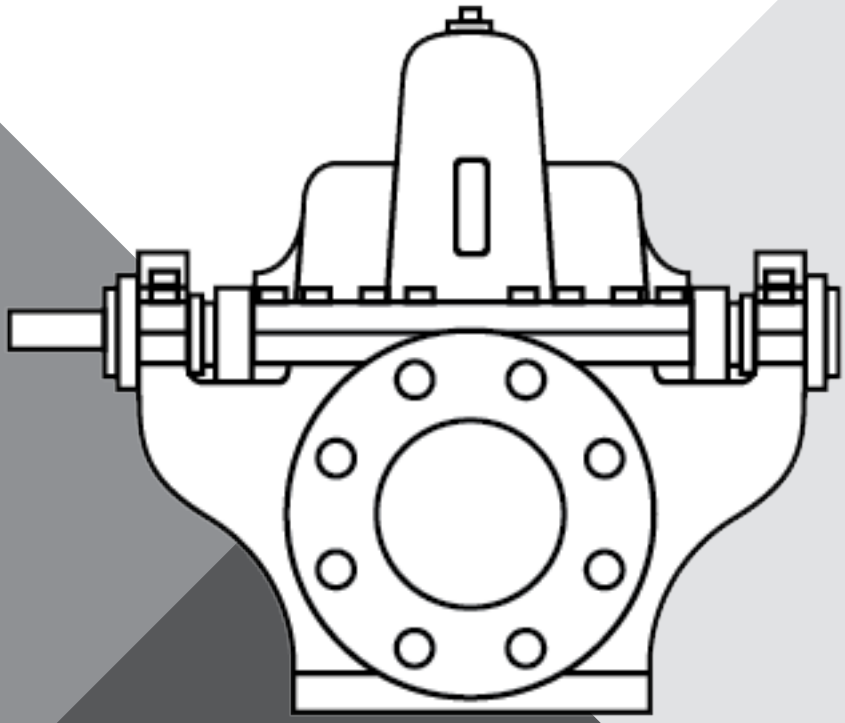
PENTAIR AURORA

SPLIT CASE FIRE PUMPS
410A SERIES



REPAIR PARTS INDEX

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A-03-226 (10-18-23)

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Note: Pumps are generally built in one of (5) five materials of construction:

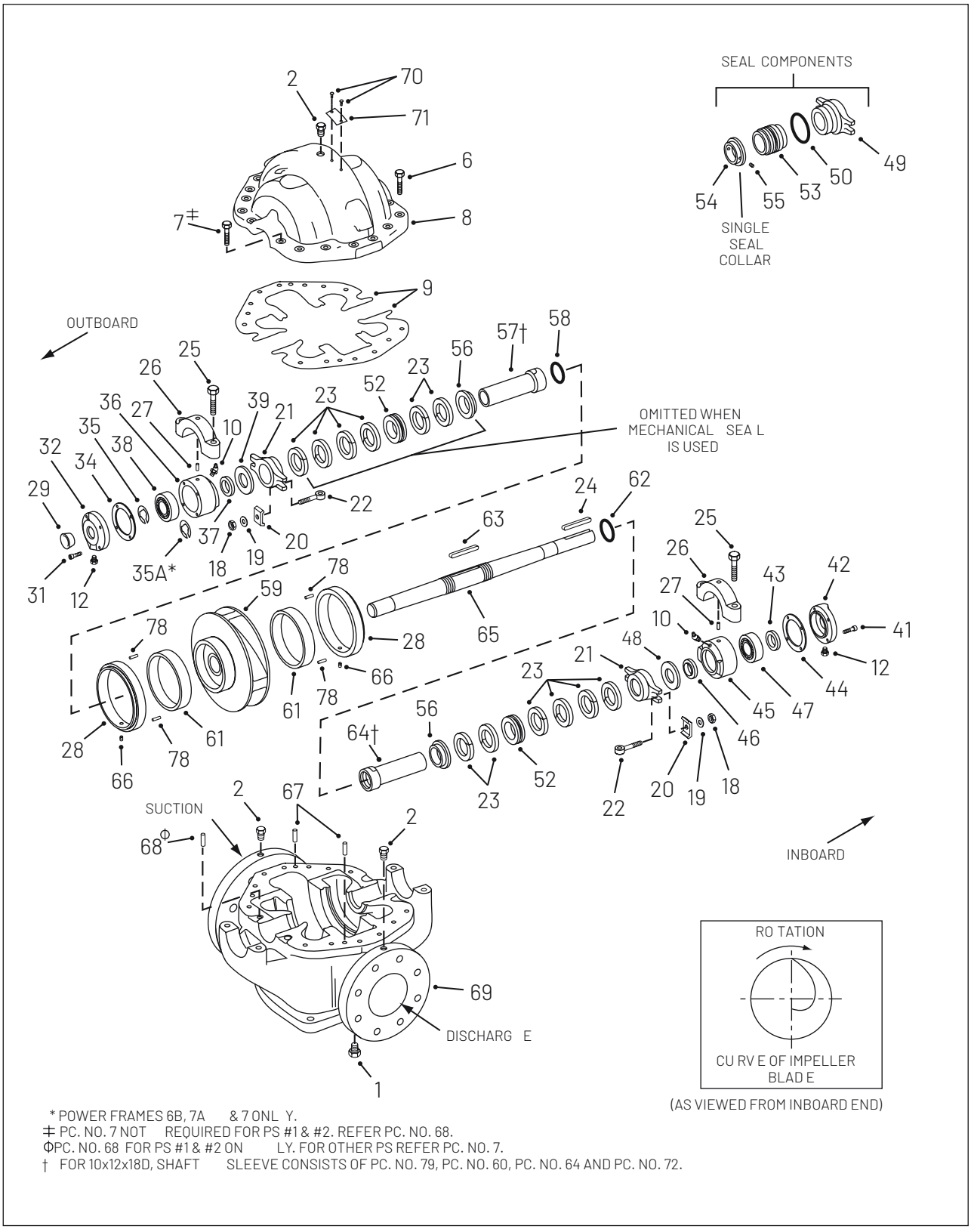
- B.F. = BRONZE FITTED
- A.I. = ALL IRON
- S.F. = STANDARD FITTED
- S.S. = STAINLESS STEEL
- A.B. = ALL BRONZE

The only difference between b.F. And s.F. Is the impeller material. B.F. Pumps have bronze impellers and s.F. Pumps have cast iron impellers.

SPLIT CASE MODEL DESIGNATIONS:

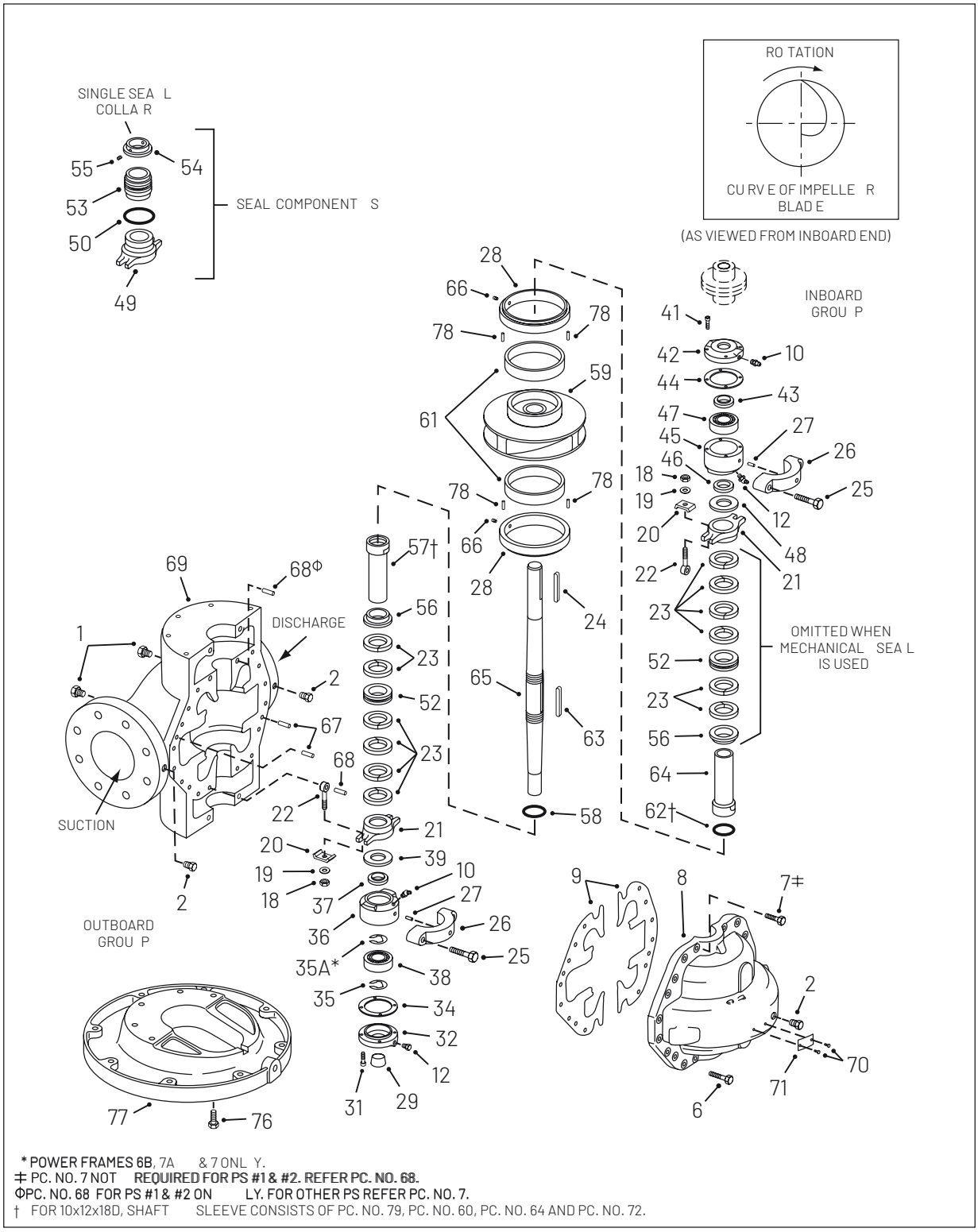
- MODEL 411 = HORIZONTAL FLEX COUPLED
- MODEL 411B = HORIZONTAL FLEX COUPLED BOTTOM SUCTION
- MODEL 412 = VERTICAL FLEXIBLE SHAFT
- MODEL 412C = VERTICAL FLEXIBLE SHAFT CHAIR MOUNT
- MODEL 413 = VERTICAL FLEX COUPLED
- MODEL 413C = VERTICAL FLEX COUPLED CHAIR MOUNT

