

MODEL 212J MICROVAC PUMP LOT NO. SC-78703 (7-99) AND FUTURE

SYM	PART NO.	DESCRIPTION	REF. DWG/ COMP. LIT.	QTY	UM	RSP
1	606-727-001	PUMP HOUSING		1	EA	
2	085-048-064	PLUG EXPANSION		4	EA	✓
3	423-860-001	REDUCING BUSHING		1	EA	
4	008-002-034	PIN DOWEL		4	EA	
5	026-010-036	PLUG 1/8 NPT		1	EA	
6	026-010-037	PLUG 1/4 NPT		1	EA	
7	026-010-039	PLUG 1/2 NPT		4	EA	
8	026-010-040	PLUG 3/4 NPT		3	EA	
9	085-050-765	STREET ELBOW 1/2 NPT		3	EA	
10	085-050-738	BALL VALVE		1	EA	
11	243-926-002	GASKET VALVE DECK		2	EA	✓
12	263-840-004	VALVE DECK		2	EA	✓
13	085-050-414	SCREW SOCKET HEAD M8 X 1.25 X 30 MM LG.		8	EA	
14	264-504-003	OIL BAFFLE		1	EA	
15	085-041-960	SCREW HEX HEAD M8 X 1.25 X 20 MM LG.		6	EA	
16	085-050-358	LOCKWASHER INTERNAL TOOTH		6	EA	
17	246-763-002	OIL BAFFLE GASKET		1	EA	
18	606-753-002	RESERVOIR OIL		1	EA	
19	085-050-761	O' RING 18		1	EA	✓
20	085-050-356	SCREW HEX HEAD M10 X 1.5 X 25 MM LG.		10	EA	
21	085-041-950	LOCKWASHER SOCKET HEAD		10	EA	
22	085-050-756	EYEBOLT		2	EA	
23	085-041-954	NUT M12 X 1.75 MM		2	EA	
24	085-036-021	PLUG 1 NPT		1	EA	
25	606-180-003	MOTOR PLATFORM BLOCK		1	EA	
26	085-050-815	SCREW SOCKET HEAD M12 X 1.75 X 70 MM LG.		2	EA	
27	085-050-816	LOCKWASHER SPLIT SOCKET HEAD		2	EA	
28	606-755-001	MOTOR PLATFORM		1	EA	
29	085-050-760	JACK SCREW M12 X 1.75 X 140 MM LG.		2	EA	
30	085-050-757	WASHER SPHERICAL MALE HALF 1/2 BOLT SIZE (M12)		4	EA	
31	085-041-954	NUT M12 X 1.75 MM		4	EA	
32	085-041-960	SCREW HEX HEAD M8 X 1.25 X 20 MM LG.		4	EA	
33	085-050-358	LOCKWASHER INTERNAL TOOTH		4	EA	

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34	606-754-001	RESERVOIR COVER		1	EA	
35	085-050-737	O' RING 15 5/8		1	EA	✓
36	085-050-116	O' RING 1 3/4		1	EA	✓
37	085-050-125	LENS PYREX		1	EA	
38	605-770-003	LENS RETAINER		1	EA	
39	085-050-357	SCREW BUTTON HEAD M5 X .8 X 12 MM LG.		3	EA	
40	085-039-332	SCREW SOCKET HEAD M8 X 20 MM LG.		14	EA	
41	085-050-358	LOCKWASHER INTERNAL TOOTH		14	EA	
42	605-988-007	SIDE COVER		1	EA	
43	085-041-609	O' RING 5/8		1	EA	✓
44	026-010-038	PLUG 3/8 NPT		1	EA	
45	085-050-117	O' RING 13 1/2		1	EA	✓
46	085-019-757	BALL BEARING		2	EA	✓
47	085-019-492	LOCKNUT BEARING		2	EA	✓
48	085-019-491	LOCKWASHER BEARING		2	EA	✓
49	085-050-286	SCREW SOCKET LOW HEAD M10 X 1.50 X 25 MM LG.		20	EA	
50	085-050-287	SOCKET SETSCREW M12 X 1.75 X 16 MM LG.		4	EA	
51	606-762-002	STANDOFF METRIC		8	EA	
52	605-988-008	SIDE COVER		1	EA	
53	085-050-122	VALVE CHECK		1	EA	✓
54	085-050-128	SCREEN WIRE		1	EA	✓
55	085-050-192	O' RING 15/16		1	EA	✓
56	085-050-115	O' RING 1/2		1	EA	✓
57	085-050-120	SEAL WASHER		1	EA	
58	085-041-609	O' RING 5/8		1	EA	✓
59	026-010-038	PLUG 3/8 NPT		1	EA	
60	026-010-051	PLUG 1/4 NPT		2	EA	
61	085-050-117	O' RING 13 1/2		1	EA	✓
62	262-315-005	ENDCAP		2	EA	
63	085-039-332	SCREW SOCKET HEAD M8 X 20 MM LG.		8	EA	
64	085-050-358	LOCKWASHER INTERNAL TOOTH		8	EA	
65	085-019-755	O' RING 4-7/8		2	EA	✓
66	085-028-091	MOTOR		1	EA	✓

