW 40	5000-7200 l/h NW 50	above 10.000 l/h NW 65		
-	8821-2110-100	8822-2110-040	8823-2110-150	8823-2110-160	1	Pre-strainer (341-348)
341	8821-2115-010	8821-2115-010	8823-2115-030	8823-2115-030	1	Cover
342	0019-6937-150	0019-6937-150	0019-6937-150	0019-6937-150	3	Hex head screw M 10x30 DIN 933 - 8.8
343	0007-2170-750	0007-2170-750	-	-	1	Gasket 130/5
343	-	-	0007-2029-750	0007-2029-750	1	Gasket 189,3/5,7
344	8821-2114-000	8821-2114-000	8823-2114-040	8823-2114-040	1	Housing
345	8821-2119-000	8821-2119-000	8823-2119-070	8823-2119-070	1	Strainer Insert
346	0004-5454-740	0004-5454-740	-	-	2	Gasket 44/70x112x2
346	-	-	0004-5460-740	0004-5460-740	2	Gasket 65/100x140x2
347	0001-0163-000	-	-	-	2	Flange 1"
347	-	0001-0146-000	-	-	2	Flange 1 1/2"
347	-	-	0001-0147-000	-	2	Flange 2"
347	-	-	-	0001-0490-000	2	Flange 2 1/2"
348	0019-6970-150	0019-6970-150	0019-6970-150	0019-6970-150	4	Hex head screw M 12x30 DIN 933 - 8.8

Single Gear Pump and Pump Connection
for OSA 7-02-

No. in Fig.	Part - No.:			Qty.	Part Description
	R31/10 FI-So-C Nominal capacity: 840 l/h	R31/20 FI-So-C Nominal capacity: 1,650 l/h	R41/40 FI-So-C Nominal capacity: 3,400 l/h		
384				1	* Flange
385				4	* Bush
386				8	* Allen screw M 5x25 DIN 912
387				1	* Pump housing
388				1	* Cap
389				1	* Pressure-adjusting screw
390				1	* Screw plug
391				1	* Cup spring
392				1	* Pressure spring
393				1	* Valve housing
394				4	* Allen screw M 12x120 DIN 912
395				1	* Piston
396				1	* Cylindrical pin
397				1	* Valve insert
398				1	* Cover
398.1				1	* Threaded pin M 8x10 DIN 914
399				1	* Cylindrical pin M 8x20 DIN 914

* Instead of part-number state number in figure (see first column).