MODEL 411 PIECE NUMBERS



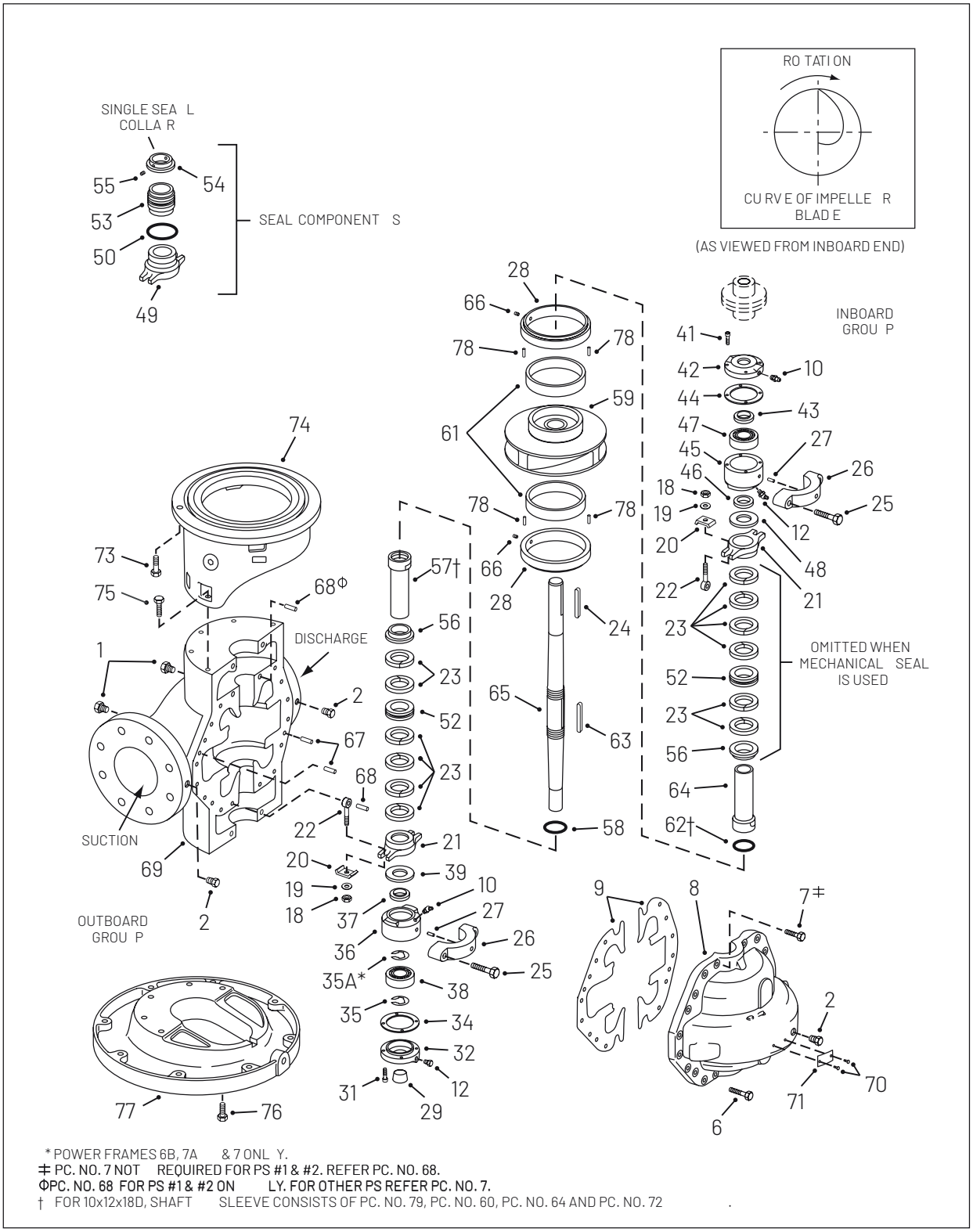
* POWER FRAMES 6B, 7A & 7 ONLY.
‡ PC. NO. 7 NOT REQUIRED FOR PS #1 & #2. REFER PC. NO. 68.
ΦPC. NO. 68 FOR PS #1 & #2 ONLY. FOR OTHER PS REFER PC. NO. 7.
† FOR 10x12x18D, SHAFT SLEEVE CONSISTS OF PC. NO. 79, PC. NO. 60, PC. NO. 64 AND PC. NO. 72.

MODEL 412 PIECE NUMBERS



* POWER FRAMES 6B, 7A & 7 ONL Y.
≠ PC. NO. 7 NOT REQUIRED FOR PS #1 & #2. REFER PC. NO. 68.
ΦPC. NO. 68 FOR PS #1 & #2 ON LY. FOR OTHER PS REFER PC. NO. 7.
† FOR 10x12x18D, SHAFT SLEEVE CONSISTS OF PC. NO. 79, PC. NO. 60, PC. NO. 64 AND PC. NO. 72.

MODEL 413 PIECE NUMBERS



* POWER FRAMES 6B, 7A & 7 ONLY.
‡ PC. NO. 7 NOT REQUIRED FOR PS #1 & #2. REFER PC. NO. 68.
ΦPC. NO. 68 FOR PS #1 & #2 ONLY. FOR OTHER PS REFER PC. NO. 7.
† FOR 10x12x18D, SHAFT SLEEVE CONSISTS OF PC. NO. 79, PC. NO. 60, PC. NO. 64 AND PC. NO. 72 .

411-412-413, 2 X 2-1/2 X 9 - 2 X 2-1/2 X 10 - 2 X 2-1/2 X 12 PARTS LIST

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
1	PLUG	2	600-0003	087	190	087	104
2	PLUG	5	600-0002	087	190	087	104
6	CAPSCREW 2x9&10	12	168-0490	082	082	082	104
	2x2-1/2x12	16	168-0490	082	082	082	104
7	PIN	REFER PC. NO. 68					
8	CASING HALF	1	INCLUDED WITH NO. 69				
9	GASKET 2x2-1/2x9&10	1	364-1262	598	598	598	598
	2x2-1/2x12	1	364-1256	598	598	598	598
10	GREASE FITTING	2	508-0001	651	651	651	651
12	PLUG	2	600-0001	087	087	087	087
18	NUT	4	544-0107		190	080	104
19	WASHER	4	908-0109		190	080	104
20	GLAND CLAMP	4	204-0120		190	360	104
21	GLAND (PACKING)A&C	2	372-0238	010	208	010	104
22	SWING BOLT	4	100-0216		190	082	104
22A	SWING BOLT ASSY. (18, 19, 20, 22)	4	099-0002	644			
23	PACKING	10	564-0152	802	802	802	802
24	KEY	1	472-0208	087	087	087	087
25	CAPSCREW	4	168-0490	082	190	082	104
26	BEARING CAP	2	163-0541	010		010	
27	PIN	2	592-0361	360	107	360	107
28	CASE RING	2	676-1744	208	208	010	107
29	PROTECTOR	1	624-0105	087	087	087	087
31	CAPSCREW	4	168-0015	082	082	082	082
32	CARTRIDGE CAP	1	164-0549	010	010	010	010
34	GASKET	1	364-1308	614	614	614	614
35	RETAINER RING	1	676-0440	088	088	088	088
36	CARTRIDGE	1	176-0064	010	010	010	010
37	GREASE SEAL	1	712-6322	653	653	653	653
38	OIL SEAL	1	712-0097	653	653	653	653
39	BEARING	1	068-0452	647	647	647	647
40	SLINGER	1	764-1012	478	478	478	478
41	CAPSCREW	4	168-0015	080	080	080	080
42	CARTRIDGE CAP	1	164-0549	010	010	010	010
43	GREASE SEAL	1	712-6321	653	653	653	653
	OIL SEAL	1	712-0052	653	653	653	653
44	GASKET	1	364-1308	614	614	614	614
45	CARTRIDGE	1	176-0064	010	010	010	010
46	GREASE SEAL	1	712-6322	653	653	653	653
	OIL SEAL	1	712-0097	653	653	653	653
47	BEARING	1	068-1905	647	647	647	647
48	SLINGER	1	764-1012	478	478	478	478
49	GLAND (SEAL)	2	372-0285	010	208	010	104
50	O-RING	2	364-0417	457	457	457	457
52	LANTERN RING	2	676-1767	512	512	512	512
53	SEAL	2	712-0907	753	764	753	764
54	COLLAR	2	224-0180	208	208	010	104
55	SETSCREW	4	724-0081	104	104	104	104
56	BUSHING	2	136-1423	208	208	010	104
57	SLEEVE WITH "O" RING PC. NO. 58 (NOTE 1) SLEEVE						
	(PACKING)	1	756-0641	644	644	646	623
	(SEALS)	1	756-0641	644	644	623	623
58	O-RING	1	364-0328	457	457	457	457

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
59	IMPELLER 2x2-1/2x9	1	443-2104	227	227	010	104
	2x2-1/2x10	1	443-2105	227	227	010	104
	2x2-1/2x12	1	443-2106	227	227	010	104
	IMPELLER (FITTED WITH OPT. RING NO. 61)	FOR S.F. CONSTRUCTION USE MATERIAL 655					
	2x2-1/2x9	1	443-2479	643	643	642	646
	2x2-1/2x10	1	443-2476	643	643	642	646
	2x2-1/2x12	1	443-2471	643	643	642	646
61	IMP. RING (OPT.)	BEFORE 10/1/85					
		2	676-1047	208	108	010	104
		AFTER 10/1/85					
		2	676-2043	208	208	010	104
62	O-RING	1	364-0328	457	457	457	457
63	KEY	1	472-0410	107	104	107	104
64	SLEEVE WITH "O" RING PC. NO. 62 (NOTE 1) SLEEVE						
	(PACKING)	1	756-0641	644	644	646	623
	(SEALS)	1	756-0641	644	644	623	623
65	SHAFT	1	728-0945	063	104	063	104
66	PIN	2	592-0361	360		360	
		2	592-0051		235		235
67	PIN	2	592-0375	360	107	360	107
68	PIN	4	592-0213	104	104	104	104
69	MODEL 411 PUMPS CASING ASSY. (1, 2, 8, 26, 27, 66)						
	2x2-1/2x9	1	179-1563	010		010	104
	2x2-1/2x10	1	179-1564	010		010	104
	2x2-1/2x12	1	179-1565	010	208	010	104
	MODEL 412 & 413 PUMPS CASING ASSEMBLY (1, 2, 8, 26, 27, 66)						
	2x2-1/2x9	1	179-1575	010	208	010	104
	2x2-1/2x10	1	179-1576	010	208	010	104
	2x2-1/2x12	1	179-1577	010	208	010	104
70	DRIVE SCREW	2	708-0013	365	365	365	365
71	NAMEPLATE	2	532-0045	114	114	114	114
73	CAPSCREW						
	FR. 143HP-256HP	4	168-0388	082	082	082	082
	FR. 284HPH-445HP	4	168-0566	082	082	082	082
74	BRACKET						
	FR. 143HP-256HP	1	116-0373	010	010	010	010
	FR. 284HPH-445HP	1	116-0374	010	010	010	010
75	CAPSCREW	5	168-0490	082	082	082	082
76	CAPSCREW	5	168-0490	082	082	082	082
77	BASE	1	060-0484	010	010	010	010
78	SETSCREW	NOT REQUIRED					

