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# Sump, Effluent and Sewage

REPAIR PARTS

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### INDEX

#### SUMP, EFFLUENT AND SEWAGE

ST .....	3
PE .....	4
3871 (EP04 & EP05).....	5
PS 41/51 .....	6
PV51 - Vortex .....	7
3872 (WW05) .....	8
1/2DM, 1/2DV .....	9
1DW .....	10
2DW .....	11
1SC and SE .....	12
3885 (WE --- L, M, H, HH).....	14
2ED .....	16
3886/3887 (WS - B, BF, BHF).....	18
3887BF (WS - BF) .....	20
3887BHF (WS --- BHF) .....	21
2WD/3WD (1725).....	22
2WD/3WD (3500).....	24
3888D3/D4 (WS --- D3, D4).....	26
3SD/4SD .....	26
3SDX/4SDX.....	28
1GD .....	30
4NS/4XD .....	32
RGS2012 .....	34
AGS0511/AGS0512.....	35
AGS1011/AGS1012.....	36
1GA/2GA .....	37
Oil Volumes .....	37
Submersible Vortex .....	37
Control Panel Repair Parts .....	38
A10-12, A10-2015 and A10-20 .....	39

**Note:** Repair Motor List Prices are in the "K", "L" and Numeric Repair Part Price Book.

4K432 OIL SPECIFICATION:  
5 gallon can of ASTM 150 Turbine Oil

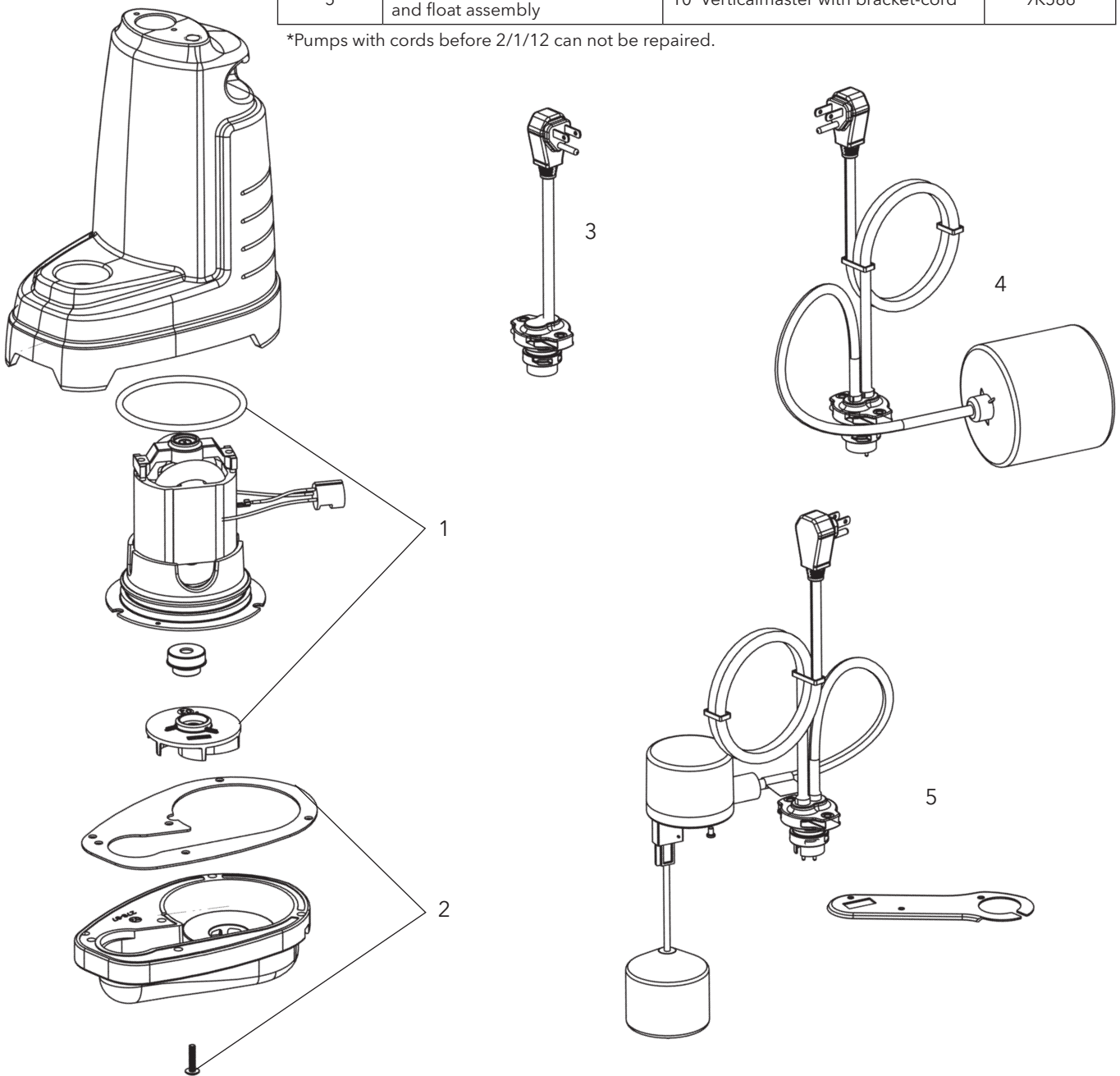
#### **COMPARABLE BRAND NAMES:**

Sunoco	Sunvis 932
Mobil	DTE Light
Texaco	Regal R&O 32
Shell	Turbo 32
Gulf	Harmony 32
Amoco	Am. Industries Oil 32
Exxon	Nuto 32
Chevron	GST 32

### MODEL ST31/51/71

Item	Part Name	Description	Part No.
1	1/3 HP Motor Assembly - 115 Volt	Motor, Seal Housing, Receptacle, Jam Nut, O-Ring, Mechanical Seal, Impeller	15K88
	1/2 HP Motor Assembly - 115 Volt		15K89
	3/4 HP Motor Assembly - 115 Volt		15K90
2	Base Assembly	Base, Gasket, Screws	15K27
3	Cord Set - 115 Volt	10' Cord Set with 5-15P Nema Plug (used with piggyback float)	9K587
	Cord Set - 115 Volt	20' Cord Set with 5-15P Nema Plug (used with piggyback float)	9K588
4	Cord Set - 115 Volt and float assembly	10' Pumpmaster with bracket-cord	9K593
5	Cord Set - 115 Volt and float assembly	10' Verticalmaster with bracket-cord	9K586