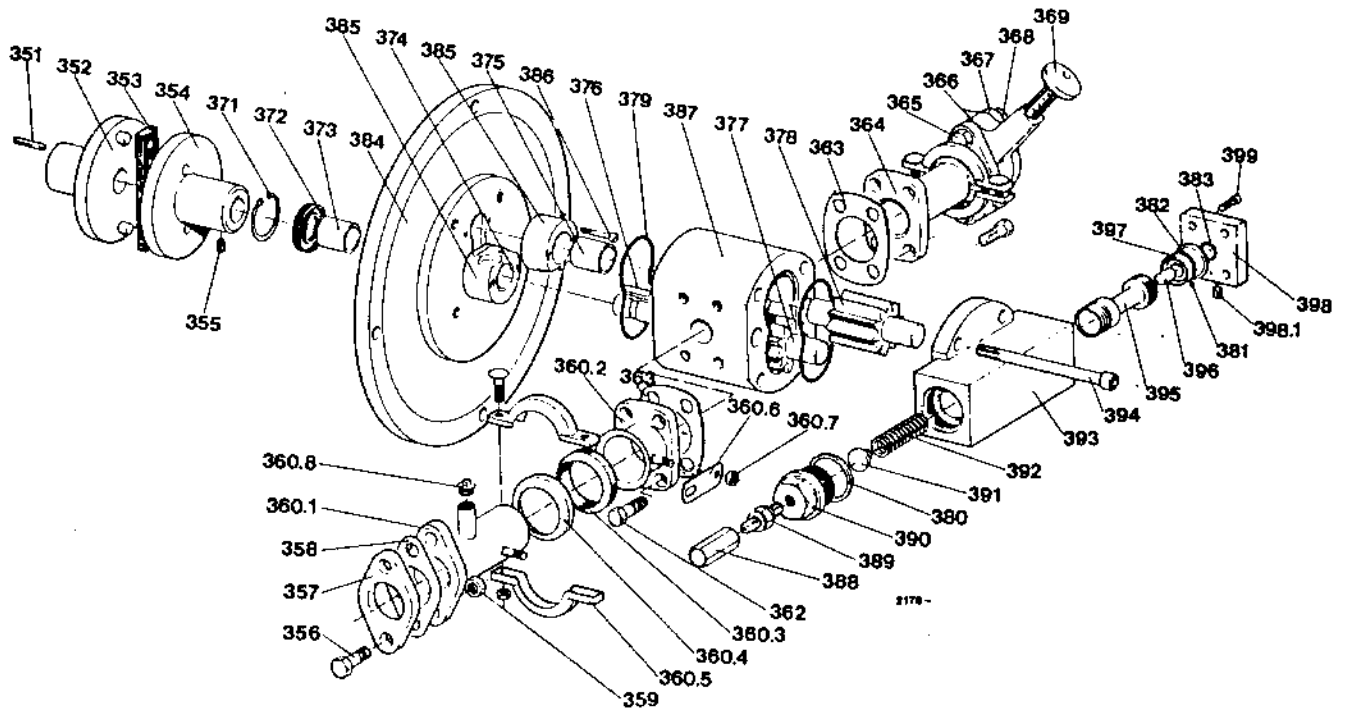


Fig. 4/8

Single Gear Pump and Pump Connection
for OSA 7-02-

No. In Fig.	Part - No.:			Qty.	Part Description
	R31/10 FI-So-C Nominal capacity: 840 l/h	R31/20 FI-So-C Nominal capacity: 1,650 l/h	R41/40 FI-So-C Nominal capacity: 3,400 l/h		
-	2168-1159-070	2168-1159-080	2168-1159-090	1	Pump connection, complete (351-369)
351	0026-1744-160	0026-1744-160	0026-1744-160	1	Key A 6x6x35
-	2161-3320-010	2161-3320-000	0822-3425-000	1	Pump coupling, complete (352-355)
352	2161-3322-010	0822-3325-000	0822-3325-000	1	Coupling pulley (separator side)
353	0021-4791-710	0021-4793-710	0021-4793-710	1	Flexible coupling
354	2160-3322-000	2161-3322-000	0822-3322-020	1	Coupling pulley (pump side)
355	0019-9063-150	-	-	1	Threaded pin M 8x10 DIN 916
355	-	0019-3982-060	-	1	Threaded pin M 10x12 DIN 438
355	-	-	0019-0421-000	1	Threaded pin 3/8"x14 DIN 437
-	2178-2805-170	2178-2805-170	2178-2805-130	1	Junction assembly (356-360.8)
356	0019-6972-150	0019-6972-150	-	2	Hex head screw M 12x40 DIN 933
356	-	-	0019-6973-150	2	Hex head screw M 12x45 DIN 933
357	0001-0135-000	0001-0135-000	-	1	Flange 1"
357	-	-	0001-0153-000	1	Flange 1 1/2"
358	0004-5447-740	0004-5447-740	-	1	Gasket 28/52x96x2
359	0013-0280-150	0013-0280-150	0004-5456-740	1	Gasket 50/74x120x2
-	2178-2832-020	2178-2832-020	0013-0280-150	2	Hexagon nut M12 DIN 934
360.1	2178-2831-020	2178-2831-020	2178-2832-040	1	Expansion joint, complete (360.1-360.8)
360.2	2178-2831-030	2178-2831-020	2178-2831-060	1	Expansion joint
360.3	0018-4841-750	0018-4841-750	2178-2831-070	1	Expansion joint
360.3	-	-	-	1	Gasket 20
360.4	0018-4841-010	0018-4841-010	0018-4844-750	1	Gasket 40
360.4	-	-	-	1	Gasket retainer 20
360.5	0018-4841-020	0018-4841-020	0018-4844-010	1	Gasket retainer 40
360.5	-	-	-	1	Clamp 20
360.6	2178-1108-000	2178-1108-000	0018-4844-020	1	Clamp 40
360.7	0013-0291-150	0013-0291-150	2178-1108-000	1	Plate
360.8	0018-0988-260	0018-0988-260	0013-0291-150	2	Hexagon nut M8 DIN 985
-	-	-	0018-0988-260	1	Plug 1/4" T9 DIN 2950
362	0019-6108-150	0019-6108-150	-	8	Allen screw M 6x20 DIN 912
362	-	-	0019-6971-150	8	Hex head screw M 12x35 DIN 933