Note 1) Material Code 644 - Sleeve 208, "O" Ring 457/ 646 - Sleeve 108, "O" Ring 457/ 623 - Sleeve 104, "O" Ring 457

411-412-413, 2-1/2 X 3 X 10B - 2-1/2 X 3 X 12 - 3 X 4 X 10B&C - 3 X 4 X 14 - 4 X 5 X 10B PARTS LIST

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
1	PLUG	2	600-0003	087	190	087	104
2	PLUG	3	600-0002	087	190	087	104
6	CAPSCREW	16	168-0492	082	082	082	082
	3x4x14	20	168-0492	082	082	082	082
7	PIN	REFER PC NO. 68					
8	CASING HALF	1	INCLUDED WITH NO. 69				
9	GASKET 2-1/2x3x10B	1	364-1263	598	598	598	598
	2-1/2x3x12	1	364-1264	598	598	598	598
	3x4x10B&C	1	364-1265	598	598	598	598
	3x4x14 4x5x10B	1	364-1266	598	598	598	598
	4x5x10B	1	364-1265	598	598	598	598
10	GREASE FITTING	2	508-0015	651	651	651	651
12	PLUG	2	600-0001	087	087	087	087
12A	PLUG*	6	600-0003	087	087	087	087
18	NUT	4	544-0107		190		104
19	WASHER	4	908-0109		190		104
20	GLAND CLAMP	4	204-0120		190		104
21	GLAND (PACKING)	2	372-0225	010	208	010	104
22	SWING BOLT	4	100-0216		190		104
22A	SWING BOLT ASSY. (18, 19, 20, 22)	4	099-0005	644		644	
23	PACKING	12	564-0151	802	802	802	802
24	KEY	1	472-0247	087	087	087	087
25	CAPSCREW	4	168-0494	080		080	104
26	BEARING CAP	2	163-0306	010		010	
27	PIN	2	592-0361	360	107	360	107
28	CASE RING						
	2-1/2x3x10B & 12	2	676-1745	208	208	010	107
	3x4x10B, C & 14	2	676-1746	208	208	010	107
	4x5x10B	2	676-1719	208	208	010	107
29	PROTECTOR	1	624-0080	087	087	087	087
31	CAPSCREW	4	168-0015	082	082	082	082
32	CARTRIDGE CAP	1	164-0531	010	010	010	010
34	GASKET	1	364-1309	614	614	614	614
35	RETAINING RING	1	676-0267	088	088	088	088
36	CARTRIDGE	1	176-0065	010	010	010	010
37	GREASE SEAL	1	712-6324	653	653	653	653
	OIL SEAL	2	712-0053	653	653	653	653
38	BEARING	1	068-0454	647	647	647	647
39	SLINGER	1	764-1017	478	478	478	478
41	CAPSCREW	4	168-0015	080	080	080	080
42	CARTRIDGE CAP	1	164-0531	010	010	010	010
43	GREASE SEAL	1	712-0231	653	653	653	653
	OIL SEAL	1	712-0016	653	653	653	653
44	GASKET	1	364-1309	614	614	614	614
	CARTRIDGE	1	176-0065	010	010	010	010
	GREASE SEAL	1	712-6324	653	653	653	653
	OIL SEAL	2	712-0053	653	653	653	653
47	BEARING	1	068-1907	647	647	647	647
48	SLINGER	1	764-1017	478	478	478	478
49	GLAND (SEAL)	2	372-0287	010	208	010	104
50	O-RING	2	364-0420	457	457	457	457
52	LANTERN RING	2	676-1698	512	512	512	512
53	SEAL	2	712-0910	753	764	753	764
54	COLLAR	2	224-0174	208	208	010	104
55	SETSCREW	4	724-0081	104	104	104	104
56	BUSHING	2	136-1411	208	208	010	104

Note 1) Material Code 644 - Sleeve 208, "O" Ring 457/ 646 - Sleeve 108, "O" Ring 457/ 623 - Sleeve 104, "O" Ring 457

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
	SLEEVE WITH "O" RING PC. NO. 58 (NOTE 1)						
57	SLEEVE (PACKING)	1	756-0642	644	644	646	623
	(SEALS)	1	756-0642	644	644	623	623
58	O-RING	1	364-0368	457	457	457	457
59	IMPELLER						
	2-1/2x3x10B	1	443-2295	227	227	010	104
	2-1/2x3x12	1	443-2108	227	227	010	104
	3x4x10B	1	443-2266	227	227	010	104
	3x4x10C & 14	1	443-2110	227	227	010	104
	4x5x10B	1	443-2251	227	227	010	104
	IMPELLER (FITTED WITH OPT. RING NO. 61)	FOR S.F. CONSTRUCTION. CONSTRUCTION USE MATERIAL 655					
	2-1/2x3x10B	1	443-2470	643	643	642	646
	2-1/2x3x12	1	443-2475	643	643	642	646
	3x4x10B	1	443-2265	643	643	642	646
	3x4x10C & 14	1	443-1881	643	643	642	646
	4x5x10B	1	443-2468	643	643	642	646
61	IMP. RING (OPT.)	BEFORE 10/1/85					
	2-1/2x3x10B & 12	2	676-1056	208	208	010	104
	3x4x10B, C & 14	2	676-1058	208	208	010	104
	4x5x10B	2	676-1892	208	208	010	104
	IMP. RING (OPT.)	AFTER 10/1/85					
	2-1/2x3x10B & 12	2	676-2042	208	208	010	104
	3x4x10B, C & 14	2	676-1058	208	208	010	104
	4x5x10B	2	676-2040	208	208	010	104
62	O-RING	1	364-0368	457	457	457	457
63	KEY	1	472-0411	107	104	107	104
64	SLEEVE (PACKING)	1	756-0642	644	644	646	623
	(SEALS)	1	756-0642	644	644	623	623
65	SHAFT	1	728-0946	063	104	063	104
66	PIN	2	592-0361	360		360	
		2	592-0051		235		235
67	PIN	2	592-0375	360	107	360	107
68	PIN	4	592-0213	104	104	104	104
69	MODEL 411 PUMPS						
	CASING ASSY.						
	(1, 2, 6, 8, 26, 27, 66)						
	2-1/2x3x10B	1	179-1357	010	208	010	104
	2-1/2x3x12	1	179-1358	010	208	010	104
	3x4x10B&C	1	179-1359	010	208	010	104
	3x4x14	1	179-1360	010		010	104
	4x5x10B	1	179-1361	010	208	010	104
	MODEL 412 & 413						
	PUMPS						
	2-1/2x3x10B	1	179-1445	010	208	020	104
	2-1/2x3x12	1	179-1446	010	208	010	104
	3x4x10B&C	1	179-1447	010	208	010	104
	3x4x14	1	179-1448	010	208	010	104
	4x5x10B	1	179-1449	010	208	010	104
70	DRIVE SCREW	2	708-0013	365	365	365	365
71	NAMEPLATE	1	532-0045	114	114	114	114
73	CAPSCREW						
	FR. 143HP-256HP	4	168-0388	082	082	082	082
	FR. 284HPH-445HP	4	168-0566	082	082	082	082
74	BRACKET						
	FR. 143HP-256HP	1	116-0373	010	010	010	010
	FR. 284HPH-445HP	1	116-0374	010	010	010	010
75	CAPSCREW	5	168-0490	082	082	082	082
76	CAPSCREW	5	168-0490	082	082	082	082
77	BASE	1	060-0484	010	010	010	010
78	SETSCREW	NOT REQUIRED					

411-412-413, 4 X 5 X 11A, C & D - 4 X 5 X 15 PARTS LIST

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
1	PLUG	3	600-0004	028	190	028	104
2	PLUG	2	600-0002	087	190	087	104
6	CAPSCREW	14	168-0492	082	082	082	104
	4x5x15	16	168-0492	082	082	082	104
7	CAPSCREW	4	168-0492	082	082	082	104
8	CASING HALF	1	INCLUDED WITH NO. 69				
9	GASKET		BEFORE MARCH 1979				
	4x5x11 A	1	364-1267	614	614	614	614
	4x5x11 C	1	364-1267	614	614	614	614
	GASKET		AFTER MARCH 1979				
	4x5x11A	1	364-0099	598	598	598	598
	4x5x11C	1	364-0099	598	598	598	598
	4x5x11D	1	364-2165	598	598	598	598
	4x5x15 (ALL)	1	364-1268	598	598	598	598
10	GREASE FITTING	2	508-0015	651	651	651	651
12	PLUG	2	600-0001	087	087	087	087
12A	PLUG*	6	600-0003	087	087	087	087
18	NUT	4	544-0109		190	080	104
19	WASHER	4	908-0112		190	080	104
20	GLAND CLAMP	4	204-0120		190	360	104
21	GLAND (PACKING)	2	372-0616	104	104	104	104
	GLAND (PACKING) 4X5X11D	1	372-0547	010	208	010	104
22	SWING BOLT	4	100-2011	104	190	104	104
22A	SWING BOLT ASSY. (18, 19, 20, 22)	4	099-0014	644			
23	PACKING	10	564-0175	816	816	816	816
24	KEY	1	472-0318	087	087	087	087
25	CAPSCREW	4	168-0494	080	190	080	104
26	BEARING CAP	2	163-0307	010		010	
27	PIN	2	592-0361	360	107	360	107
28	CASING RING						
	4x5x11A	2	676-1720	208	208	010	107
	4x5x11C	2	676-1747	208	208	010	107
	4x5x11D	2	676-2136	208	208	010	107
	4x5x15	2	676-1747	208	208	010	107
29	PROTECTOR	1	624-0081	087	087	087	087
31	CAPSCREW	4	168-0260	082	082	082	082
32	CARTRIDGE CAP	1	164-0550	010	010	010	010
34	GASKET	1	364-1310	614	614	614	614
35	RETAINING RING	1	676-0929	088	088	088	088
36	CARTRIDGE	1	176-0066	010	010	010	010
37	GREASE SEAL	1	712-6326	653	653	653	653
	OIL SEAL	1	721-0017	653	653	653	653
38	BEARING	1	068-0455	647	647	647	647
39	SLINGER	1	764-1020	478	478	478	478
41	CAPSCREW	4	168-0260	082	082	082	082
42	CARTRIDGE CAP	1	164-0550	010	010	010	010
43	GREASE SEAL	1	712-6325	653	653	653	653
	OIL SEAL	1	712-0019	653	653	653	653
44	GASKET	1	364-1310	614	614	614	614
45	CARTRIDGE	1	176-0066	010	010	010	010
46	GREASE SEAL	1	712-6326	653	653	653	653
	OIL SEAL	1	712-0017	653	653	653	653
47	BEARING	1	068-1908	647	647	647	647
48	SLINGER	1	764-1020	478	478	478	478
49	GLAND (SEAL)	2	372-0289	010	208	010	104
50	O-RING	2	364-0423	457	457	457	457
52	LANTERN RING	2	676-1699	512	512	512	512
53	SEAL	2	712-1012	753	764	753	764
54	COLLAR	2	224-0175	208	208	010	104