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67	085-027-308	PULLEY		1	EA	✓
68	085-013-669	BELT SET		1	EA	✓
69	085-029-600	ROTARY OIL SEAL		2	EA	✓
70	243-595-011	PISTON & SLIDE		1	EA	✓
71	278-575-001	ECCENTRIC (HOLLOW)		1	EA	
72	085-022-001	PLUG EXPANSION		4	EA	
73	297-857-004	HINGE BAR		2	EA	
74	252-616-012	SHAFT		1	EA	
75	262-318-003	RING SHOULDER SHAFT		1	EA	✓
76	266-169-025	PULLEY		1	EA	
77	266-169-027	FLYWHEEL		1	EA	✓
78	264-524-001	WOODRUFF KEY		2	EA	
79	264-540-001	SHIM BEARING		1	EA	✓
80	296-264-007	RING SHOULDER SHAFT		1	EA	
81	408-324-005	ECCENTRIC KEY		1	EA	✓
82	606-279-002	OIL MANIFOLD BLOCK		1	EA	
83	026-010-039	PLUG 1/2 NPT		3	EA	
84	085-050-327	SCREW PANHEAD M5 X .8 X 20 MM LG.		1	EA	
85	605-770-003	LENS RETAINER		1	EA	
86	606-127-001	WHEEL PADDLE		1	EA	
87	606-130-001	AXLE WHEEL		1	EA	
88	085-050-125	LENS PYREX		1	EA	
89	085-050-116	O' RING 1 3/4		1	EA	✓
90	085-050-129	SOLENOID VALVE WITH ORING		1	EA	✓
91	085-050-357	SCREW BUTTON HEAD M5 X .8 X 12 MM LG.		3	EA	
92	085-041-609	O' RING 5/8		2	EA	✓
93	085-050-328	SCREW SOCKET HEAD M10 X 1.5 X 45 MM LG.		2	EA	
94	606-002-001	STEM VALVE		1	EA	✓
95	606-003-001	RETAINER CHECK VALVE		1	EA	✓
96	606-757-001	BELT GUARD BRACKET		1	EA	
97	085-032-616	WASHER (NYLON) 3/8" ID X 1" OD X 1/16 THK. NATURAL COLOR		10	EA	
98	085-041-960	SCREW HEX HEAD M8 X 1.25 X 20 MM LG.		10	EA	
99	085-041-947	LOCKWASHER SPLIT		1	EA	

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SYM	PART NO.	DESCRIPTION	REF. DWG/ COMP. LIT.	QTY	UM	RSP
100	085-041-955	WASHER PLAIN (M12)		1	EA	
101	085-041-959	SCREW HEX HEAD M12 X 1.75 X 20 MM LG.		1	EA	
	606-766-001	BELT GUARD ASSEMBLY CONSISTING OF:		1	EA	
102		BELT GUARD FRONT		1	EA	
103		BELT GUARD BACK		1	EA	
104		WASHER PLAIN (M8)		6	EA	
105		NUT M8 X 1.25 MM		6	EA	
	606-767-001	FLYWHEEL GUARD ASSEMBLY CONSISTING OF:		1	EA	
106		FLYWHEEL GUARD BACK		1	EA	
107		FLYWHEEL GUARD FRONT		1	EA	
108		WASHER PLAIN (M8)		4	EA	
109		NUT M8 X 1.25 MM		4	EA	
110	085-035-996	DOWEL PIN		2	EA	
111	085-050-413	SCREW SOCKET HEAD M8 X 1.25 X 20 MM LG.		4	EA	