363	0004-5472-740	0004-5472-740	-	1	Gasket 20/40x40x2
363.1	0004-5471-740	0004-5471-740	-	1	Gasket 15/35x35x2
363	-	-	0004-5475-740	2	Gasket 94x82
-	2178-2805-160	2178-2805-160	2178-2805-150	1	Expansion joint, assembly (364-369)
364	2178-2832-010	2178-2832-010	2178-2832-040	1	Expansion joint, complete
-	2178-2831-020	2178-2831-020	2178-2831-060	1	Expansion joint
-	2178-2831-010	2178-2831-010	2178-2831-070	1	Expansion joint
-	0018-4841-750	0018-4841-750	-	1	Gasket 20
-	-	-	0018-4844-750	1	Gasket 40
-	0018-4841-010	0018-4841-010	0018-4844-010	1	Gasket retainer 20
-	0018-4841-020	0018-4841-020	0018-4844-020	1	Gasket retainer 40
-	-	-	0018-4844-020	1	Clamp 20
-	2178-1108-000	2178-1108-000	2178-1108-000	1	Clamp 40
-	0013-0291-150	0013-0291-150	0013-0291-150	1	Plate
-	0018-0988-260	0018-0988-260	0013-0291-150	2	Hexagon nut M8 DIN 985
365	0019-6540-150	0019-6540-150	0018-0988-260	1	Plug 1/4" T9 DIN 2950
365	-	-	-	2	Hex head screw M 12x70 DIN 931
366	0004-5447-740	0004-5447-740	0019-6542-150	2	Hex head screw M 12x80 DIN 931
366	-	-	0004-5456-740	1	Gasket 28/52x96x2
367	0001-0140-000	0001-0140-000	-	1	Gasket 50/74x120x2
367	-	-	0001-0153-000	1	Flange 3/4"
368	0013-0280-150	0013-0280-150	0013-0280-150	1	Flange 1 1/2"
369	0018-1684-000	0018-1684-000	0018-1686-000	1	Hexagon nut M12 DIN 934
-	8056-9110-070	-	-	1	Pre-set valve, complete
-	-	8056-9110-050	-	1	Single gear pump assembly R31/10 FI-So-C (371-399)
-	-	-	8059-9100-120	1	Single gear pump assembly R31/20 FI-So-C (371-399)
371	-	-	-	1	Single gear pump assembly R41/40 FI-So-C (371-399)
371	-	-	-	1	Securing ring
372	0004-5574-830	0004-5574-830	-	1	Securing ring 43x1,75 DIN 472
372	-	-	0004-5539-830	1	Sealing ring
373	-	-	-	1	Sealing ring 25x43x10 - Viton
374	8056-9121-000	8056-9121-000	8059-9121-000	1	Set of bearing bushes (two drive bushes, three bearing bushes)
375	8056-9415-030	8056-9415-020	8059-9415-050	1	Set of gear parts (376-378)
376	-	-	-	1	Key
377	-	-	-	1	Gear shaft
378	-	-	-	1	Drive shaft
379	-	-	-	-	-
380	-	-	-	-	-
381	8056-9125-000	8056-9125-000	8059-9125-000	1	Set of gaskets (379-383)
382	-	-	-	-	-
383	-	-	-	-	-

* Instead of part-number state number in figure (see first column).