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
55	SETSCREW	4	724-0081	104	104	104	104
56	BUSHING	2	136-1412	208	208	010	104
57	SLEEVE WITH "O" RING PC. NO. 58 (NOTE 1)						
	SLEEVE (PACKING)	1	756-0643	644	644	646	623
	(SEALS)	1	756-0643	644	644	623	623
58	O-RING	1	364-0372	457	457	457	457
59	IMPELLER						
	4x5x11A	1	443-2112	227	227	010	104
	4x5x11C	1	443-0147	227	227	010	104
	4x5x11D	1	443-2984	227	227	-	-
	4x5x15	1	443-2115	227	227	010	104
	IMPELLER (FITTED WITH OPT. RING NO. 61)	FOR S.F. USE MATERIAL 655 CONSTRUCTION					
	4x5x11A	1	443-2478	643	643	642	646
	4x5x11C	1	443-2466	643	643	642	646
	4x5x15	1	443-1885	643	643	642	646
61	IMP. RING (OPT.)		BEFORE 10/1/85				
	4x5x11A	2	676-1893	208	208	010	104
	4x5x11C	2	676-1059	208	208	010	104
	4x5x11 D		N/A	N/A	N/A	N/A	N/A
	4x5x15	2	676-1059	208	208	010	
	IMP. RING (OPT.)		AFTER 10/1/85				
	4x5x11A	2	676-2045	208	208	010	104
	4x5x11C	2	676-2038	208	208	010	104
	4x5x11D		N/A	N/A	N/A	N/A	N/A
	4x5x15	2	676-1059	208	208	010	104
62	O-RING	1	364-0372	457	457	457	457
63	KEY	1	472-0412	107	104	107	104
64	SLEEVE WITH "O" RING PC. NO. 62 (NOTE 1)						
	SLEEVE (PACKING)	1	756-0643	644	644	646	623
	(SEALS)	1	756-0643	644	644	623	623
	FOR 4X5X11 D	1	756-0763	644	644	645	623
65	SHAFT	1	728-0947	063	104	063	104
66	PIN	2	592-0361	360		360	
		2	592-0051		235		235
	4X5X11 D	2	592-0361	360	235	360	235
67	PIN	2	592-0375	360	107	360	107
68	PIN		NOT REQUIRED				
69	MODEL 411 PUMPS CASING ASSY. (1, 2, 8, 26, 27, 66)						
	4x5x11A	1	179-1363	010	208	010	104
	4x5x11C	1	179-1363	010	208	010	104
	4x5x11 D	1	179-2511	010	208	010	104
	4x5x15	1	179-1364	010	208	010	104
	MODEL 412 & 413 PUMPS CASING ASSY. (1, 2, 8, 26, 27, 66)						
	4x5x11A	1	179-1451	010	208	010	104
	4x5x11C	1	179-1451	010	208	010	104
	4x5x11 D	1	179-2518	010	208	010	104
	4x5x15	1	179-1452	010	208	010	104
70	DRIVE SCREW	2	708-0013	365	365	365	365
71	NAMEPLATE	1	532-0045	114	114	114	114
73	CAPSCREW						
	FR. 143HP-256HP	4	168-0388	082	082	082	082
	FR. 284HPH-445HP	4	168-0570	082	082	082	082
74	BRACKET						
	FR. 143HP-256HP	1	116-0376	010	010	010	010
	FR. 284HPH-445HP	1	116-0364	010	010	010	010
75	CAPSCREW	5	168-0562	082	082	082	082
76	CAPSCREW	5	168-0562	082	082	082	082
77	BASE	1	060-0485	010	010	010	101
78	SETSCREW		NOT REQUIRED				

411-412-413, 4 X 6 X 18B - 5 X 6 X 11A&C - 5 X 6 X 15 - 5 X 6 X 17 - 6 X 8 X 11 - 8 X 8 X 11B PARTS LIST

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
1	PLUG	3	600-0004	028	190	028	104
2	PLUG MODEL 411	2	600-0002	087	190	087	104
	MODEL 412 & 413	4	600-0002	087	190	087	104
6	CAPSCREW						
	5X6X11A, 6X8X11,						
	8X8X11B	14	168-0564	082	082	082	104
	5X6X11C, 5X6X15						
	5X6X17	16	168-0564	082	082	082	104
	4X6X18B	20	158-0564	082	082	082	104
7	CAPSCREW	4	168-0494	082	082	082	104
8	CASING HALF	1	INCLUDED WITH NO. 69				
9	GASKET 4X6X18B	1	364-0801	598	598	598	598
	5X6X11A	1	364-1269	598	598	598	598
	5X6X11C	1	364-0809	598	598	598	598
	5X6X15	1	364-1270	598	598	598	598
	5X6X17	1	364-1270	598	598	598	598
	6X8X11	1	364-1271	598	598	598	598
	8X8X11B	1	364-1271	598	598	598	598
10	GREASE FITTING	2	508-0015	651	651	651	651
12	PLUG	2	600-0001	087	087	087	087
12A	PLUG*	6	600-0003	087	087	087	087
18	NUT	4	544-0109		190	080	104
19	WASHER	4	908-0112		190	080	104
20	GLAND CLAMP	4	204-0120		190	360	104
21	GLAND (PACKING)	2	372-0227	010	208	010	104
22	SWING BOLT	4	100-2011	104	190	104	104
22A	SWING BOLT ASSY. (18, 19, 20, 22)	4	099-0014	644			
23	PACKING	12	564-0176	816	816	816	816
24	KEY	1	472-0318	087	087	087	087
25	CAPSCREW	4	168-0566	082	190	082	104
26	BEARING CAP	2	163-0308	010		010	
27	PIN	2	592-0361	360	107	360	107
28	CASE RING						
	4X6X18B	2	676-1748	208	208	010	107
	5X6X11A & C	2	676-1748	208	208	010	107
	5X6X15	2	676-1748	208	208	010	107
	5X6X17, 6X8X11	2	676-1748	208	208	010	107
	8X8X11B	2	676-1721	208	208	010	107
29	PROTECTOR	1	624-0081	087	087	087	087
31	CAPSCREW	4	168-0260	082	082	082	082
32	CARTRIDGE CAP	1	164-0532	010	010	010	010
34	GASKET	1	364-1311	614	614	614	614
35	RETAINING RING	1	676-0935	088	088	088	088
36	CARTRIDGE	1	176-0067	010	010	010	010
37	GREASE SEAL	1	712-6327	653	653	653	653
	OIL SEAL	1	712-6327	653	653	653	653
38	BEARING	1	068-0456	647	647	647	647
39	SLINGER	1	764-1022	478	478	478	478
41	CAPSCREW	4	168-0260	082	082	082	082
42	CARTRIDGE CAP	1	164-0532	010	010	010	010
43	GREASE SEAL	1	712-6326	653	653	653	653
	OIL SEAL	1	712-0017	653	653	653	653
44	GASKET	1	364-1311	614	614	614	614
45	CARTRIDGE	1	176-0067	010	010	010	010

*USED WITH WATER COOLED CARTRIDGE CAPS ONLY

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
46	GREASE SEAL	1	712-6327	653	653	653	653
	OIL SEAL	1	712-6327	653	653	653	653
47	BEARING 5X6X11C (3500)	1	068-1909	647	647	647	647
		1	068-0359	647	647	647	647
48	SLINGER	1	764-1022	478	478	478	478
49	GLAND (SEAL)	2	372-0291	010	208	010	104
50	O-RING	2	364-0425	457	457	457	457
52	LANTERN RING	2	676-1700	512	512	512	512
53	SEAL	2	712-1014		764		764
		2	712-1014	753		753	
54	COLLAR	2	224-0176	208	208	010	
55	SETSCREW	4	724-0081	104	104	104	
56	BUSHING	2	136-1413	208	208	010	
57	SLEEVE WITH "O" RING PC. NO. 58 (NOTE 1)						
	SLEEVE (PACKING)	1	756-0644	644	644	646	
	SLEEVE (SEALS)	1	756-0644	644	644	623	
58	O-RING	1	364-0375	457	457	457	
59	IMPELLER 4X6X18B	1	443-0648	227	227	010	104
	5X6X11A	1	443-2116	227	227	010	104
	5X6X11C	1	443-2300	227	227	010	104
	5X6X15	1	443-2117	227	227	010	104
	5X6X17	1	443-2118	227	227	010	104
	6X8X11	1	443-2116	227	227	010	104
59	IMPELLER 8X8X11B	1	443-2122	227	227	010	104
	IMPELLER (FITTED WITH OPT. NO. 61 IMP. RING)		FOR S.F. USE MATERIAL 655 CONSTRUCTION				
	4X6X18B	1	443-1021	643	643	642	646
	5X6X11A	1	443-0126	643	643	642	646
	5X6X11C	1	443-2480	643	643	642	646
	5X6X15	1	443-2467	643	643	642	646
	5X6X17	1	443-1887	643	643	642	646
	6X8X11	1	443-0126	643	643	646	646
	8X8X11B	1	443-0119	643	643	642	646
61	IMP. RING (OPT.)		BEFORE 10/1/85				
	4X6X18B, 5X6X11A & C						
	5X6X15, 5X6X17 &						
	6X8X11	2	676-1071	208	208	010	104
	8X8X11B	2	676-1894	208	208	010	104
			AFTER 10/1/85				
	4X6X18B, 5X6X11A &5X6X17, 6X8X11	2	676-1071	208	208	010	104
	5X6X11C	2	676-2046	208	208	010	104
	5X6X15	2	676-2039	208	208	010	104
	8X8X11B	2	676-1894	208	208	010	104
62	O-RING	1	364-0375	457	457	457	457
63	KEY	1	472-0412	107	104	107	104