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MODEL 212-J MICROVAC PUMP

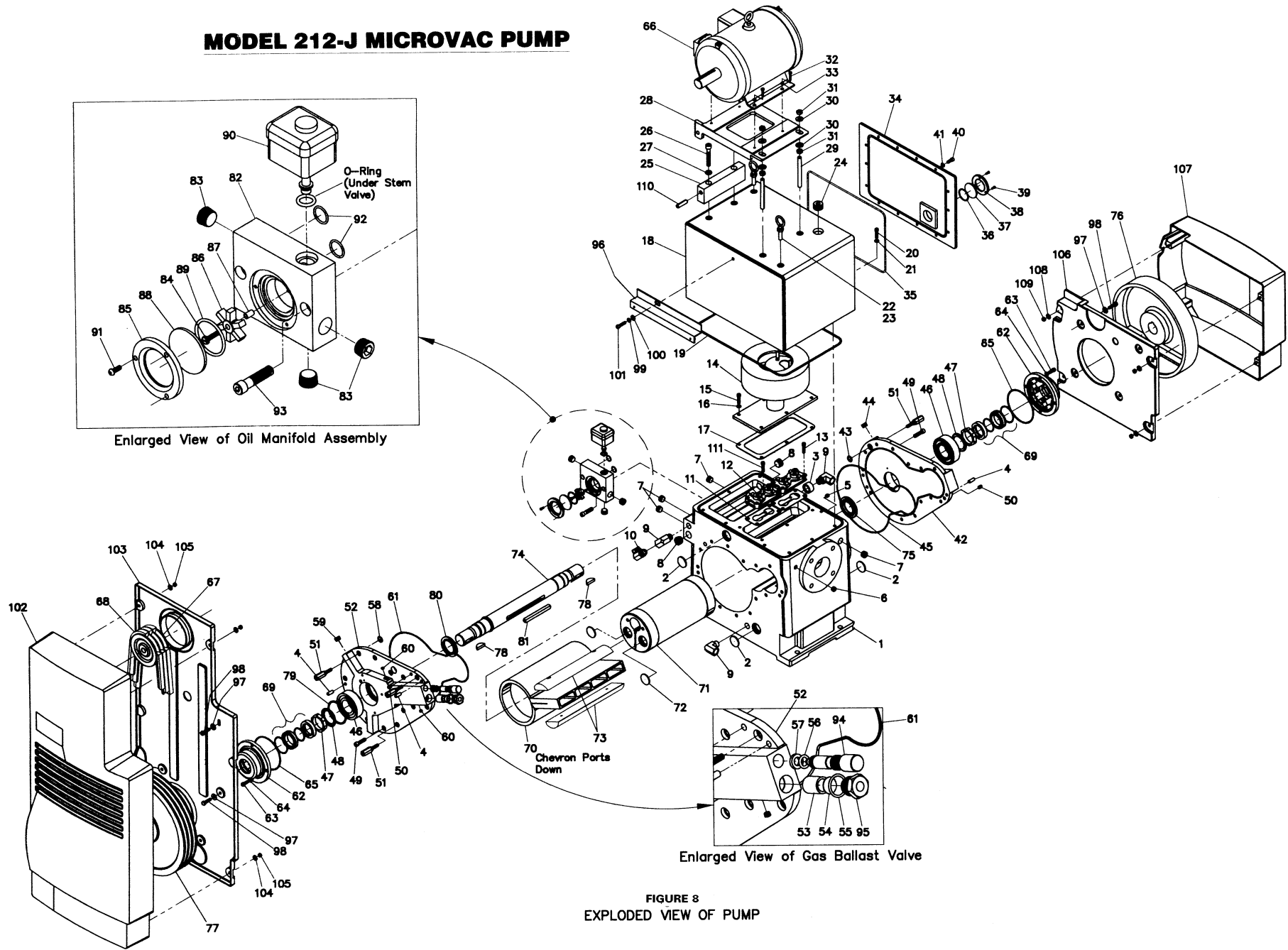


FIGURE 8
EXPLODED VIEW OF PUMP

MODEL 412-J14 MICROVAC PUMP

LOT NO. SC-78782 (11-99) AND FUTURE

SYM	PART NO.	DESCRIPTION	REF. DWG/ COMP. LIT.	QTY	UM	RSP
1	606-309-002	BELT GUARD ASSY (412J)	C-606-309-002	1	EA	
2	606-272-003	BRACKET BELT GUARD TOP	B-606-272-003	1	EA	
3	606-272-004	BRACKET BELT GUARD BOTTOM	B-606-272-004	1	EA	
3a	408-306-008	BRACKET BELT GUARD MIDDLE	B-408-306-008	1	EA	
3b	085-032-616	WASHER PLAIN NYLON 3/8 ID X		5	EA	✓
4	268-783-005	PULLEY (DRIVEN)	C-268-783-005-E	1	EA	✓
4a	085-050-233	PULLEY 3 GRV A-4.6 PD B-5.0 PD	A-085-050-233	1	EA	✓
4b	085-050-126	V-BELT BX SECT SET OF 3 BELTS		1	EA	✓
5	262-315-005	CAP END (DRIVE END)	C262-315-005-F	1	EA	
6	085-019-755	O RING 4-7/8 IDX5-1/8 OD.139CS		1	EA	✓
6	085-019-755	O RING 4-7/8 IDX5-1/8 OD.139CS		1	EA	✓
7	085-029-600	SEAL ROTARY OIL		1	EA	✓
8	085-019-492	LOCK NUT BRG STL N 10		2	EA	
9	085-019-491	LOCKWASHER BRG 2 ID X.058 THK		2	EA	
10	085-019-757	BALL BEARING		2	EA	✓