Tools and Accessories

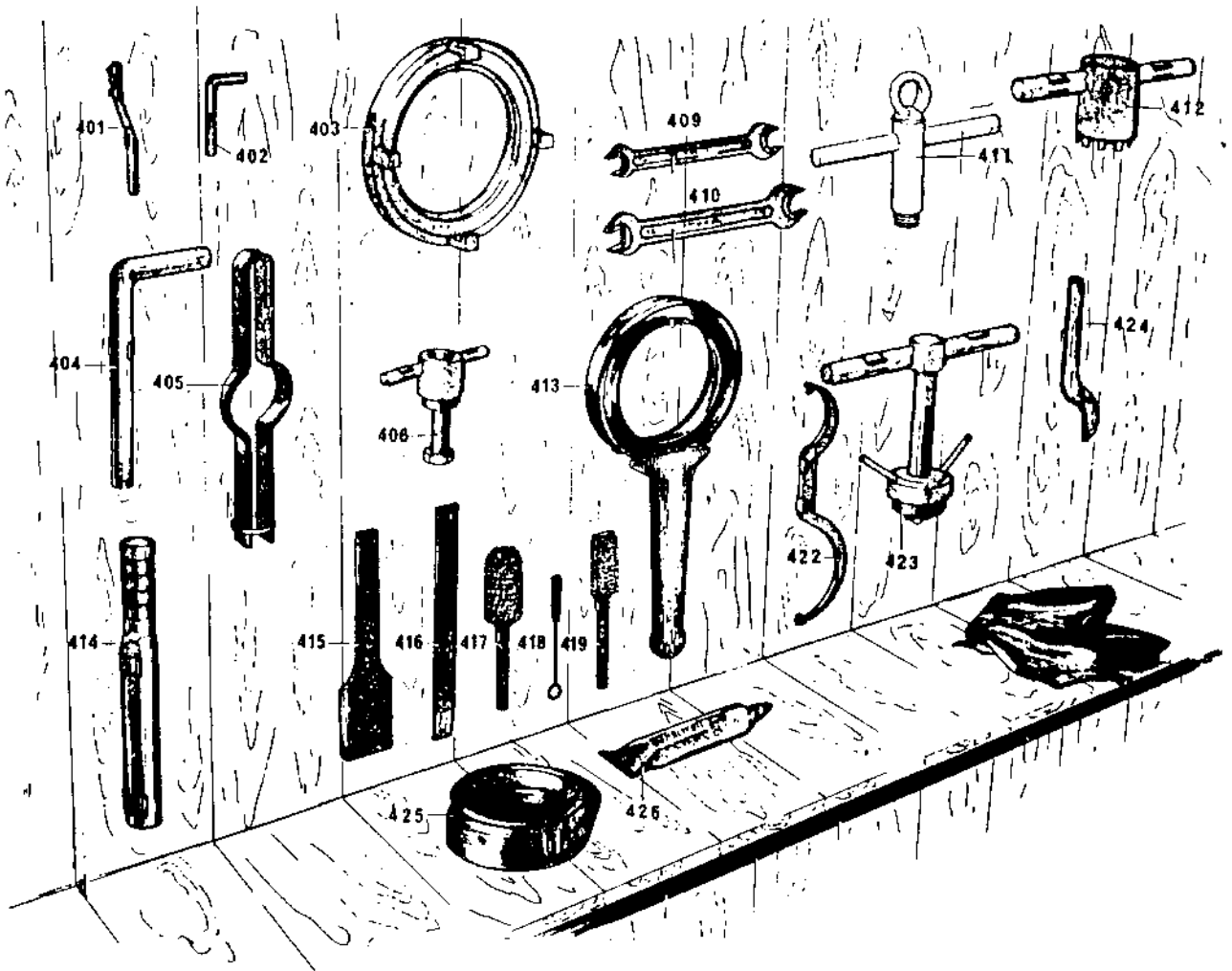


Fig. 4/9

Tools and Accessories

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All the parts mentioned in the packing list furnished with the separator should be found in the packing case.

No. in Fig.	Part - No.	Qty.	Part Description
401	0003-4585-000	1	Wrench (for oil sight glass)
402	0003-3778-320	1	Allen wrench 10 DIN 911
403	2171-9942-000	1	Ring (for sliding piston)
404	0003-3340-000	1	Wrench (for centripetal pump)
405	0003-3403-170	1	Lifting tongs (for bowl top)
406	3033-9910-000	1	Puller (for clutch)
409	0003-4211-320	1	Double-ended wrench 27x32 DIN 3110
410	0003-4222-320	1	Double-ended wrench 36x41 DIN 3110
411	2168-9930-000	1	Jack (for bowl bottom)
412	2171-9855-000	1	Wrench (for threaded ring in bowl bottom)
413	0003-0354-000	1	Annular wrench (for bowl lock ring)
414	0003-0200-000	1	Mallet
415	0003-0211-950	1	Scraper 70
416	0003-0210-950	1	Scraper 25
417	0003-4695-960	1	Brush 70x100x500
418	0003-4540-960	1	Cylindrical brush 10x40x160
419	0003-4690-960	1	Brush 35x125x285
422	0003-3685-000	1	Hook wrench 94/132
423	2171-9800-000	1	Jack (for sealing-chamber bottom)
424	0003-0216-000	1	Chisel 4x330
425	0003-0277-800	1	Oil cup (2.7 litres)
426	0015-0103-000	1	Tube of Molykote paste DX white, 50 grams
-	0015-0003-080	1	2.5-litre can of separator lubricating oil C 100