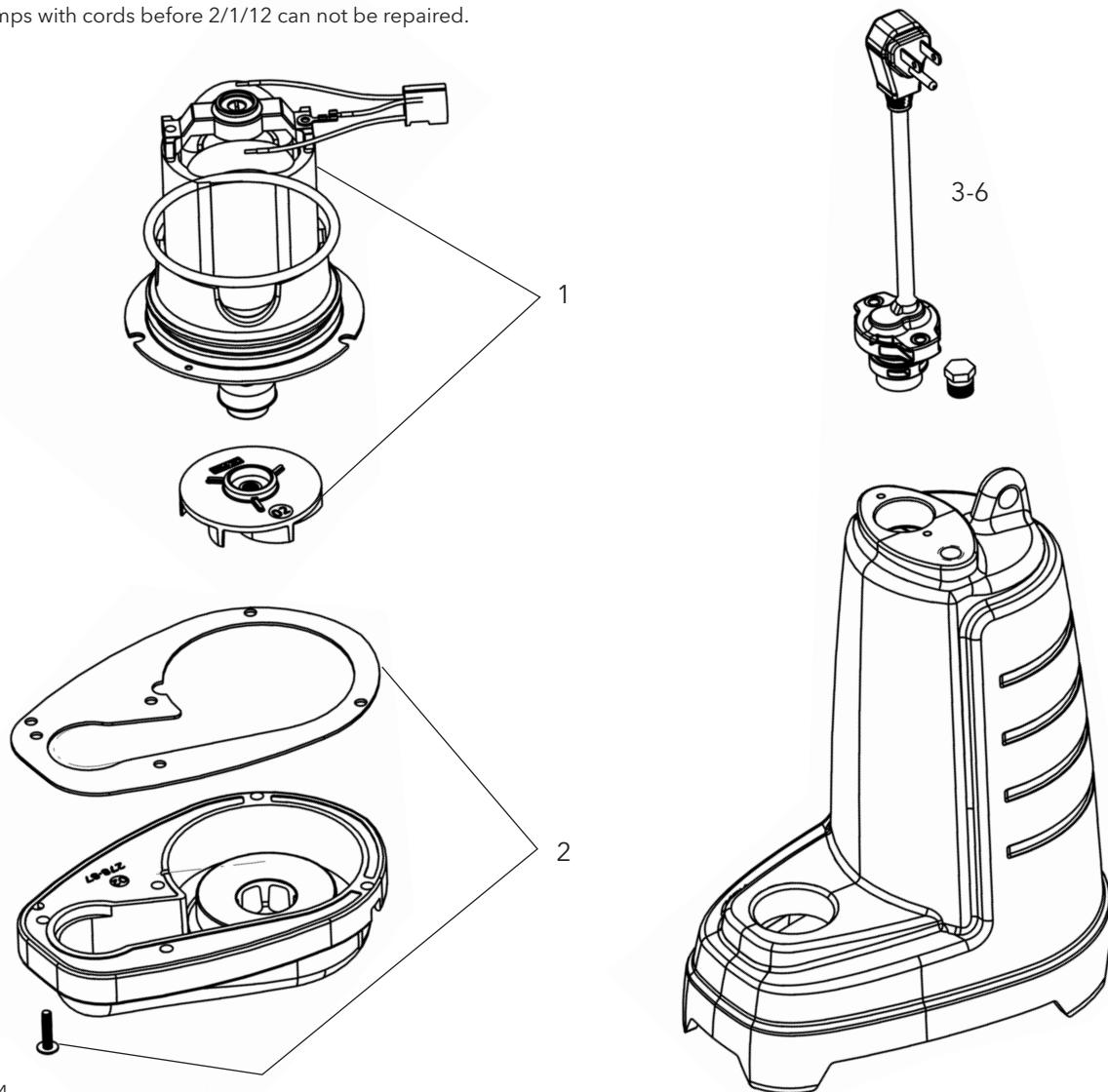
\*Pumps with cords before 2/1/12 can not be repaired.