NOTE 1) MATERIAL CODE
644 - SLEEVE 208, "O" RING 457
646 - SLEEVE 108, "O" RING 457
623 - SLEEVE 104, "O" RING 457

411-412-413, 4 X 6 X 18B - 5 X 6 X 11A&C - 5 X 6 X 15 - 5 X 6 X 17 - 6 X 8 X 11 - 8 X 8 X 11B PARTS LIST

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
	SLEEVE WITH "O" RING PC. NO. 62 (NOTE 1)						
64	SLEEVE (PACKING)	1	756-0644	644	644	646	623
	SLEEVE (SEALS)	1	756-0644	644	644	623	623
65	SHAFT	1	728-0948	063	104	063	104
66	PIN	2	592-0361	360		360	
		2	592-0051		235		235
67	PIN	2	592-0375	360	107	360	107
68	PIN	NOT REQUIRED					
69	MODEL 411 PUMPS CASING ASSEMBLY (1, 2, 8, 26, 27, 66)						
	4X6X18B	1	179-2047	010	227	010	104
	5X6X11A	1	179-1365	010	227	010	104
	5X6X11C	1	179-2129	010	227	010	104
	5X6X15	1	179-1366	010	227	010	104
	5X6X17	1	179-1367	010	227	010	104
	6X8X11	1	179-1368	010	227	010	014
	8X8X11B	1	179-1371	010		010	014
	MODEL 412 & 413 PUMPS CASING ASSY. (1, 2, 8, 26, 27, 66)						
	4X6X18B	1	179-2101	010	208	010	104
	5X6X11A	1	179-1453	010	208	010	104
69	5X6X11C	1	179-2135	010	208	010	104
	5X6X15	1	179-1454	010	208	010	104
	5X6X17	1	179-1455	010	208	010	104
	6X8X11	1	179-1456	010	208	010	104
	8X8X11B	1	179-1459	010	208	010	104
70	DRIVE SCREW	2	708-0013	365	365	365	365
71	NAMEPLATE	1	532-0045	114	114	114	114
	CAPSCREW						
73	FR. 143HP-256HP	4	168-0388	082	082	082	082
	FR. 284HPH-445HP	4	168-0570	082	082	082	082
	BRACKET						
74	FR. 143HP-256HP	1	116-0376	010	010	010	010
	FR. 284HPH-445HP	1	116-0364	010	010	010	010
75	CAPSCREW	5	168-0562	082	082	082	082
76	CAPSCREW	5	168-0562	082	082	082	082
77	BASE	1	060-0485	010	010	010	010
78	SETSCREW	6	724-0027	104	104	104	104

411-412-413, 6 X 8 X 11HH PARTS LIST

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
1	PLUG	3	600-0004	028		028	
2	PLUG MODEL 411	2	600-0002	087		087	
	MODEL 412 & 413	4	600-0002	087		087	
6	CAPSCREW	24	168-0636	082		082	
7	CAPSCREW	4	168-0494	082		082	
8	CASING HALF	1	INCLUDED WITH NO. 69				
9	GASKET	1	364-2166	598		598	
10	GREASE FITTING	2	508-0015	651		651	
12	PLUG	2	600-0001	087		087	
18	NUT	4	544-0109	190		080	
19	WASHER	4	908-0112	080		080	
20	GLAND CLAMP	4	204-0120	360		360	
21	GLAND (PACKING)	2	372-0227	010		010	
22	SWING BOLT	4	100-2011	104		104	
22A	SWING BOLT ASSY. (18, 19, 20, 22)	4	099-0014	644			
23	PACKING	12	564-0176	816		816	
24	KEY	1	472-0318	087		087	
25	CAPSCREW	4	168-0566	082		082	
26	BEARING CAP	2	163-0308	010		010	
27	PIN	2	592-0361	360		360	
28	CASE RING	2	676-2138	208		010	
29	PROTECTOR	1	624-0081	087		087	
31	CAPSCREW	4	168-0260	082		082	
32	CARTRIDGE CAP	1	164-0532	010		010	
34	GASKET	1	364-1311	614		614	
35	RETAINING RING	1	676-0935	088		088	
36	CARTRIDGE	1	176-0067	010		010	
37	GREASE SEAL	1	712-6327	653		653	
	OIL SEAL	1	712-6327	653		653	
38	BEARING	1	068-0456	647		647	
39	SLINGER	1	764-1022	478		478	
41	CAPSCREW	1	168-0260	082		082	
42	CARTRIDGE CAP	1	164-0532	010		010	
43	GREASE SEAL	1	712-6327	653		653	
	OIL SEAL	1	712-6327	653		653	
44	GASKET	1	364-1311	614		614	
45	CARTRIDGE	1	176-0067	010		010	
46	GREASE SEAL	1	712-6326	653		653	
	OIL SEAL	1	712-6326	653		653	
47	BEARING	1	068-1909	647		647	
48	SLINGER	1	764-1022	478		478	
49	GLAND (SEAL)	2	372-0291	010		010	
50	O-RING	2	364-0425	457		457	
52	LANTERN RING	2	676-1700	512		512	
53	SEAL	2	712-1014	753		753	
54	COLLAR	2	224-0176	208		010	
55	SETSCREW	4	724-0081	104		104	
56	BUSHING	2	136-1413	208		010	
56	SLEEVE WITH "O" RING PC. NO. 58 (NOTE 1)						
	SLEEVE (PACKING)		756-0828	644		646	
	SLEEVE (SEALS)		756-0828	644		623	
58	O-RING	1	364-0375	457		457	
59	IMPELLER	1	443-2990	227		010	
59	IMPELLER (FITTED WITH OPT. NO. 61 IMP. RING)	FOR S.F. CONSTRUCTION USE MATERIAL 655					
	6x8x11HH	1	N/A	N/A		N/A	
61	IMP. RING (OPT.) 6x8x11HH	2	N/A	N/A		N/A	
62	O-RING	1	364-0375	457		457	
63	KEY	1	472-0412	107		107	

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
	SLEEVE WITH "O" RING PC. NO. 62 (NOTE 1)						
64	SLEEVE (PACKING)	1	756-0828	644		646	
	SLEEVE (SEALS)	1	756-0828	644		623	
65	SHAFT	1	728-7304	063		063	
66	PIN	2	592-0305	360		360	
		2	592-0051				
67	PIN	2	592-0375	360		360	
68	PIN	NOT REQUIRED					
69	MODEL 411 PUMPS CASING ASSEMBLY (1, 2, 8, 26, 27, 66) 6x8x11HH	1	179-2505	010		010	
	MODEL 412 & 413 PUMPS CASING ASSY. (1, 2, 8, 26, 27, 66) 6x8x11HH	1	179-2508	010		010	
70	DRIVE SCREW	2	708-0013	365		365	
71	NAMEPLATE	1	532-0045	114		114	
73	CAPSCREW						
	FR. 143HP-256HP	4	168-0388	082		082	
	FR. 284HPH-445HP	4	168-0570	082		082	
74	BRACKET						
	FR. 143HP-256HP	1	116-0376	010		010	
	FR. 284HPH-445HP	1	116-0364	010		010	
75	CAPSCREW	5	168-0562	082		082	
76	CAPSCREW	5	168-0562	082		082	
77	BASE	1	060-0485	010		010	
78	SETSCREW	6	724-0027	104		104	

411-412-413, 6 X 8 X 14HH PARTS LIST

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
1	PLUG	3	600-0004	028		028	
2	PLUG	2	600-0002	087		087	
6	CAPSCREW	24	168-0636	082		082	
7	CAPSCREW	4	168-0494	082		082	
8	CASING HALF	1	INCLUDED WITH NO. 69				
9	GASKET	1	364-2161	598		598	
10	GREASE FITTING	2	508-0015	651		651	
12	PLUG	2	600-0001	087		087	
18	NUT	4	544-0113	190		080	
19	WASHER	4	908-0114	080		080	
20	GLAND CLAMP	4	204-0121	360		360	
21	GLAND (PACKING)	2	372-0228	010		010	
22	SWING BOLT	4	100-2012	360		360	
22A	SWING BOLT ASSY. (18, 19, 20, 22)	4	099-0015	644			
23	PACKING	12	564-0177	816		816	
24	KEY	1	472-0321	087		087	
25	CAPSCREW	4	168-0638	080		080	
26	BEARING CAP	2	163-0309	010		010	
27	PIN	2	592-0361	360		360	
28	CASE RING	2	676-2137	208		010	
29	PROTECTOR	1	624-0110	087		087	
31	CAPSCREW	4	168-0260	082		082	
32	CARTRIDGE CAP	1	164-0533	010		010	
34	GASKET	1	364-1312	614		614	
35	RETAINING RING	1	676-0943	088		088	
36	CARTRIDGE	1	176-0068	010		010	
37	GREASE SEAL OIL SEAL	1	712-6329 712-0037	653 653		653 653	
38	BEARING	1	068-0458	647		647	
39	SLINGER	1	764-1028	478		478	
41	CAPSCREW	4	168-0260	082		082	
42	CARTRIDGE CAP	1	164-0533	010		010	
43	GREASE SEAL OIL SEAL	1	712-6328 712-0055	653 653		653 653	
44	GASKET	1	364-1312	614		614	
45	CARTRIDGE	1	176-0068	010		010	
46	GREASE SEAL OIL SEAL	1	712-6329 712-0037	653 653		653 653	

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
47	BEARING	1	068-0160	647		647	
48	SLINGER	1	764-1028	478		478	
49	GLAND (SEAL)	2	372-0293	010		010	
50	O-RING	2	364-0429	457		457	
52	LANTERN RING	2	676-1701	512		512	
53	SEAL	2	712-1017	753		753	
54	COLLAR	2	224-0177	208		010	
55	SETSCREW	4	724-0081	104		104	
56	BUSHING	2	136-1414	208		010	
	SLEEVE WITH "O" RING PC. NO. 58 (NOTE 1)						
57	SLEEVE (PACKING SEALS)	1 1	756-0827 756-0827	644 644		646 623	
58	O-RING	1	364-0380	457		457	
59	IMPELLER 6x8x14HH	1	444-2985	225		010	
59	IMPELLER (FITTED WITH OPT. RING NO. 61) 6x8x14HH	1	N/A	N/A		N/A	
61	IMP. RING (OPT.) 6x8x14HH	2	N/A	N/A		N/A	
62	O-RING	1	364-0380	457		457	
63	KEY	1	472-0413	107		107	
	SLEEVE WITH "O" RING PC. NO. 62 (NOTE 1)						
64	SLEEVE (PACKING)	1	756-0827	644		646	
	(SEALS)	1	756-0827	644		623	
65	SHAFT	1	728-7302	063		063	
66	PIN	2 2	592-0305 592-0030	360		360	
67	PIN	2	592-0375	360		360	
68	PIN		NOT REQUIRED				
69	MODEL 411 PUMPS CASING ASSEMBLY (1, 2, 8, 26, 27, 66) 6x8x14HH	1	179-2499	010		010	
	MODEL 412&413 PUMPS CASING ASSY (1, 2, 8, 26, 27, 66) 6x8x14HH	1	179-2502	010		010	