Single gear pump for OSA 7-
(including part-numbers for pump connections)

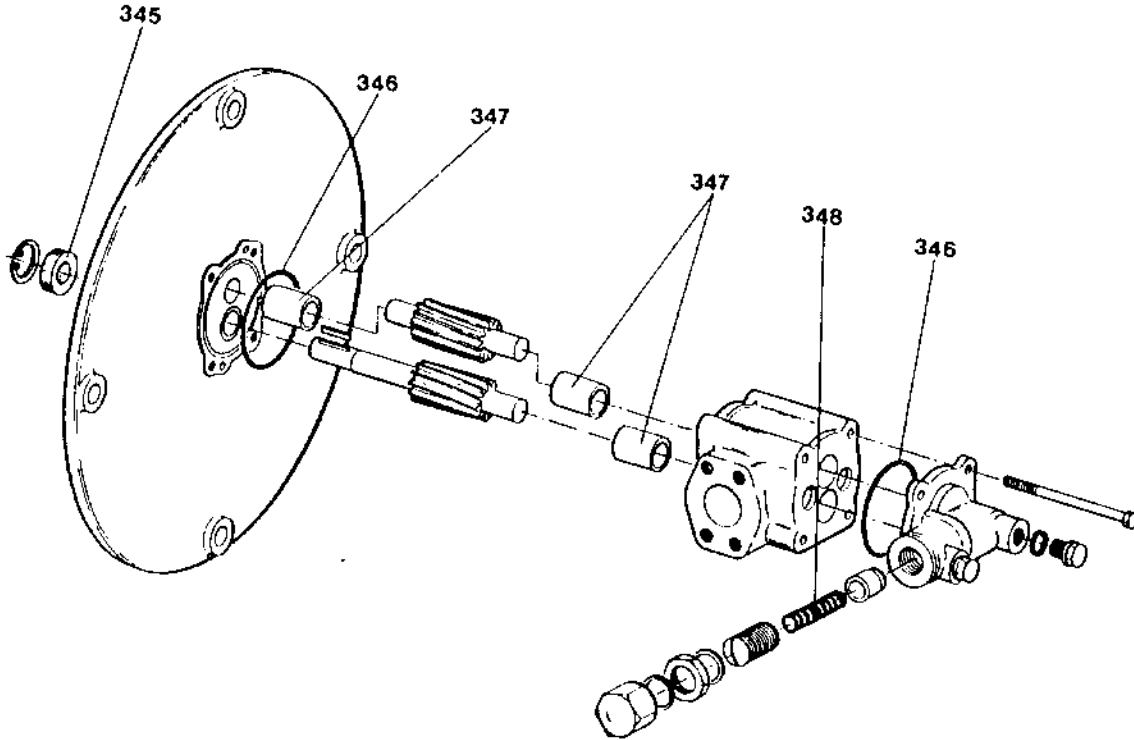


Fig. 4/8a

Single gear pump for OSA 7-
(including part-numbers for pump connections)