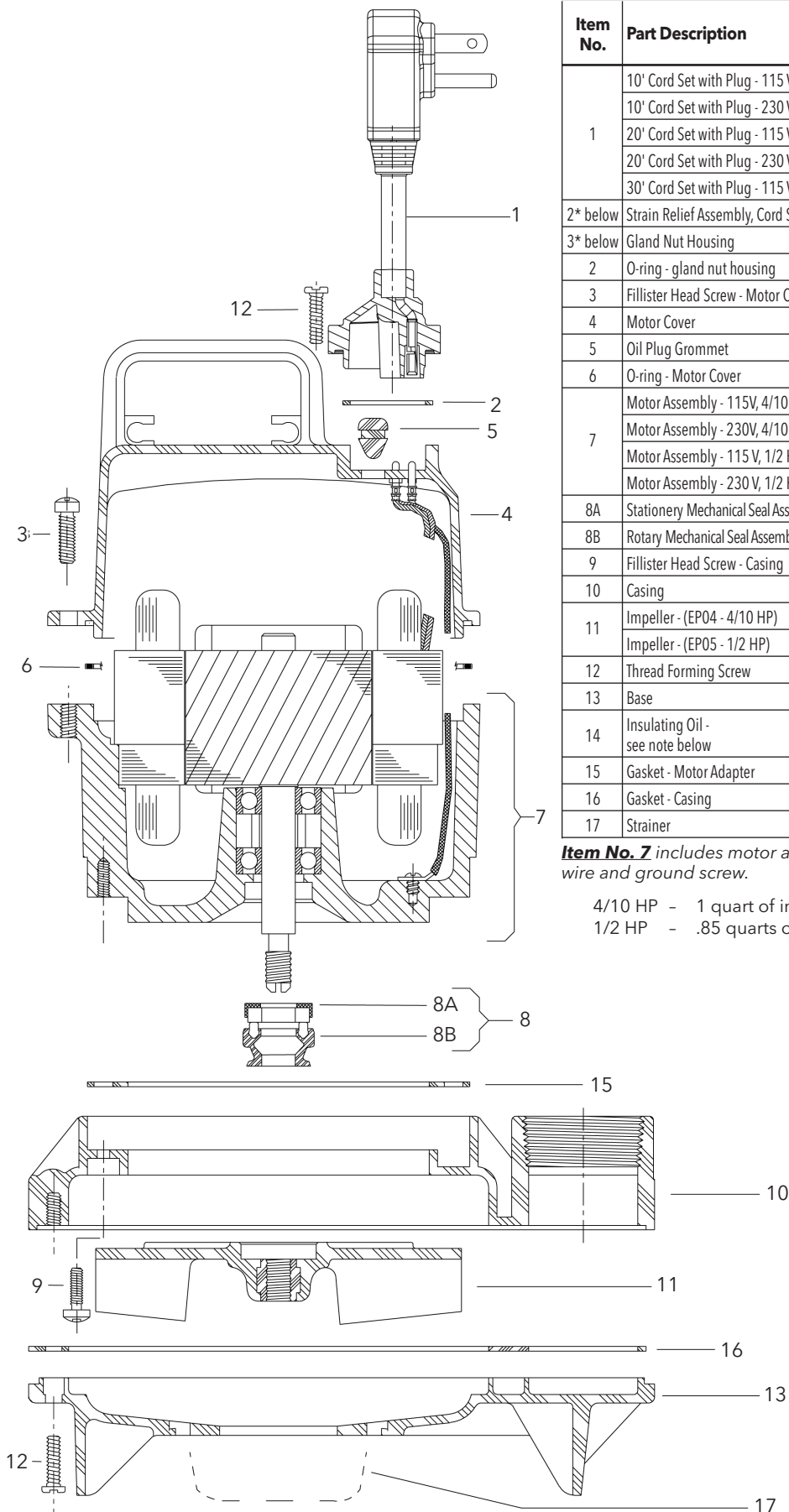
### ALL MODELS PE AND ST51/71

Item No.	Part Name	Description	After 2/1/12 Part No.
1	1/3 HP Motor Assembly - 115V	Motor, Seal Housing, Receptacle, Jam Nut, O-ring, Mechanical Seal, Impeller	15K88
	4/10 HP Motor Assembly - 115V		15K89
	1/2 HP Motor Assembly - 115V		15K90
	4/10 HP Motor Assembly - 230V		15K93
	1/2 HP Motor Assembly - 230V		15K94
2	Base Assembly	Base, Gasket, Screws	15K27
3	Cord Set - 115V	10' Manual - 115V with 5-15P Nema Plug	9K587
4		20' Manual - 115V with 5-15P Nema Plug - Standard	9K588
5		30' Manual - 115V with 5-15P Nema Plug	9K595
6		50' Manual - 115V with 5-15P Nema Plug	9K590
		30' Pumpmaster - 115V with 5-15P Nema Plug	9K594
-		Cord Set - 230V	20' Manual - 230V with 6-15P Nema Plug - Standard
-	30' Manual - 230V with 6-15P Nema Plug		9K592
-	Float Switch - 115V	10' Pumpmaster with Hardware - 115V, 13A	A2D11
		20' Pumpmaster with Hardware - 115V, 13A	A2D31
		30' Pumpmaster with Hardware - 115V, 13A	A2D51
-	Float Switch - 230V	20' Pumpmaster with Hardware - 230V, 13A	A2D32
		30' Pumpmaster with Hardware - 230V, 13A	A2D52

\*Pumps with cords before 2/1/12 can not be repaired.



### MODEL 3871 - EP04/EP05 Series

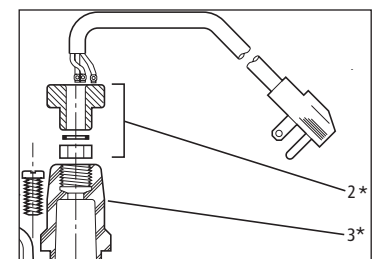


Item No.	Part Description	Material	Qty. Req.	Before 2/1/12 Part No.	After 2/1/12 Part No.
1	10' Cord Set with Plug - 115 V	SJTOW - 16/3	1	9K207	9K531
	10' Cord Set with Plug - 230 V			9K208	9K532
	20' Cord Set with Plug - 115 V			9K533	9K533
	20' Cord Set with Plug - 230 V			9K210	9K534
	30' Cord Set with Plug - 115 V*			9K403	9K536
2* below	Strain Relief Assembly, Cord Set	Varies	1	5K113	not needed
3* below	Gland Nut Housing	Thermoplastic	1	9K226	not needed
2	O-ring - gland nut housing	Buna-N, AS 568A-024	1	5K197	5K197
3	Fillister Head Screw - Motor Cover	AISI 300 SS	4	13K347	13K347
4	Motor Cover	Thermoplastic	1	1K257	1K257
5	Oil Plug Grommet	Buna-N	1	6K87	6K87
6	O-ring - Motor Cover	Buna-N, AS 568A-161	1	5K196	5K196
7	Motor Assembly - 115V, 4/10 HP	Varies	1	1K282	1K282
	Motor Assembly - 230V, 4/10 HP			1K283	1K283
	Motor Assembly - 115 V, 1/2 HP			1K284	1K284
	Motor Assembly - 230 V, 1/2 HP			1K285	1K285
8A	Stationery Mechanical Seal Assembly	Carbon/Ceramic	1	10K32	10K32
8B	Rotary Mechanical Seal Assembly				
9	Fillister Head Screw - Casing	AISI 300 SS	4	13K347	13K347
10	Casing	Thermoplastic	1	1K233	1K233
11	Impeller - (EP04 - 4/10 HP)	Thermoplastic	1	2K498	2K498
	Impeller - (EP05 - 1/2 HP)			2K731	2K731
12	Thread Forming Screw	AISI 300 SS	10	13K243	13K243
13	Base	Thermoplastic	1	1K258	1K258
14	Insulating Oil - see note below	Turbine Oil - ATSM 150	-	4K432	4K432
15	Gasket - Motor Adapter	Composite	1	5K182	5K182
16	Gasket - Casing	Composite	1	5K219	5K219
17	Strainer	Thermoplastic	1	4K528	4K528

**Item No. 7** includes motor adapter, rotor, stator, tolerance ring, ground wire and ground screw.

4/10 HP - 1 quart of insulating oil required.

1/2 HP - .85 quarts of insulating oil required.