411-412-413, 6 X 8 X 15 - 6 X 8 X 18A, B&C - 6 X 8 X 20 8 X 10 X 12 & 12A - 8 X 10 X 15A&B - 8 X 10 X 17B PARTS LIST

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
1	PLUG	3	600-0004	028	190	028	104
2	PLUG MODEL 411	2	600-0002	087	190	087	104
	MODEL 412 & 413	4	600-0002	087	190	087	104
6	CAPSCREW 6x8x15	17	168-0636	082		082	104
	6x8x18A,B&C	20	168-0638	082		082	104
	6x8x20	19	168-0638	082		082	104
	ALL OTHER SIZES	18	168-0638	082		082	104
7	CAPSCREW	4	168-0498	082		082	104
8	CASING HALF	1	INCLUDED WITH NO. 69				
9	GASKET 6x8x15	1	364-1272	598	598	598	598
	6x8x18A,B&C	1	364-0802	598	598	598	598
	6x8x20	1	364-1273	598	598	598	598
	8x10x12, 12A	1	364-1274	598	598	598	598
	8x10x15A&B	1	364-1275	598	598	598	598
	8x10x17B	1	364-1276	598	598	598	598
10	GREASE FITTING	2	508-0015	651	651	651	651
12	PLUG	2	600-0001	087	087	087	087
12A	PLUG*	6	600-0003	087	087	087	087
18	NUT	4	544-0113		190	080	104
19	WASHER	4	908-0114		190	080	104
20	GLAND CLAMP	4	204-0121		190	360	104
21	GLAND (PACKING)	2	372-0228	010	208	010	104
22	SWING BOLT	4	100-2012	104	190	104	104
22A	SWING BOLT ASSY. (18, 19, 20, 22)	4	099-0015	644			
23	PACKING	12	564-0177	802	802	802	802
24	KEY	1	472-0321	087	087	087	087
25	CAPSCREW	4	168-0638	082	208	082	104
26	BEARING CAP	2	163-0309	010		010	
27	PIN	2	592-0361	360	107	360	107
28	CASE RING						
	6x8x15, 6x8x18A&C 6x8x20, 8x10x12	2	676-1750	208	208	010	107
	6x8x18B	2	676-1989	208	208	010	107
	8x10x15A	2	676-1988	208	208	010	107
	8x10x12A, 15B & 17B	2	676-0018	208	208	010	107
29	PROTECTOR	1	624-0110	087	087	087	087
31	CAPSCREW	4	168-0260	082	082	082	082
32	CARTRIDGE CAP	1	164-0533	010	010	010	010
34	GASKET	1	364-1312	614	614	614	614
35	RETAINING RING	1	676-0943	088	088	088	088
36	CARTRIDGE	1	176-0068	010	010	010	010
37	GREASE SEAL	1	712-6329	653	653	653	653
	OIL SEAL	1	712-0037	653	653	653	653
38	BEARING	1	068-0458	647	647	647	647
39	SLINGER	1	764-1028	478	478	478	478
41	CAPSCREW	4	168-0260	082	082	082	082
42	CARTRIDGE CAP	1	164-0533	010	010	010	010
43	GREASE SEAL	1	712-6328	653	653	653	653
	OIL SEAL	1	712-0055	653	653	653	653
44	GASKET	1	364-1312	614	614	614	614
45	CARTRIDGE	1	176-0068	010	010	010	010
46	GREASE SEAL	1	712-6329	653	653	653	653
	OIL SEAL	1	712-0037	653	653	653	653
47	BEARING	1	068-0160	647	647	647	647

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
48	SLINGER	1	764-1028	478	478	478	478
49	GLAND (SEAL)	2	372-0293	010	208	010	104
50	O-RING	2	364-0429	457	457	457	457
52	LANTERN RING	2	676-1701	512	512	512	512
53	SEAL	2	712-1017	753	764	753	764
54	COLLAR	2	224-0177	208	208	010	104
55	SETSCREW	4	724-0081	104	104	104	104
56	BUSHING	2	136-1414	208	208	010	104
57	SLEEVE WITH "O" RING PC. NO. 58 (NOTE 1)						
	SLEEVE (PACKING)	1	756-0645	644	644	646	623
	SLEEVE (SEALS)	1	756-0645	644	644	623	623
58	O-RING	1	364-0380	457	457	457	457
59	IMPELLER						
	6x8x15	1	443-2119	227	227	010	104
	6x8x18A	1	443-0649	227	227	010	104
	6x8x18B	1	443-0658	227	227	010	104
	6x8x18C	1	443-2298	227	227	010	104
	6x8x20	1	443-2120	227	227	010	104
	8x10x12	1	443-2447	227	227	010	104
	8x10x15A	1	443-2119	227	227	010	104
	8x10x12A & 15B	1	443-2445	227	227	010	104
	8x10x17B	1	443-0476	227	227	010	104
	IMPELLER (FITTED) WITH OPT. NO. 61 RING	FOR S.F. CONSTRUCTION USE MATERIAL 655					
	6x8x15	1	443-1888	643	643	642	646
	6x8x18A	1	443-1022	643	643	642	646
	6x8x18B	1	443-0659	643	643	642	646
	6x8x18C	1	443-2299	643	643	642	646
	6x8x20	1	443-1889	643	643	642	646
	IMPELLER (FITTED) WITH OPT. NO. 61 RING	FOR S.F. CONSTRUCTION USE MATERIAL 655					
	8x10x12	1	443-2446	643	643	642	646
	8x10x15A	1	443-1888	643	643	642	646
	8x10x12A & 15B	1	443-2473	643	643	642	646
	8x10x17B	1	443-2472	643	643	642	646
61	IMP. RING (OPT.)	BEFORE 10/1/85					
	6x8x15	2	676-1054	208	208	010	104
	6x8x18B	2	676-1990	208	208	010	104
	8x10x12A, 15B & 17B	2	676-0019	208	208	010	104
	IMP. RING (OPT.)	AFTER 10/1/85					
	6x8x15, 18A & 18C	2	676-1054	208	208	010	104
	6x8x20	2	676-1054	208	208	010	104
	8x10x12	2	676-1054	208	208	010	104
	8x10x15A	2	676-1054	208	208	010	104
	6x8x18B	2	676-1990	208	208	010	104
	8x10x12A, 15B & 17B	2	676-2044	208	208	010	104
62	O-RING	1	364-0380	457	457	457	457
63	KEY	1	472-0413	107	104	107	104
64	SLEEVE WITH "O" RING PC. NO. 62 (NOTE 1)						
	SLEEVE (PACKING)	1	756-0645	644	644	646	623
	SLEEVE (SEALS)	1	746-0645	644	644	623	623
65	SHAFT	1	728-0949	063	104	063	104
66	PIN	2	592-0361	360		360	
		2	592-0051		235		235

411-412-413, 6 X 8 X 15 - 6 X 8 X 18A, B&C - 6 X 8 X 20 8 X 10 X 12 & 12A - 8 X 10 X 15A&B - 8 X 10 X 17B PARTS LIST

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
67	PIN	2	592-0375	360	107	360	107
68	PIN	NOT REQUIRED					
69	MODEL 411 CASING ASSEMBLY (1, 2, 8, 26, 27, 66)						
	6x8x15	1	179-1369	010	228	010	104
	6x8x18A,B&C	1	179-2049	010	208	010	104
	6x8x20	1	179-1370	010	208	010	104
	8x10x12	1	179-1373	010	208	010	104
	8x10x12A	1	179-2344	010		101	104
	8x10x15A&B	1	179-2204	010		010	104
	8x10x17B	1	179-2074	010		010	104
69	MODEL 412 & 413 CASING ASSEMBLY (1, 2, 8, 26, 27, 66)						
	6x8x15	1	179-1457	010	208	010	104
	6x8x18A,B&C	1	179-2103	010	208	010	104
	6x8x20	1	179-1458	010	208	020	104
	8x10x12	1	179-1461	010	208	010	104
	8x10x12A	1	179-2346	010	208	010	104
	8x10x15A&B	1	179-2207	010	208	010	104
	8x10x17B	1	179-2077	010	208	010	104
70	DRIVE SCREW	2	708-0013	365	365	365	365
71	NAMEPLATE	1	532-0045	114	114	114	114
73	CAPSCREW	4	168-0498	082	082	082	104
74	BRACKET	REFER TO FACTORY					
75	CAPSCREW	5	168-0634	082	082	082	082
76	CAPSCREW	5	168-0634	082	082	082	082
77	BASE	1	060-0470	010	010	010	010
78	SETSCREW						
	6X8X15	6					
	6x8x18A	6					
	6x8x18C	6					
	6x8x20	6					
	8x10x12, 12A	6					
	8x10x15A	6	724-0027	104	104	104	104
	6x8x18B	6					
	8x10x15B	8					
	8x10x17B	8					

*USED WITH WATER COOLED CARTRIDGE CAPS ONLY

NOTE 1) MATERIAL CODE
644 - SLEEVE 208, "O" RING 457
646 - SLEEVE 108, "O" RING 457
623 - SLEEVE 104, "O" RING 457

411-411B-412-412C-413-413C, 8 X 10 X 21 - 8 X 10 X 21A - 10 X 12 X 12B - 10 X 12 X 15B&C - 10 X 12 X 18 PARTS LIST

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
1	PLUG	3	600-0004	028	190	028	104
2	PLUG	2	600-0002	087	190	087	104
	10x12x12B 412 & 413	4	600-0002	087	190	087	104
6	CAPSCREW						
	8x10x21 & 21A	21	168-0638	082	082	082	082
	10x12x12B	24	168-0638	082	082	082	104
	10x12x15B	26	168-0638	082	082	082	104
	10x12x18	26	168-0638	082	082	082	104
7	CAPSCREW	4	168-0498	082	082	082	104
8	UPPER CASING		INCLUDED WITH NO. 69				
9	GASKET 8x10x21&21A	1	364-2110	598	598	598	598
	10x12x12B	1	364-0803	598	598	598	598
	10x12x15B&C	1	364-0804	598	598	598	598
	10x12x18	1	364-0805	598	598	598	598
10	GREASE FITTING	2	508-0015	651	651	651	651
12	PLUG	2	600-0001	087	087	087	087
18	NUT	4	544-0113		190	080	104
19	WASHER	4	908-0114	080	190	080	104
20	CLAMP	4	204-0121	360	190	360	104
21	GLAND (PACKING)	2	372-0065	010	208	010	104
22	SWING BOLT						
	PACKING	4	100-2012	360	190	360	104
	SEALS	4	100-2013	360	190	360	104
23	PACKING	10	564-0179	802	802	802	802
24	KEY	1	472-0366	087	087	087	087
25	CAPSCREW	4	168-0638	082	082	082	104
26	BEARING CAP	2	163-0309	010		010	
27	PIN	2	592-0361	360	107	360	107
28	CASE RING						
	8x10x21	2	676-2031	208	208	010	107
	8x10x21A	2	676-2014	208	208	010	107
	10x12x12B	2	676-1982	208	208	010	107
	10x12x15B&C	2	676-1983	208	208	010	107
	10x12x18	2	676-1984	208	208	010	107
29	PROTECTOR	1	624-0111	087	087	087	087
31	CAPSCREW	4	168-0260	082	082	082	082
32	CARTRIDGE CAP	1	164-0352	010	010	010	010
34	GASKET	1	364-1312	614	614	614	614
35	RETAINING RING	1	676-0382	088	088	088	088
35A	RETAINING RING	1	676-0925	088	088	088	088
36	CARTRIDGE	1	176-0001	010	010	010	010
37	GREASE SEAL	1	712-6331	653	653	653	653
	OIL SEAL	1	712-6331	653	653	653	653
38	BEARING	1	068-0362	647	647	647	647
39	SLINGER	1	764-0178	478	478	478	478
41	CAPSCREW	4	168-0260	082	082	082	082
42	CARTRIDGE CAP	1	164-0352	010	010	010	010
43	GREASE SEAL	1	712-6330	653	653	653	653
	OIL SEAL	1	712-6330	653	653	653	653
44	GASKET	1	364-1312	614	614	614	614
45	CARTRIDGE	1	176-0001	010	010	010	010
46	GREASE SEAL	1	712-6331	653	653	653	653
	OIL SEAL	1	712-6331	653	653	653	653
47	BEARING	1	068-1912	647	647	647	647
48	SLINGER	1	764-0178	478	478	478	478
49	GLAND (SEAL)	2	372-0150	010	208	010	104