11	605-988-004	SIDE COVER 412 METRIC DR END	D-605-988-004D	1	EA	
11a	606-002-001	STEM VALVE	A-606-002-001D	2	EA	✓
11b	606-003-001	RETAINER CHECK VALVE	A-606-003-001B	2	EA	✓
11c	085-050-117	O-RING 13 1/2 ID X.139 C/S		2	EA	✓
11d	085-041-609	O RING 5/8 ID X .139 CS VITON		2	EA	✓
11e	085-050-120	SEAL 1/4 ID X 5/8 OD X 3/16 TK		2	EA	✓
11f	085-050-192	O-RING 15/16 ID X .139W (-213)		2	EA	✓
12	605-988-003	SIDE COVER 412 METRIC DEAD END	D-605-988-003D	1	EA	
13	262-318-003	RING SHOULDER SHAFT	A262-318-003-A	2	EA	
14	264-524-001	WOODRUFF KEY	A264-524-001-D	1	EA	
15	408-324-005	SQUARE KEY FOR ECC	A408-324-005-B	2	EA	
16	262-992-005	SHAFT (412)	D262-992-005-J	1	EA	
17	243-595-011	PISTON & SLIDE 212/412	C243-595-011-E	2	EA	
18	297-857-004	HINGE BAR(212-412)	B297-857-004-E	4	EA	
19	252-459-001	ECCENTRIC SOLID 412	C252-459-001-W	1	EA	
20	268-788-001	SPACER HINGE BAR	A268-788-001-D	1	EA	
20A	085-050-115	O-RING 1/2 ID X .139 W (-206)		2	EA	✓
21	085-050-361	SCR CAP SKT HD M6X1X30MM LG		6	EA	
22	264-785-002	RING BEARING	C264-785-002-N	1	EA	
23	085-033-232	BRG RLLR SPH 2.1654 IDX3.9370		1	EA	