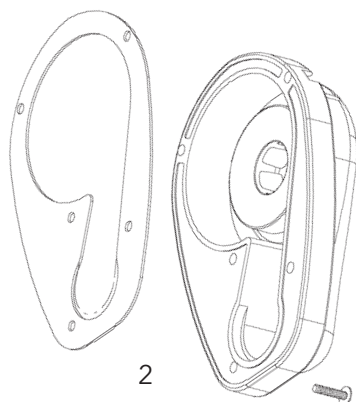
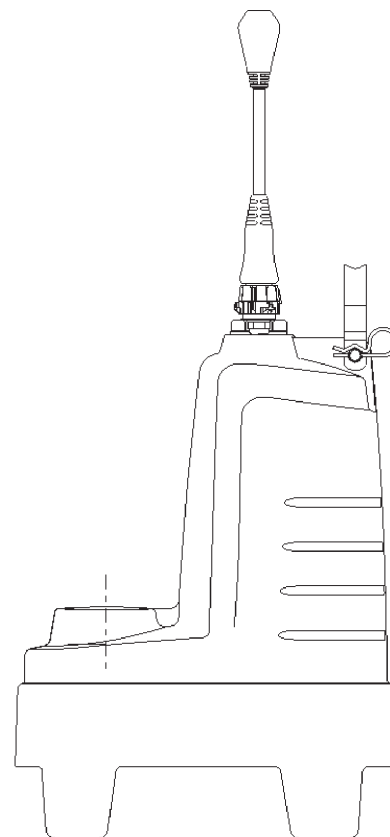
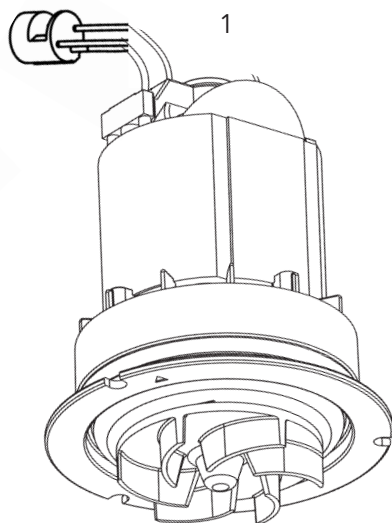
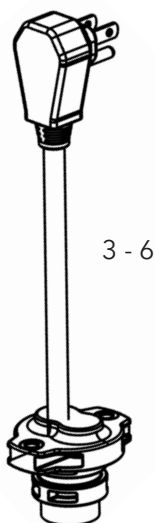
\* Not needed after 2/1/2012.

**NOTE:** Pump with cord sets previous to 2/1/2012 can not be repaired after 2/1/2012.

**NOTE:** After 5/11, new cord design eliminates gland as separate component.

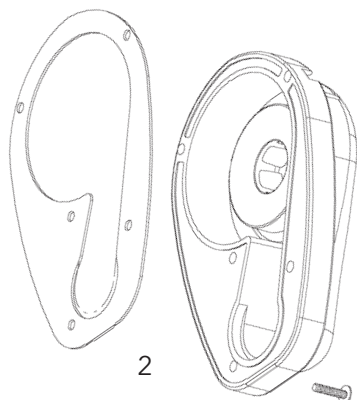
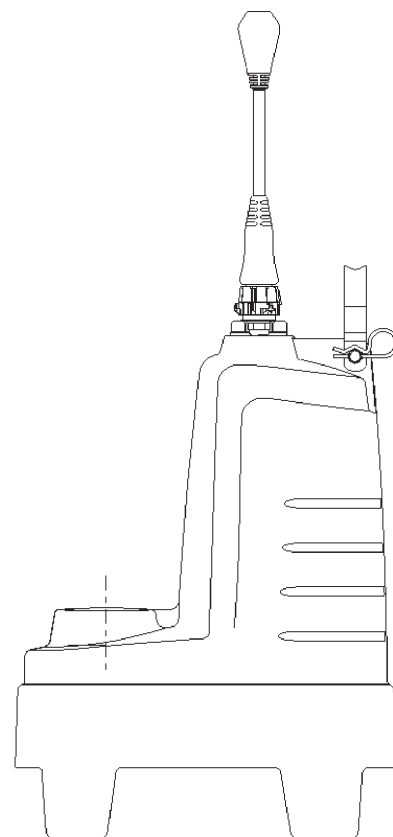
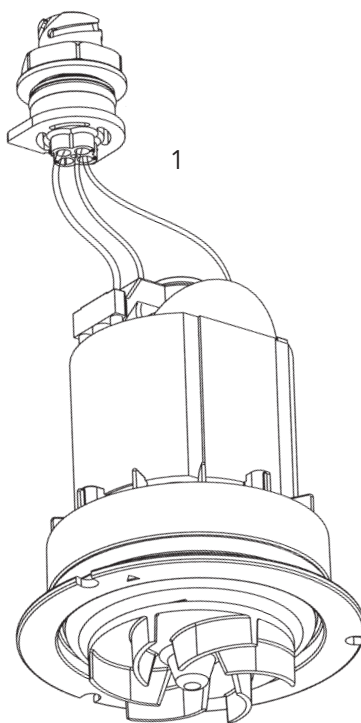
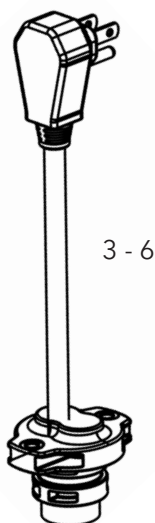
### MODEL PS41, 51

Item Number	Part Name	Description	Before 2/1/12 Part Number	After 2/1/12 Part Number
1	4/10 HP Motor Assembly - 115V	Motor, Seal Housing, Receptacle, Jam Nut, O-ring, Mechanical Seal, Impeller	15K30	15K91
	1/2 HP Motor Assembly - 115V		15K31	15K92
	4/10 HP Motor Assembly - 230V		15K47	15K95
	1/2 HP Motor Assembly - 230V		15K48	15K96
2	Base Assembly	Base, Gasket, Screws	15K39	15K39
3	Cord Set - 115V	10' Manual - 115V with 5-15P Nema Plug	9K372	9K587
4		20' Manual - 115V with 5-15P Nema Plug - Standard	9K375	9K588
5		30' Manual - 115V with 5-15P Nema Plug	9K380	9K595
6		50' Manual - 115V with 5-15P Nema Plug	9K377	9K590
		30' Pumpmaster - 115V with 5-15P Nema Plug	9K446	9K594
-		Cord Set - 230V	20' Manual - 230V with 6-15P Nema Plug - Standard	9K421
-	30' Manual - 230V with 6-15P Nema Plug		9K422	9K592
-	Float Switch - 115V	10' Pumpmaster with Hardware - 115V, 13A	A2D11	A2D11
		20' Pumpmaster with Hardware - 115V, 13A	A2D31	A2D31
		30' Pumpmaster with Hardware - 115V, 13A	A2D51	A2D51
-	Float Switch - 230V	20' Pumpmaster with Hardware - 230V, 13A	A2D32	A2D32
		30' Pumpmaster with Hardware - 230V, 13A	A2D52	A2D52

