



SOUTHWEST OILFIELD PRODUCTS, INC. MUD PUMP EXPENDABLE PARTS LIST

SOUTHWEST 8422A FLUID END FOR EMSCO F-1000

®

MUD PUMP PERFORMANCE CHART

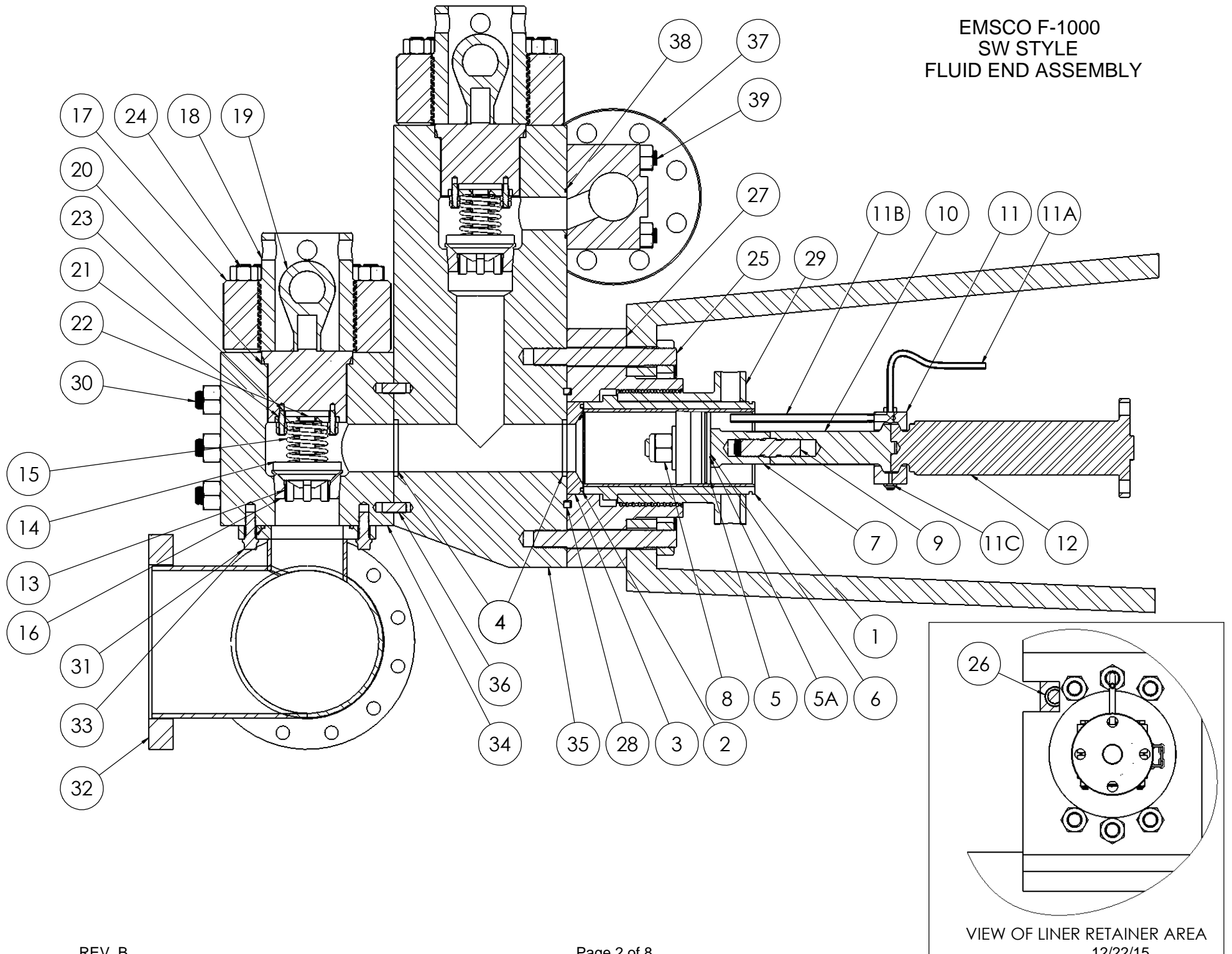
PUMP MODEL	MAX I.H.P.	MAX S.P.M.	STROKE LENGTH	LINER SIZE IN INCHES											
				4	4 1/2	5	5 1/4	5 1/2	5 3/4	6	6 1/4	6 1/2	6 3/4		
F-1000	1000	140	10"	MAX-P.S.I.	5000	5000	4330	3927	3575	3273	3010	2770	2558	2370	
				G.P.R.	1.63	2.06	2.55	2.81	3.08	3.37	3.67	3.98	4.31	4.65	
				G.P.M. @ 120 R.P.M.	196	247	306	337	370	404	440	478	517	558	