Type of pump	Part-No.	Capacity at rpm		Sealing ring No. 345	Set of gaskets No. 345 and 346	Set of bearing bushes No. 347	Spring for valve No. 348	Pump connections (for components refer to page 4/17)	Pipe
		1455	1745						
R25/4 FL-DBI-C	8068-9100-000	320	400	0004-1975-750	8068-9125-000	8068-2120-000	8068-9858-000	2168-1159-150	3/4 "
R25/5 FL-DBI-C	8068-9100-010	410	500	0004-1975-750	8068-9125-000	8068-2120-000	8068-9858-000	2168-1159-150	3/4 "
R25/6.3 FL-DBI-C	8068-9100-020	520	630	0004-1975-750	8068-9125-000	8068-2120-000	8068-9858-000	2168-1159-150	3/4 "
R25/8 FL-DBI-C	8068-9100-030	650	800	0004-1975-750	8068-9125-000	8068-2120-000	8068-9858-000	2168-1159-150	3/4 "
R25/10 FL-DBI-C	8068-9100-040	820	1 000	0004-1975-750	8068-9125-000	8068-2120-000	8068-9858-000	2168-1159-150	3/4 "
R25/12.5 FL-DBI-C	8068-9100-050	1 000	1 250	0004-1975-750	8068-9125-000	8068-2120-000	8068-9858-000	2168-1159-160	1 "
R25/16 FL-DBI-C	8068-9100-060	1 300	1 600	0004-1975-750	8068-9125-000	8068-2120-000	8068-9858-000	2168-1159-160	1 "
R25/20 FL-DBI-C	8068-9100-070	1 650	2 000	0004-1975-750	8068-9125-000	8068-2120-000	8068-9858-000	2168-1159-160	1 "
R35/25 FL-DBI-C	8068-9100-080	2 000	2 500	0004-1948-750	8068-9125-010	8068-2120-010	8068-9858-010	2168-1159-170	1 1/2 "
R35/31.5 FL-DBI-C	8068-9100-090	2 600	3 150	0004-1948-750	8068-9125-010	8068-2120-010	8068-9858-010	2168-1159-170	1 1/2 "

Only the itemized parts can be supplied as spare parts. If the existing pump no longer achieves the desired capacity, it is recommended that a new pump be installed since repairs would be too expensive.

Pump connections for single gear pumps

(OSA 7-)