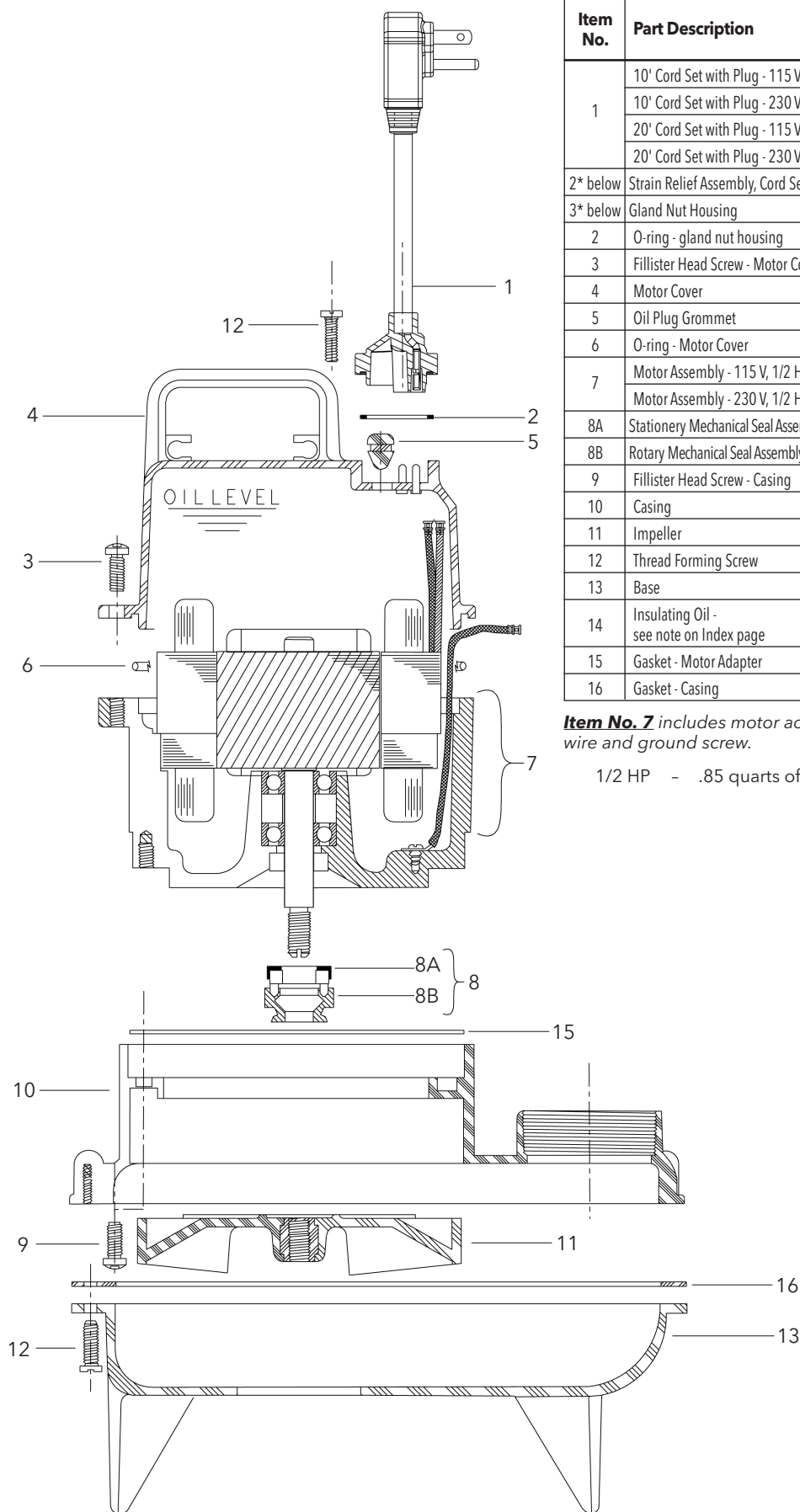


### MODEL PV51 - Vortex

Item Number	Part Name	Description	Before 2/1/12 Part Number	After 2/1/12 Part Number	
1	½ HP Motor Assembly - 115V	Motor, Seal Housing, Receptacle, Jam Nut, O-Ring, Mechanical Seal, Impeller	15K58	15K102	
	½ HP Motor Assembly - 230V		15K59	15K104	
	¾ <sub>10</sub> HP Motor Assembly - 115V			15K101	
	¾ <sub>10</sub> HP Motor Assembly - 230V			15K103	
2	Base Assembly	Base, Gasket, Screws	15K57	15K57	
3	Cord Set - 115V	10' Manual - 115V with 5-15P Nema Plug	9K372	9K587	
4		20' Manual - 115V with 5-15P Nema Plug - Standard	9K375	9K588	
5		30' Manual - 115V with 5-15P Nema Plug	9K380	9K595	
6		50' Manual - 115V with 5-15P Nema Plug	9K377	9K590	
7		30' Pumpmaster - 115V with 5-15P Nema Plug	9K446	9K594	
8		Cord Set - 230V	20' Manual - 230V with 6-15P Nema Plug - Standard	9K421	9K591
9			30' Manual - 230V with 6-15P Nema Plug	9K422	9K592
10	Float Switch - 115V	10' Pumpmaster with Hardware - 115V, 13A	A2D11	A2D11	
		20' Pumpmaster with Hardware - 115V, 13A	A2D31	A2D31	
		30' Pumpmaster with Hardware - 115V, 13A	A2D51	A2D51	
11	Float Switch - 230V	20' Pumpmaster with Hardware - 230V, 13A	A2D32	A2D32	
		30' Pumpmaster with Hardware - 230V, 13A	A2D52	A2D52	