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
50	O-RING	2	364-0433	457	457	457	457
52	LANTERN RING	2	676-1462	512	512	512	512
53	SEAL	2	712-0468	753	764	753	753
54	COLLAR	2	224-0004	208	208	010	104
55	SETSCREW	4	724-0081	104	104	104	104
56	BUSHING	2	136-1002	208	208	010	104
57	SLEEVE WITH "O" RING PC. NO. 58 (NOTE 1)						
	SLEEVE (PACKING)	1	756-0646	644	644	646	623
	SLEEVE (SEALS)	1	756-0646	644	644	623	623
58	O-RING	1	364-0388	457	457	457	457
59	IMPELLER 8x10x21	1	443-2432	227	227	010	104
	8x10x21A	1	443-2662	227	227	010	104
	10x12x12B	1	443-0650	227	227	010	104
	10x12x15B	1	443-0651	227	227	010	104
	10x12x15C	1	443-0841	227	227	010	104
	10x12x18	1	443-0652	227	227	010	104
	IMPELLER (FITTED WITH OPT. IMP. RING NO. 61)	FOR S.F. CONSTRUCTION USE MATERIAL 655					
	8x10x21	1	443-2457	643	643	642	646
	8x10x21A	1	443-2663	643	643	642	646
	10x12x12B	1	443-1023	643	643	642	646
	10x12x15B	1	443-1024	643	643	642	646
	10x12x15C	1	443-2474	643	643	642	646
	10x12x18	1	443-2469	643	643	642	646
61	IMP. RING (OPT.)	ALSO ORDER #78 SETSCREW BEFORE 10/1/85					
	8x10x21	2	676-1757	208	208	010	104
	10x12x12B	2	676-1970	208	208	010	104
	10x12x15B&C	2	676-1971	208	208	010	104
	10x12x18	2	676-1972	208	208	010	104
	AFTER 10/1/85						
	8x10x21	2	676-1757	208	208	010	104
	8x10x21A	2	676-2013	208	208	010	104
	10x12x12B	2	676-1970	208	208	010	104
	10x12x15B	2	676-1971	208	208	010	104
	10x12x15C	2	676-2047	208	208	010	104
	10x12x18	2	676-2041	208	208	010	104
62	O-RING	1	364-0388	457	457	457	457
63	KEY	1	472-0414	107	107	107	107
64	BEFORE JULY 1990 SLEEVE						
	SLEEVE (PACKING)	1	756-0384	208	208	108	104
	SLEEVE (SEALS)	1	756-0384	208	208	104	104
64	SLEEVE WITH "O" RING PC. NO. 62 (NOTE 1)						
	SLEEVE (PACKING)	1	756-0646	644	644	646	623
	SLEEVE (SEALS)	1	756-0646	644	644	623	623
65	SHAFT	1	728-0502	076	109	076	109
66	PIN	2	592-0361	360		360	
		2	592-0051		235		235

*411B - BOTTOM SUCTION PUMP. 412C - CHAIR MOUNTED PUMPS.

411-411B-412-412C-413-413C, 8 X 10 X 21 - 8 X 10 X 21A - 10 X 12 X 12B - 10 X 12 X 15B&C - 10 X 12 X 18 PARTS LIST

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
67	PIN	2	592-0375	360	107	360	107
68	PIN	NOT REQUIRED					
69	CASING ASSEMBLY (1, 2, 8, 26, 27, 66)						
	8x10x21 411	1	179-2328	010	208	010	104
	8x10x21A	1	179-2464	010		010	104
	8x10x21A	1	179-2466	010	208	010	104
	10x12x12B 411	1	179-2051	010		010	104
	10x12x12B 412 & 413	1	179-2315	010	208	010	104
	10x12x15B&C 411	1	179-2053	010	208	010	104
	10x12x18 411	1	179-2055	010	208	010	104
	10x12x18						
70	DRIVE SCREW	2	708-0013	365	365	365	365
71	NAMEPLATE	1	532-0045	114	114	114	114
73	CAPSCREW	4	168-0566	082	082	082	082
74	BRACKET	REFER TO FACTORY					
75	CAPSCREW 8x10x21 & 21A	4	168-0636	082	082	082	082
	10x12x12B	5	168-0634	082	082	082	082
	10x12x15B&C	4	168-0636	082	082	082	082
	10x12x18	4	168-0636	082	082	082	082
76	CAPSCREW 8x10x21 & 21A	4	168-0636	082	082	082	082
	10x12x12B	5	168-0634	082	082	082	082
	10x12x15B&C	4	168-0636	082	082	082	082
	10x12x18	4	168-0636	082	082	082	082
	BASE (MODELS 412 & 413)						
	10x12x12B	1	060-1292	010	010	010	010
	*BASE MODEL 411B MODEL 412C	(NOT REFER TO FACTORY ILLUSTRATED)					
77	10x12x12B						
	10x12x15B&C						
	MODEL 413C						
	10x12x12B						
	10x12x15B&C						
78	SETSCREW						
	8x10x21 & 21A	6	724-0027	104	104	104	104
	10x12x12B						
	10x12x15B&C						
	10x12x18	8	724-0027	104	104	104	104

411-412-413, 10 X 12 X 18D PARTS LIST

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
1	PLUG	3	600-0004	028		028	
2	PLUG	2	600-0002	087		087	
6	CAPSCREW	32	168-0638	082		082	
7	CAPSCREW	4	168-0500	082		082	
8	UPPER CASING	INCLUDED WITH NO. 69					
9	GASKET	1	364-2168	598		598	
10	GREASE FITTING	2	508-0015	651		651	
12	PLUG	2	600-0001	087		087	
18	NUT	4	544-0113	190		104	
19	WASHER	4	908-0114	080		080	
20	CLAMP	4	204-7001	360		360	
21	GLAND	2	372-7009	010		010	
22	SWING BOLT	4	100-2013	104		104	
23	PACKING	12	564-0181	802		802	
24	KEY	1	472-0366	087		087	
25	CAPSCREW	4	168-0638	082		082	
26	BEARING CAP	2	163-0309	010		010	
27	PIN	2	592-0361	360		360	
28	CASE RING	2	676-2140	208		010	
29	PROTECTOR	1	624-0111	087		087	
31	CAPSCREW	4	168-0260	082		082	
32	CARTRIDGE CAP	1	164-0352	010		010	
34	GASKET	1	364-1312	614		614	
35	RETAINING RING	1	676-0382	088		088	
35A	RETAINING RING	1	676-0925	088		088	
36	CARTRIDGE	1	176-0001	010		010	
37	GREASE SEAL	1	712-6331	653		653	
	OIL SEAL	1	712-6331	653		653	
38	BEARING	1	068-0362	647		647	
39	SLINGER	1	764-0178	478		478	
41	CAPSCREW	4	168-0260	082		082	
42	CARTRIDGE CAP	1	164-0352	010		010	
43	GREASE SEAL	1	712-6330	653		653	
	OIL SEAL	1	712-6330	653		653	
44	GASKET	1	364-1312	614		614	
45	CARTRIDGE	1	176-0001	010		010	
46	GREASE SEAL	1	712-6331	653		653	
	OIL SEAL	1	712-6331	653		653	
47	BEARING	1	068-1912	647		647	
48	SLINGER	1	764-0178	478		478	
49	GLAND	2	372-7032	010		010	
50	O-RING	2	364-0384	457		457	
52	LANTERN RING	2	676-7030	509		509	
53	SEAL	2	712-7038	753		753	
54	COLLAR	2	224-0006	208		010	
55	SETSCREW	4	724-0089	104		104	
56	BUSHING	2	136-1672	208		010	
57	SLEEVE (PACKING)	1	756-0774	644		646	
	SLEEVE (SEALS)	1	756-0774	644		623	
58	O-RING	1	364-0384	457		457	
59	IMPELLER	1	443-2986	227		010	
60	SLEEVE PIN	2	592-0008	104		104	
61	IMP. RING (OPT.)	ALSO ORDER #78 SETSCREW					
		2	676-2139	208		010	
62	O-RING	1	364-0384	457		457	
63	KEY	1	472-7048	107		107	
64	SLEEVE (PACKING)	1	756-0774	644		646	
	SLEEVE (SEALS)	1	756-0774	644		623	
65	SHAFT	1	728-7306	076		076	
66	PIN	2	592-0310	360		360	
		2	592-0032				

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
67	PIN	2	592-0375	360		360	
68	PIN	NOT REQUIRED					
69	CASING ASSEMBLY	1	179-2422	010		010	
70	DRIVE SCREW	2	708-0013	365		365	
71	NAMEPLATE	1	532-0045	114		114	
72	SETSCREW	4	724-0643	113		113	
73	CAPSCREW	4	168-0566	082		082	
74	BRACKET	REFER TO FACTORY					
75	CAPSCREW	4	168-0636	082		082	
76	CAPSCREW	4	168-0636	082		082	
	BASE						
77	MODEL 412C	1	060-1553	087		087	
	MODEL 413C	1	060-1574	087		087	
78	SETSCREW	NOT REQUIRED					
79	SLEEVE COLLAR	2	544-7007	208		108	

*411B – BOTTOM SUCTION PUMP. 412C – CHAIR MOUNTED PUMPS.