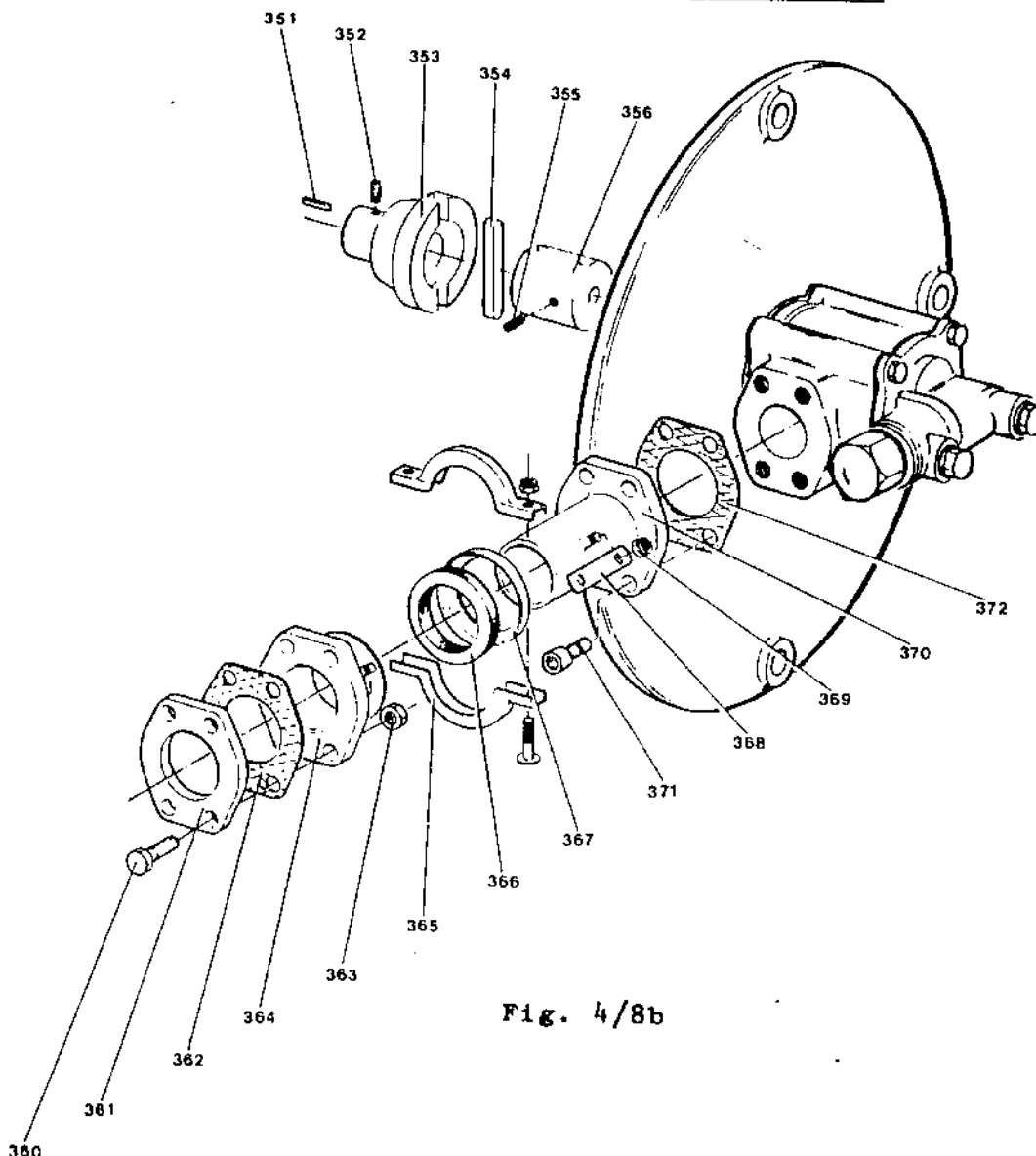


Fig. 4/8b

Part-No. for pump connections OSA 7						Qty.	Part description
No. in Fig.	for pumps		for pumps		for pumps		
	R25/4	FL-DBI-C	R25/12,5	FL-DBI-C	R35/25	FL-DBI-C	
	R25/5	FL-DBI-C	R25/16	FL-DBI-C	R35/31,5	FL-DBI-C	
	R25/6,3	FL-DBI-C	R25/20	FL-DBI-C			
	R25/8	FL-DBI-C					
	R25/10	FL-DBI-C					
-	2168-1159-150		2168-1159-160		2168-1159-170	1	Pump connection, complete (351 - 372)
351	0026-1744-160		0026-1744-160		0026-1744-160	1	Key A 6 x 6 x 35
-	2168-3320-000		2168-3320-000		2168-3320-010	1	Pump clutch assembly (352 - 356)
352	0019-9063-150		0019-9063-150		0019-9063-150	1	Threaded pin AM8 x 10 DIN 916
353	2168-3323-000		2168-3323-000		2168-3323-000	1	Clutch half (separator side)
354	0021-4796-890		0021-4796-890		0021-4796-890	1	Flexible coupling 87 x 6.8
355	0019-9063-150		0019-9063-150		0019-9063-150	1	Threaded pin AM8 x 10 DIN 916
356	2168-3323-010		2168-3323-010		2168-3323-020	1	Clutch half (pump side)
-	2168-2805-090		2168-2805-100		2178-2805-200	2	Junction assembly (360 - 370)
360	0019-6512-150		0019-6512-150		0019-6973-150	8	Hex head screw
361	0001-0819-000		0001-0828-000		0001-0825-000	2	Flange
362	0004-5425-740		0004-5426-740		0004-5475-740	2	Gasket
363	0013-0279-150		0013-0279-150		0013-0280-150	8	Hexagon nut
-	2168-2832-010		2168-2832-020		2178-2832-060	2	Expansion joint assembly (364 - 370)
364	2168-2831-090		2168-2831-110		2178-2831-110	2	Expansion joint
365	0018-4841-020		0018-4842-020		0018-4844-020	2	Clamp
366	0018-4841-750		0018-4842-750		0018-4844-750	2	Gasket
367	0018-4841-010		0018-4842-010		0018-4844-010	2	Gasket holder
368	2178-1108-000		2178-1108-000		2178-1108-000	2	Plate
369	0013-0291-150		0013-0291-150		0013-0291-150	4	Hexagon nut
370	2168-2831-080		2168-2831-100		2178-2831-100	2	Expansion joint
371	0019-6145-150		0019-6145-150		0019-6166-150	8	Cylindrical screw
372	0004-5425-740		0004-5426-740		0004-5475-740	2	Gasket

2168-050