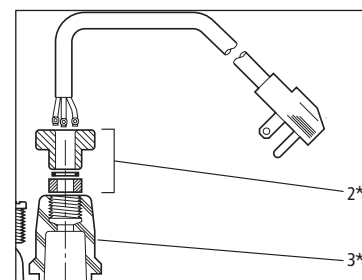
### MODEL 3872 - WW05 Series



Item No.	Part Description	Material	Qty. Req.	Before 2/1/12 Part No.	After 2/1/12 Part No.
1	10' Cord Set with Plug - 115 V	SJTOW - 16/3	1	9K207	9K531
	10' Cord Set with Plug - 230 V			9K208	9K532
	20' Cord Set with Plug - 115 V			9K533	9K533
	20' Cord Set with Plug - 230 V			9K210	9K534
2* below	Strain Relief Assembly, Cord Set	Varies	1	5K113	not needed
3* below	Gland Nut Housing	Thermoplastic	1	9K226	not needed
2	O-ring - gland nut housing	Buna-N, AS 568A-024	1	5K197	5K197
3	Fillister Head Screw - Motor Cover	AISI 300 SS	4	13K347	13K347
4	Motor Cover	Thermoplastic	1	1K257	1K257
5	Oil Plug Grommet	Buna-N	1	6K87	6K87
6	O-ring - Motor Cover	Buna-N, AS 568A-161	1	5K196	5K196
7	Motor Assembly - 115 V, 1/2 HP	Varies	1	1K284	1K284
	Motor Assembly - 230 V, 1/2 HP			1K285	1K285
8A	Stationery Mechanical Seal Assembly	Carbon/Ceramic	1	10K32	10K32
8B	Rotary Mechanical Seal Assembly				
9	Fillister Head Screw - Casing	AISI 300 SS	4	13K347	13K347
10	Casing	Thermoplastic	1	1K274	1K274
11	Impeller	Thermoplastic	1	2K494	2K494
12	Thread Forming Screw	AISI 300 SS	10	13K243	13K243
13	Base	Thermoplastic	1	1K275	1K275
14	Insulating Oil - see note on Index page	Turbine Oil - ATSM 150	-	4K432	4K432
15	Gasket - Motor Adapter	Composite	1	5K182	5K182
16	Gasket - Casing	Composite	1	5K217	5K217

**Item No. 7** includes motor adapter, rotor, stator, tolerance ring, ground wire and ground screw.

1/2 HP - .85 quarts of insulating oil required.



\* Not needed after 2/1/2012.

**NOTE:** Pump with cord sets previous to 2/1/2012 can not be repaired after 2/1/2012.

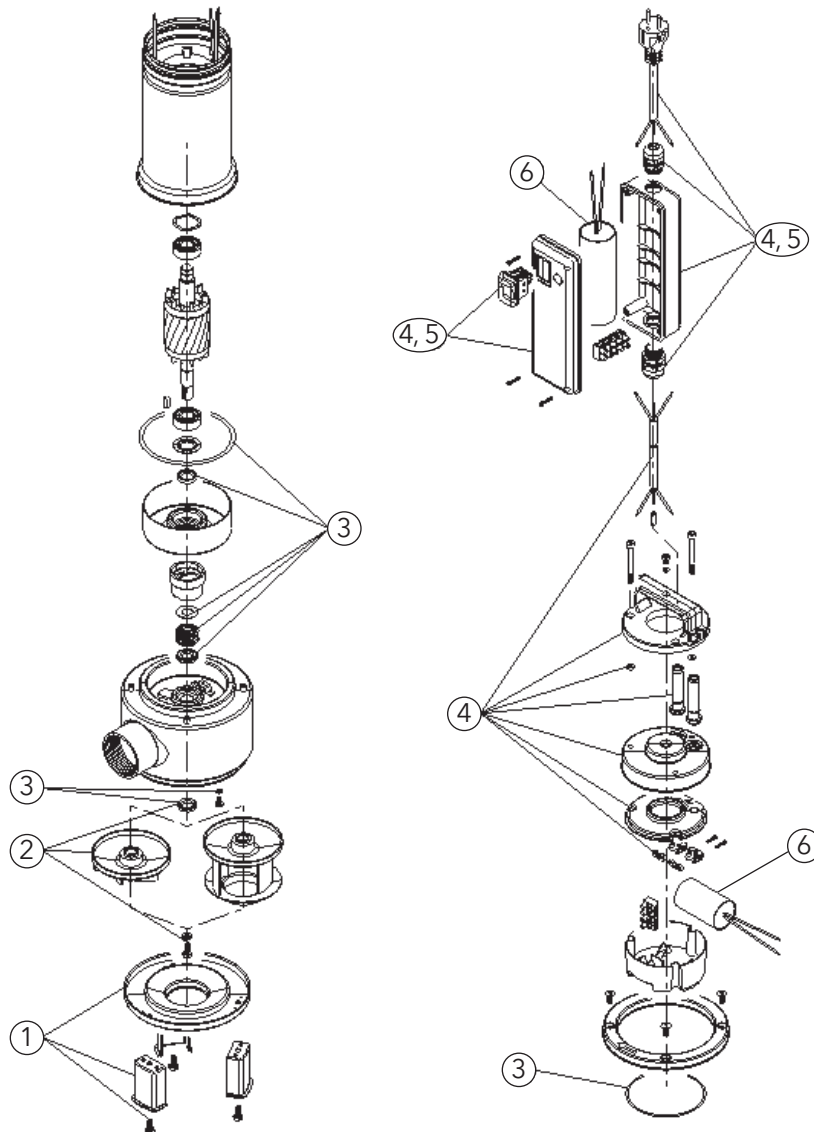
**NOTE:** After 5/11, new cord design eliminates gland as separate component.



### MODEL 1/2DM, 1/2DV

Item Number	Part Description	Repair Parts Order Number			
		½ HP	¾ HP	1 HP	1½ HP
1	Base Package (Suction Flange, Feet, Screws)	15L1		15L2	
2	<b>DV</b> Impeller Package (Impeller, Screw, Key, V-Ring)	15L3	15L4	15L5	15L6
	<b>DM</b> Impeller Package (Impeller, Screw, Key, V-Ring)	15L7	15L8	15L9	15L10
3	Pump Seal Package (V-Ring, Mechanical Seal, O-Rings)	15L11			
4*	Cord / Handle / Capacitor Box Assembly	115V, Single Phase	15L60	N/A	
	Cord / Handle Assembly	230V, Single Phase	15L61		N/A
		230V/460V, Three Phase	15L62		
5	Capacitor Box / Cord Assembly	15L51	N/A	15L57*	N/A
6	Capacitor - pumps built after June, 2002	115V, Single Phase	9L122	N/A	
		230V, Single Phase	9L113	9L123	9L124