411-411B-412C-413C, 8 X 12 X 24 - 12 X 14 X 15B - 12 X 14 X 18A - 14 X 16 X 18 PARTS LIST

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
1	PLUG	3	600-0004	087	190	087	104
2	PLUG	2	600-0002	087	190	087	104
6	CAPSCREW 12X14X18A &	32	168-0638	082		082	104
	14X16X18	36	168-0790	082	190	082	104
7	CAPSCREW	4	168-0163	082	082	082	104
	8X12X24	4	168-0167	082	–	–	–
8	CASING HALF		INCLUDED WITH NO. 69				
9	GASKET 8X12X24	1	364-2171	598	598	598	598
	12X14X15B	1	364-0806	598	598	598	598
	12x14x18A	1	364-0807	598	598	598	598
	14X16X18	1	364-0808	598	598	598	598
10	GREASE FITTING	2	508-0010	651	651	651	651
11	GREASE FITTING		INCLUDED WITH NO. 10				
12	PLUG	2	600-0001	087	087	087	087
18	NUT	4	544-0113	080	190	080	104
19	WASHER	4	908-0114	080	190	080	104
20	GLAND CLAMP	4	204-0121	360	190	360	104
21	GLAND (PACKING)	2	372-0280	010	208	010	104
22	SWING BOLT	4	100-2013	104	190	104	104
23	PACKING	14	564-0180	802	802	802	802
24	KEY	1	472-0394	087	087	087	087
25	CAPSCREW	4	168-0642	082	190	082	104
26	BEARING CAP	2	163-0334	010		010	
27	PIN	2	592-0366	360	107	360	107
28	CASE RING 8x12x24	2	676-7125	208	208	010	107
	12x14x15B	2	676-1985	208	208	010	107
	12x14x18A	2	676-2056	208	208	010	107
	14x16x18	2	676-1969	208	208	010	107
29	PROTECTOR	1	624-0111	087	087	087	087
31	CAPSCREW	4	168-0388	082	082	082	082
32	CARTRIDGE CAP	1	164-0499	010	010	010	010
34	GASKET	1	364-1330	614	614	614	614
35	RETAINING RING	1	676-0295	088	088	088	088
35A	RETAINING RING	1	676-0926	088	088	088	088
36	CARTRIDGE	1	176-0002	010	010	010	010
37	GREASE SEAL	1	712-6332	653	653	653	653
	OIL SEAL	1	712-0059	653	653	653	653
38	BEARING	1	068-0364	647	647	647	647
39	SLINGER	1	764-0177	478	478	478	478
41	CAPSCREW	4	168-0388	082	082	082	082
42	CARTRIDGE CAP	1	164-0499	010	010	010	010
43	GREASE SEAL	1	712-6333	653	653	653	653
	OIL SEAL	1	712-0058	653	653	653	653
44	GASKET	1	364-1330	614	614	614	614
45	CARTRIDGE	1	176-0002	010	010	010	010
46	GREASE SEAL	1	712-6332	653	653	653	653
	OIL SEAL	1	712-0059	653	653	653	653
47	BEARING	1	068-1914	647	647	647	647
48	SLINGER	1	764-0177	478	478	478	478
49	GLAND (SEAL)	2	372-0068	010		010	104
50	O-RING	2	364-0436	457	457	457	457
52	LANTERN RING	2	676-1943	010	208	010	104
53	MECH. SEAL	2	712-0471	753	764	753	764
54	COLLAR	2	224-0006	208	208	010	104
55	SETSCREW	4	724-0081	104	104	104	104
56	BUSHING	2	136-1602	208	208	010	104
57	SLEEVE WITH "O" RING PC. NO. 58 (NOTE 1)						
	SLEEVE (PACKING)	1	756-0647	644	644	646	623
	SLEEVE (SEALS)	1	756-0647	644	644	623	623
58	O-RING	1	364-0390	457	457	457	457
59	IMPELLER 8x12x24	1	443-3149	227	227	010	104
	12x14x15B	1	443-0653	227	227	010	104
	12x14x15C	1	443-3080	227	227	010	104
	12x14x18A	1	443-2482	227	227	010	104
	14x16x18	1	443-0655	227	227	010	104
	IMPELLER (FITTED WITH OPT. IMP. RING NO. 61)		FOR S.F. CONSTRUCTION USE MATERIAL 655				
	8x12x24	1	443-3150	643	643	642	646
	12x14x15B	1	443-1026	643	643	642	646
	12x14x15C	1	443-3084	643	643	642	646
	12x14x18A	1	443-2481	643	643	642	646
	14x16x18	1	443-1028	643	643	642	646
61	IMP. RING (OPT.)		ALSO ORDER #78, SETSCREW				
	8x12x24	2	676-7124	208	208	010	104
	12x14x15B	2	676-1973	208	208	010	104
	12x14x15C	2	676-2124	208	208	010	104
	12x14x18A	2	676-2055	208	208	010	104
	14x16x18	2	676-1975	208	208	010	104
62	O-RING	1	364-0390	457	457	457	457
63	KEY	1	472-0414	107	104	107	104
64	SLEEVE WITH "O" RING PC. NO. 62 (NOTE 1)						
	SLEEVE (PACKING)	1	756-0647	644	644	646	623
	SLEEVE (SEALS)	1	756-0647	644	644	623	623
65	SHAFT	1	728-0503	076	109	076	109
66	PIN	2	592-0361	360		360	
		2	592-0051		235		235
67	PIN	2	592-0375	360	107	360	107
68	PIN		NOT REQUIRED				
69	CASING ASSEMBLY						
	8x12x24	1	179-2526	010	208	010	104
	12x14x15B 411	1	179-2057	010		010	104
	12x14x15B 412C, 413C	1	179-2321	010	208	010	104
	12x14x18A 411	1	179-2337	010	208	010	104
	14x16x18 411	1	179-2061	010		010	104
70	DRIVE SCREW	2	708-0013	365	365	365	365
71	NAMEPLATE	1	532-0045	114	114	114	114
73	CAPSCREW 413C	4	168-0636	082	082	082	082
74	BRACKET		REFER TO FACTORY				
75	CAPSCREW 412C	4	168-0636	082	082	082	082
	413C	4	168-0636	082	082	082	082
76	CAPSCREW 412C	4	168-0636	082	082	082	082
*	BASE MODEL 411B		(NOT ILLUSTRATED) REFER TO FACTORY				
	MODEL 412C						
78	SETSCREW	8	724-0027	104	104	104	104
80	REGISTER PLATE		(NOT ILLUSTRATED)				

*411B - BOTTOM SUCTION PUMP. 412C, 413C - CHAIR MOUNTED PUMPS.

STANDARD LIMITED WARRANTY

Seller warrants equipment (and its component parts) of its own manufacture against defects in materials and workmanship under normal use and service for one (1) year from the date of installation or start-up, or for eighteen (18) months after the date of shipment, whichever occurs first. Seller does not warrant accessories or components that are not manufactured by Seller; however, to the extent possible, Seller agrees to assign to Buyer its rights under the original manufacturer's warranty, without recourse to Seller. Buyer must give Seller notice in writing of any alleged defect covered by this warranty (together with all identifying details, including the serial number, the type of equipment, and the date of purchase) within thirty (30) days of the discovery of such defect during the warranty period. No claim made more than 30 days after the expiration of the warranty period shall be valid. Guarantees of performance and warranties are based on the use of original equipment manufactured (OEM) replacement parts. Seller assumes no responsibility or liability if alterations, non-authorized design modifications and/or non-OEM replacement parts are incorporated If requested by Seller, any equipment (or its component parts) must be promptly returned to Seller prior to any attempted repair, or sent to an authorized service station designated by Seller, and Buyer shall prepay all shipping expenses. Seller shall not be liable for any loss or damage to goods in transit, nor will any warranty claim be valid unless the returned goods are received intact and undamaged as a result of shipment. Repaired or replaced material returned to customer will be shipped F.O.B., Seller's factory. Seller will not give Buyer credit for parts or equipment returned to Seller, and will not accept delivery of any such parts or equipment, unless Buyer has obtained Seller's approval in writing. The warranty extends to repaired or replaced parts of Seller's manufacture for ninety (90) days or for the remainder of the original warranty period applicable to the equipment or parts being repaired or replaced, whichever is greater. This warranty applies to the repaired or replaced part and is not extended to the product or any other component of the product being repaired. Repair parts of its own manufacture sold after the original warranty period are warranted for a period of one (1) year from shipment against defects in materials and workmanship under normal use and service. This warranty applies to the replacement part only and is not extended to the product or any other component of the product being repaired. Seller may substitute new equipment or improve part(s) of any equipment judged defective without further liability. All repairs or services performed by Seller, which are not covered by this warranty, will be charged in accordance with Seller's standard prices then in effect.

THIS WARRANTY IS THE SOLE WARRANTY OF SELLER AND SELLER HEREBY EXPRESSLY DISCLAIMS AND BUYER WAIVES ALL OTHER WARRANTIES EXPRESSED, IMPLIED IN LAW OR IMPLIED IN FACT, INCLUDING ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Seller's sole obligation under this warranty shall be, at its option, to repair or replace any equipment (or its component parts) which has a defect covered by this warranty, or to refund the purchase price of such equipment or part. Under the terms of this warranty, Seller shall not be liable for (a) consequential, collateral, special or liquidated losses or damages; (b) equipment conditions caused by normal wear and tear, abnormal conditions of use, accident, neglect, or misuse of said equipment; (c) the expense of, and loss or damage caused by, repairs or alterations made by anyone other than the Seller; (d) damage caused by abrasive materials, chemicals, scale deposits, corrosion, lightning, improper voltage, mishandling, or other similar conditions; (e) any loss, damage, or expense relating to or resulting from installation, removal or reinstallation of equipment; (f) any labor costs or charges incurred in repairing or replacing defective equipment or parts, including the cost of reinstalling parts that are repaired or replaced by Seller; (g) any expense of shipment of equipment or repaired or replacement parts; or (h) any other loss, damage or expense of any nature.

The above warranty shall not apply to any equipment which may be separately covered by any alternate or special warranties.

PERFORMANCE: In the absence of Certified Pump Performance Tests, equipment performance is not warranted or guaranteed. Performance curves and other information submitted to Buyer are approximate and no warranty or guarantee shall be deemed to arise as a result of such submittal. All testing shall be done in accordance with Seller's standard policy under Hydraulic Institute procedures.

LIABILITY LIMITATIONS: Under no circumstances shall the Seller have any liability under the Order or otherwise for liquidated damages or for collateral, consequential or special damages or for loss of profits, or for actual losses or for loss of production or progress of construction, regardless of the cause of such damages or losses. In any event, Seller's aggregate total liability under the Order or otherwise shall not exceed the contract price.

ACTS OF GOD: Seller shall in no event be liable for delays in delivery of the equipment or other failures to perform caused by fires, acts of God, strikes, labor difficulties, acts of governmental or military authorities, delays in transportation or procuring materials, or causes of any kind beyond Seller's control.

COMPLIANCE WITH LAW: Seller agrees to comply with all United States laws and regulations applicable to the manufacturing of the subject equipment. Such compliance shall include: The Fair Labor Standards Acts of 1938, as amended; Equal Employment Opportunity clauses of Executive Order 11246, as amended; Occupational Safety and Health Act of 1970 and the standards promulgated thereunder, if applicable. Since compliance with the various Federal, State, and Local laws and regulations concerning occupational health and safety, pollution or local codes are affected by the use, installation and operation of the equipment and other matters over which Seller has no control, Seller assumes no responsibility for compliance with those laws and regulations, whether by way of indemnity, warranty, or otherwise. It is incumbent upon the Buyer to specify equipment which complies with local codes and ordinances.

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