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24	270-231-001	PIN RETAINING	A270-231-001E	1	EA	
25	243-926-002	GASKET VALVE PLATE	A-243-926-002A*	4	EA	
26	263-840-004	2 VALVE DECK SUB ASSEMBLY	263-840-004-D	4	EA	
27	269-037-001	GASKET OIL SEPARATOR	B269-037-001*	1	EA	
28	269-256-005	OIL SEPARATOR	D269-256-005-B	1	EA	
29	085-050-119	O-RING 28 1/4 ID X .210 C/S		1	EA	✓
30	607-059-001	RESERVOIR OIL	D-607-059-001	1	EA	
31	085-050-118	O-RING 23 ID X .210 C/S		1	EA	✓
32	605-432-005	COVER,RESERVOIR 412 CLASSIC	D-605-432-005A	1	EA	
34	085-035-996	ROLL PIN STL 1/2 D X 1 3/4 LG		2	EA	
35	606-180-001	BLOCK, HINGE	A606-180-001A	1	EA	
36	605-587-003	PLATFORM, MOTOR	C-605-587-003	1	EA	
38	605-618-002	STUD REAR M16X2	A-605-618-002	1	EA	
39	605-619-002	JACKSCREW FRONT M16X2	A-605-619-002	1	EA	
41	278-575-001	ECCENTRIC	C278-575-001-L	1	EA	
43	264-789-003	CAP END (DEAD END)	C264-789-003-B	1	EA	
44	606-191-003	PUMP HSG 412J METRIC (MACH)	D-606-191-003D	1	EA	
44a*	026-010-040	PLUG, STEEL FPS 3/4 NPT 3000#		2	EA	
44a*	085-049-934	PLUG, HEX, HOL. 1-3/16-12 STR THD W/O-RING, STL		2	EA	
45	606-280-002	OIL MANIFOLD ASSEMBLY	C-606-280-002A	1	EA	
45a	606-279-002	OIL MANIFOLD BLOCK	C-606-279-002	1	EA	
45b	605-770-003	LENS RETAINER	A-605-770-003B	2	EA	
45c	606-127-001	WHEEL PADDLE	B-606-127-001B	1	EA	
45d	606-130-001	AXLE, WHEEL	A-606-130-001	1	EA	
45e	085-050-125	LENS PYREX FL PL GLASS CIRCLE		2	EA	
45f	085-050-116	O-RING 1 3/4 ID X .139 C/S		2	EA	✓
45g	085-050-129	VALVE SOL 2WAY NC 7/16 ORIFICE	A-085-050-129	1	EA	
45h	026-010-039	PLUG 1/2 NPT SOC HD		3	EA	
45j	085-050-357	SCR CAP SKT BTN HD M5X.8X12MM		6	EA	
45k	085-050-327	SCR PNH SLTD STL M5X.8X20MM LG		1	EA	
45l	085-041-609	O RING 5/8 ID X .139 CS VITON		2	EA	✓
45m	085-050-328	SCR CAP SKT HD M10X1.5X45MM LG		2	EA	
46	085-029-217	EYEBOLT 3/4-10 X 4-1/4 LG		1	EA	
47	085-018-321	EYEBOLT 3/4-10 NC THD 2"UNDER		1	EA	