NOTE: I.H.P.= INPUT HORSE POWER S.P.M.= STROKE PER MINUTE P.S.I.= POUNDS PER SQUARE INCH G.P.R.= GALLONS PER REVOLUTION

*MAX – P.S.I. CALCULATIONS DO NOT EXCEED MAXIMUM FLUID END PRESSURE RATINGS

BASED ON 100% VOLUMETRIC EFFICIENCY AND 90% MECHANICAL EFFICIENCY

EMSCO F-1000
SW STYLE
FLUID END ASSEMBLY



FLUID END TYPE	MODEL OF PUMP	SIZE OF PUMP
SOUTHWEST 5000 PSI	EMSCO F-1000	6-3/4" X 10"

ITEM NO.	PART NO.	DESCRIPTION	QTY. REQ'D
	8422A	FLUID END ASSEMBLY: (CONSISTS OF ITEMS: 3,4,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,34,35,36,38 & 39)	3
1	1372YXX	LINER REFER TO GUIDE FOR ORDERING CHART FOR TYPE (G); (Y); AND FOR BORE SIZE (XX)	3
2	2974-8	LINER SEAL	3
3	8422-6	LINER WEARPLATE	3
4	2988	WEARPLATE AND MODULE SEAL	6
5	XX-BYY	PISTON REFER TO GUIDE FOR ORDERING CHART FOR SIZE (XX) AND FOR TYPE (YY)	3
5A	2932	PISTON BUSHING (FROM 1-5/8" TO 1-1/2" STRAIGHT BORE)	3
6	568-225	PISTON SEAL	3
7	6222-25	PISTON ROD (WITH ELASTIC STOP NUT)	3
8	API-4ESN	PISTON ROD NUT	3
9	1290-2	PISTON ROD CONNECTING STUD	3
10	6222-1	SUB ROD	3
11	6272CWNS	ROD CLAMP (WITH WATER SPRAY)	3
11A	1200H30	HOSE (1/2" X 30" WITH 1/2" MALE X 3/8" MALE CONNECTIONS)	3
11B	1200120	PIPE (3/8" X 12" GALVANIZED AND THREADED ON ONE END)	3
11C	4018-97	BOLT (3/4"X 3" GRADE 8 BOLT WITH LOCK NUT AND WASHER)	6
12	6200G72	PONY ROD (CLAMP TYPE)	3
13	SEE PAGE	VALVE	6
14	SEE PAGE	VALVE INSERT	6
15	SEE PAGE	VALVE SPRING	6
16	SEE PAGE	VALVE SEAT	6
	SWTM1700	HYDRAULIC SEAT PULLER KIT COMPLETE (REFER TO TOOLS SECTION IN CATALOG)	
	4475-2A	SOUTHWEST HP QUICK-CHANGE VALVE COVER ASSEMBLY: (CONSISTS OF ITEM NO. 17-24)	6
17	4475	THREADED FLANGE	6
18	4575	SCREW GLAND	6
19	4675-2A	PLUG (COMPLETE WITH VALVE GUIDE; BUSHING; AND SCREWS)	6
20	P129	HP VALVE COVER PLUG SEAL	6
21	4775-2R	VALVE GUIDE (COMPLETE WITH BUSHING #4700I)	6
22	4700I	VALVE GUIDE INSERT	6

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SOUTHWEST 5000 PSI	EMSCO F-1000	6-3/4" X 10"

ITEM NO.	PART NO.	DESCRIPTION	QTY. REQ'D
23	4016-99	VALVE GUIDE SCREW	12
24	4015-2	VALVE COVER STUD (WITH SW PART# HHN1250-7 1-1/4-7 HEAVY HEX NUT)	72
25	4017-63	POWER END STUD (WITH SW PART# HHN1500-8 1-1/2"-8 HEAVY HEX NUT)	18
26	4017-51	LINER RETAINER FLANGE SOCKET HEAD CAP SCREW	36
27	6422-4	LINER RETAINER FLANGE	3
28	8422-3	LINER RETAINER PILOT RING	3
29	6522	LINER RETAINER NUT	3
30	4016-97	SUCTION MODULE STUD (WITH SW PART# HHN1500-8 1-1/2"-8 HEAVY HEX NUT)	18
31	4017-81	SUCTION MANIFOLD CAP SCREW (WITH LOCK WASHER)	18
32	8522-51A	SUCTION MANIFOLD (FRONT OR SIDE INLET)	1
33	568-442	SUCTION MANIFOLD SEAL	3
34	8422-2S	SUCTION MODULE (STUDED ONLY)	3
35	8422-1D	DISCHARGE MODULE (STUDED ONLY)	3
36	8488-5	DOWEL PIN	6
37	8322-51	DISCHARGE MANIFOLD	1
38	568-241	DISCHARGE MANIFOLD SEAL	3
39	4017-46	DISCHARGE MANIFOLD STUD (WITH SW PART# HHN1250-8 1-1/4"-8 HEAVY HEX NUT)	12
40	9070006	DOUBLE LIP PONY ROD SEAL	3
41	9070007	SINGLE LIP PONY ROD SEAL	3
42	9060018	SPLASH GUARD	
		** POLYURETHANE SEAL AVAILABLE**	