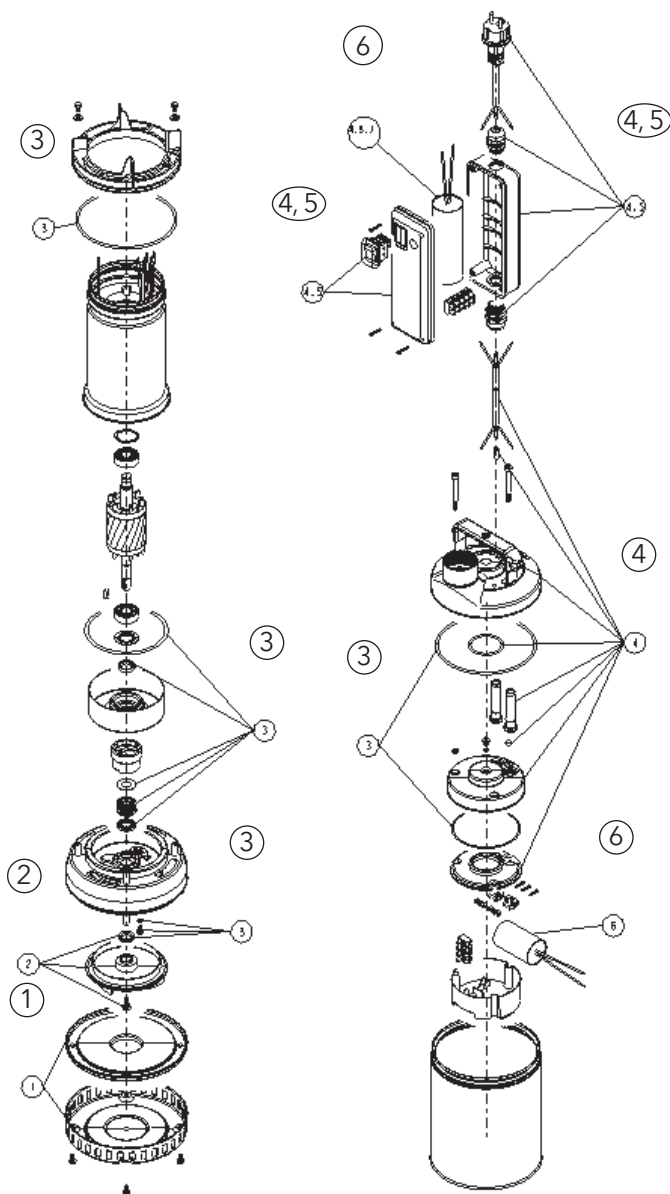
\* After 11/04 - cord/handle/capacitor box assembly is not available for units built prior to 11/04



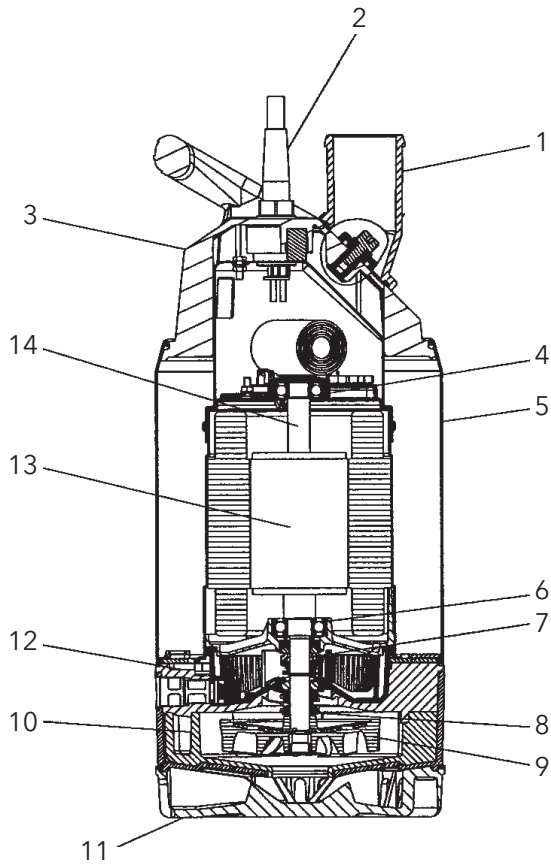
### MODEL 1DW

Item Number	Part Description	Repair Parts Order Number			
		½ HP	¾ HP	1 HP	1½ HP
1	Strainer Package (Suction Flange and Strainer)	15L17			
2	Impeller Package (Impeller, Screw, Key, V-Ring)	15L19	15L20	15L21	15L22
3	Pump Seal Package (V-Ring, Mechanical Seal, O-Rings)	15L23			
4	Cord / Handle / Capacitor Box Assembly	115V, Single Phase	15L54	N/A	
		230V, Single Phase	15L55		N/A
	Cord / Handle Assembly	230/460V, Three Phase			
5	Capacitor Box / Cord Assembly	15L51		15L16	N/A
6	Capacitor - pumps built after June, 2002	115V, Single Phase	9L117	N/A	
		230V, Single Phase	9L113	9L123	9L124

Capacitors not available for pumps before June, 2002.