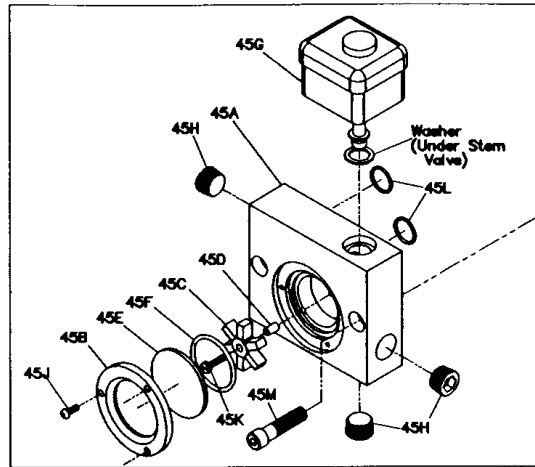
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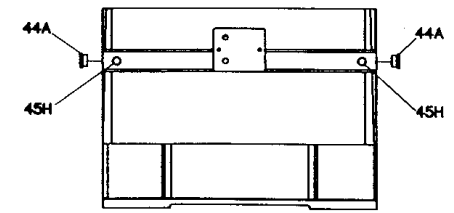
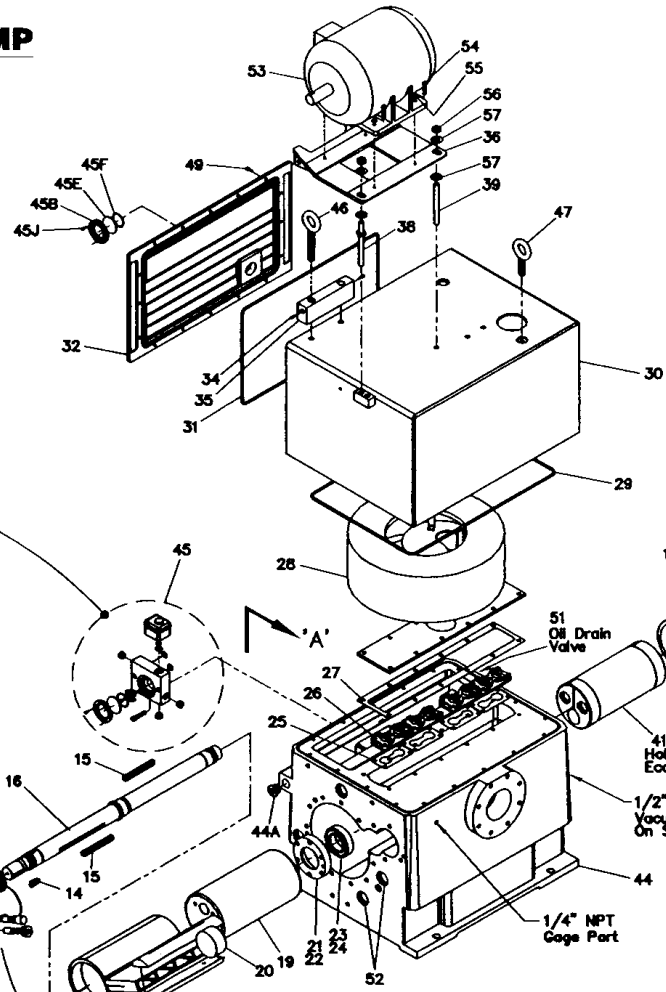
SYM	PART NO.	DESCRIPTION	REF. DWG/ COMP. LIT.	QTY	UM	RSP
<i>SOLENOID COILS FOR 45G (CHECK VOLTAGE BEFORE ORDERING)</i>						
	084-029-430	SOLENOID VALVE COIL 220/440V 50/60 CY.		1	EA	✓
	085-029-427	SOLENOID VALVE COIL 550V, 60 CY.		1	EA	✓
	085-029-431	SOLENOID VALVE COIL 110V 50/60 CY.		1	EA	✓
49	085-039-332	SCR SOC M8 X 20MM LG STL ALLOY		16	EA	
50	085-050-122	VALVE CHK CRTG BRS BODY (1"D X		1	EA	
50	085-050-122	VALVE CHK CRTG BRS BODY (1"D X		1	EA	
50a	085-050-128	SCREEN WIRE MESH 24 X 24 .014		2	EA	
51	085-033-233	COCK DRAIN BRASS 1/2MPTX3/4 M		1	EA	
52	085-048-063	PLUG EXPANSION 1 7/8 OD X .083		8	EA	
53	085-027-292	MTR EL 10HP 1800/230/460/3/60		1	EA	
54	085-050-356	SCR CAP HEX HD M10X1.5X25MM LG		4	EA	
55	085-041-950	WASHER LOCK SPLIT M10		4	EA	
56	085-050-280	NUT HEX THIN CL4 STL M16X2		3	EA	
57	085-050-152	WASHER SPHER MALE HALF(CONVEX)		4	EA	
<i>SYM NO. 44a, DEPENDING ON STOCK LOT, SIZE OF PLUG WILL DIFFER, PLEASE CHECK SIZE BEFORE ORDERING</i>						

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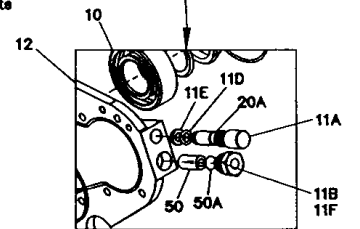
MODEL 412-J MICROVAC PUMP



Enlarged View of Oil Manifold Assembly (45)



View 'A' - Rear View of Pump Housing (Oil Manifold Assembly Not Shown)



Enlarged View of Gas Ballast Valve