SOUTHWEST**EMSCO F-1000****GUIDE TO ORDERING**

		PISTONS			LINERS		LINER SEALS	
SIZE	FAIL-SAFE	DUAL-DURO®	BLACK CAT	GRAYLOY®	ZIRCONIA	RUBBER	URETHANE	
4"	76BFS	76BDD	76BBC	1372G06	1372ZIR06	2974-8		
4 1/4"	77BFS	77BDD	77BBC	1372G07		2974-8		
4 1/2"	78BFS	78BDD	78BBC	1372G08	1372ZIR08	2974-8		
4 3/4"	79BFS	79BDD	79BBC	1372G09		2974-8		
5"	81BFS	81BDD	81BBC	1372G1	1372ZIR1	2974-8		
5 1/4"	82BFS	82BDD	82BBC	1372G2		2974-8		
5 1/2"	83BFS	83BDD	83BBC	1372G3	1372ZIR3	2974-8		
5 3/4"	84BFS	84BDD	84BBC	1372G4		2974-8		
6"	85BFS	85BDD	85BBC	1372G5	1372ZIR5	2974-8		
6 1/4"	86BFS	86BDD	86BBC	1372G6		2974-8		
6 1/2"	87BFS	87BDD	87BBC	1372G7	1372ZIR7	2974-8		
6 3/4"	88BFS	88BDD	88BBC	N/A		2974-8		
NOTE: DUAL-DURO® AND GRAYLOY® ARE REGISTERED TRADEMARKS OF SOUTHWEST® OILFIELD PRODUCTS.								

VALVES & SEATS (EMSCO F-1000)

TYPE	VALVE	INSERT	SPRING	STAINLESS SPRING	SEAT	PULLER HEAD	PULLER HEAD STYLE
SOUTHWEST (Full Open)	773-1B	N/A	SW5710-110L	N/A	873-2	SWTM3750	SPLIT JAW
FULL OPEN-ROUGHNECK (Cast N Place Insert)	SWND-6V2	N/A	SW5710-115	N/A	SWND-6S6	SWND-6PH SWTM27SXN	PANCAKE SPLIT JAW
FULL OPEN-ROUGHNECK (High Temp)	SWND-6V2HC	N/A	SW5710-115	N/A	SWND-6S6	SWND-6PH SWTM27SXN	PANCAKE SPLIT JAW
FULL OPEN-ROUGHNECK (w/Replaceable Urethane Insert)	SWND-6V1	SWND-6I	SW5710-115	N/A	SWND-6S6	SWND-6PH SWTM27SXN	PANCAKE SPLIT JAW
3 WEB DOUBLE ANGLE O-RING	SWR0500118	SWR0515844	SWR0513744	SWR0514790	SWR0504818	SWTM3-6	3 J HOOK
3 WEB (High Temp)	SWR0521487	N/A	SWR0513744	SWR0514790	SWR0504818	SWTM3-6	
3 WEB STANDARD PLATE	SWR0505012	SWR0504888	SWR0513937	SWR0514423	SWR0504818	SWTM3-6	
4 WEB	SWU5B-EH	SWUDD-6AB	SW5710-111	N/A	SW6ADD-B6	SWTM4-6	4 J HOOK
4 WEB (High Temp)	SWU5B-EHHT	SWUDD-6ABHT	SW5710-111	N/A	SW6ADD-B6	SWTM4-6	

PANCAKE



SPLIT JAW



3 J HOOK



4 J HOOK



**TORQUE SPECIFICATIONS FOR 8422A SOUTHWEST FLUID END ASSEMBLY
FOR EMSCO F-1000 5000 P.S.I.**

<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>TORQUE TYPE (EXPRESSED IN FOOT-POUNDS)</u>		
		<u>COPPERCOTE</u>	<u>MOLY GREASE</u>	<u>DRY (NOT RECOMMENDED)</u>
API-4 ESN	PISTON ROD NUT	NO MORE FORCE THAN ONE MAN ON 3' WRENCH/CHEATER COMBINATION		
4018-97	ROD CLAMP BOLT	150 MAXIMUM		
4015-2	VALVE COVER STUD	669	970	1338
4017-63	POWER END STUD	1397	2025	2794
4017-51	LINER RETAINER STUD	908	1363	1817
4016-97	SUCTION MODULE STUD	1397	2025	2794
4017-81	SUCTION MANIFOLD CAPSCREW	303	455	606
4017-46	DISCHARGE MANIFOLD STUD	697	1011	1395



SOUTHWEST
OILFIELD PRODUCTS, INC.

**8422-A FLUID END FOR EMSCO F-1000
REVISION SUMMARY**

<u>REVISION</u>	<u>DATE</u>	<u>REASON OF CHANGE</u>
REV A	4/09/15	UPDATED FLUID END ASSEMBLY DRAWING
REV B	12/22/15	UPDATED FLUID END ASSEMBLY DRAWING