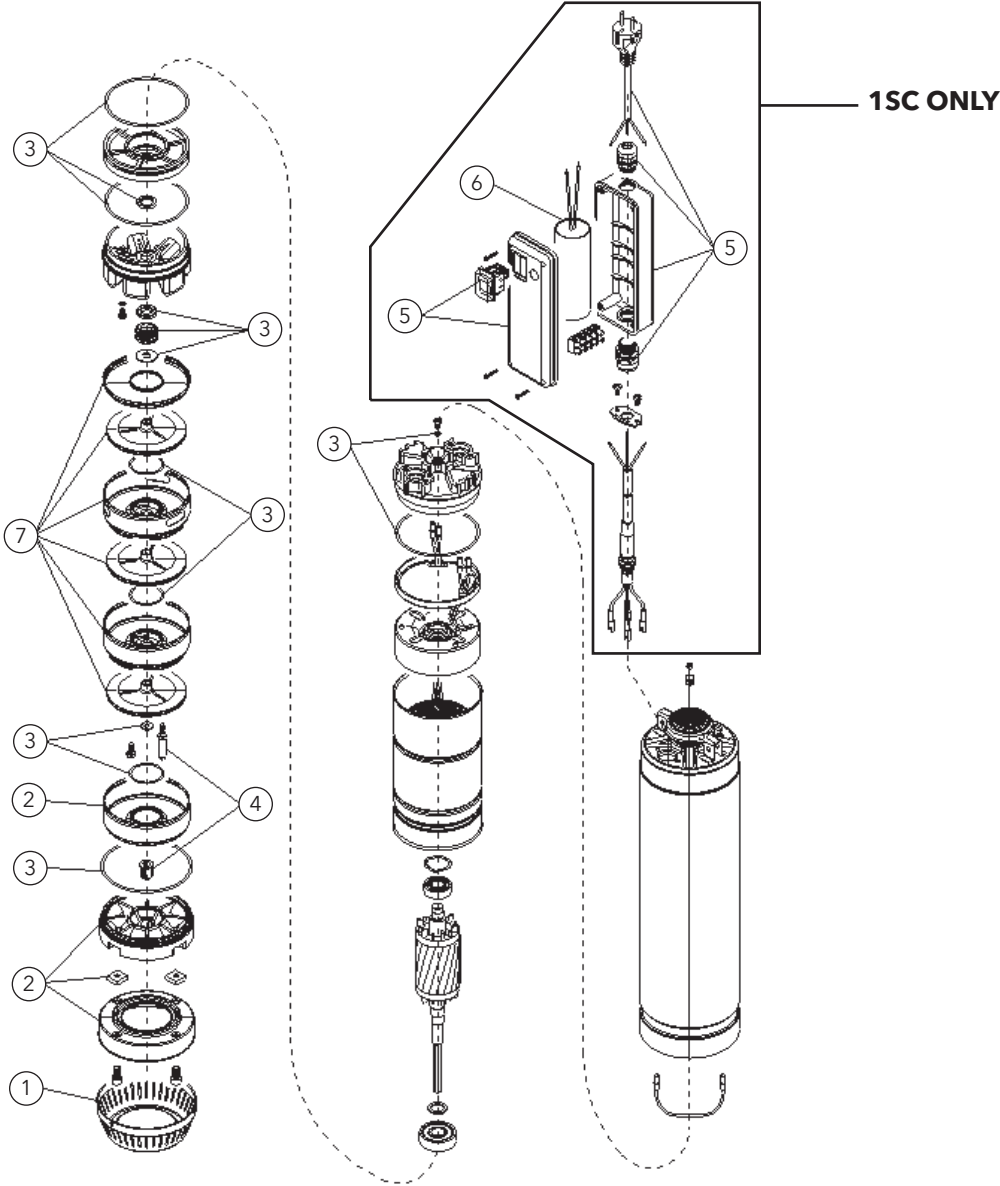


### MODEL 2DW



Item No.	Part Description	Quantity Required	Repair Part Order No. After 8/05
1	Discharge Connection Kit	1	6K173
2	Cordset - 1 Phase, 115V		9K598
	Cordset - 1 Phase, 230V		9K599
3	Handle / Cover		-
4	Bearing - Upper		-
5	Casing		-
6	Bearing - Lower		-
7	Mechanical Seal - Lower		-
8	Mechanical Seal - Upper		-
9	Impeller		-
10	Diffuser		-
11	Strainer		-
12	Plug - Oil		-
13	Motor	-	
<b>Kits</b>		<b>Kit</b>	
Impeller - ½ HP	Impeller, Impeller Screw, Protective Plug, Washer, Assembly Instructions	1	15K97
Impeller - 1 HP			15K98
Diffuser	Diffuser, Screws, Washers, Assembly Instruction		15K99
Mechanical Seal - Lower	Mechanical Face-Seal Unit, Assembly Instruction		15K14
Mechanical Seal - Upper and Lower	Complete Mechanical Seal Kit		15K41
Ball Bearing Kit	Upper and Lower Ball Bearings		15K42
O-Ring Kit (Complete Set)	Complete O-Ring Set		15K100

**MODELS SE and 1SC**



### MODEL SE

Item Number	Part Description		Repair Parts Order Number		
			8SE	16SE	26SE
1	Suction Strainer		15L28		
2	Lower Bearing Support Package		15L29		
3	Pump Seal Package (Mechanical Seal and O-Rings) - New		15L52		
4	Bushing Package		15L31	N/A	N/A
5	Power Cord - 16/3 SJTW x 10 ft. with Bare Leads	115V, Single Phase	9L120		
		230V, Single Phase			
6	Capacitor	115V, Single Phase	9L118 (50 mfd, 250V)		
		230V, Single Phase	9L119 (16 mfd, 450V)		
7	Impeller / Diffuser Package		15L53 (4)	15L33 (3)	15L34 (3)

### MODEL 1SC - After 5/06

Item Number	Part Description		Repair Parts Order Number		
			½ HP - 3 Stage	¾ HP - 4 Stage	1 HP - 5 Stage
1	Suction Strainer		15L28		
2	Lower Bearing Support Package		15L29		
3	Pump Seal Package (Mechanical Seal and O-Rings) - New		15L52		
4	Bushing Package		N/A		15L31
5	Capacitor Box / Cord Assembly Cord Assembly	115V, Single Phase	15L51	N/A	
		230V, Single Phase	9L121 (6-15P Plug)		
		230V, Three Phase	9L125		
6	Capacitor	115V, Single Phase	No Longer Available		
		230V, Single Phase	9L114 (25 mfd, 450V)		9L124 (30 mfd, 450V)
7	Impeller / Diffuser Package - Low Flow		15L33 (3)	15L33 (4)	15L33 (5)
	Impeller / Diffuser Package - High Flow		15L34 (3)	15L34 (4)	15L34 (5)

### MODEL 1SC - 6/02 to 5/06

Item Number	Part Description		Repair Parts Order Number		
			½ HP - 3 Stage	¾ HP - 4 Stage	1 HP - 5 Stage
1	Suction Strainer		15L28		
2	Lower Bearing Support Package		15L29		
3	Pump Seal Package (Mechanical Seal and O-Rings) - New		(15L30 Obs.) - 15L52		
4	Bushing Package		15L31		
5	Capacitor Box / Cord Assembly	115V, Single Phase	15L51	N/A	
		230V, Single Phase	15L16		15L57
6	Capacitor	115V, Single Phase	9L122 (70 mfd, 250V)	N/A	
		230V, Single Phase	9L114 (25 mfd, 450V)		9L124 (30 mfd, 450V)
7	Impeller / Diffuser Package - Low Flow		15L33 (3)	15L33 (4)	15L33 (5)
	Impeller / Diffuser Package - High Flow		15L34 (3)	15L34 (4)	15L34 (5)

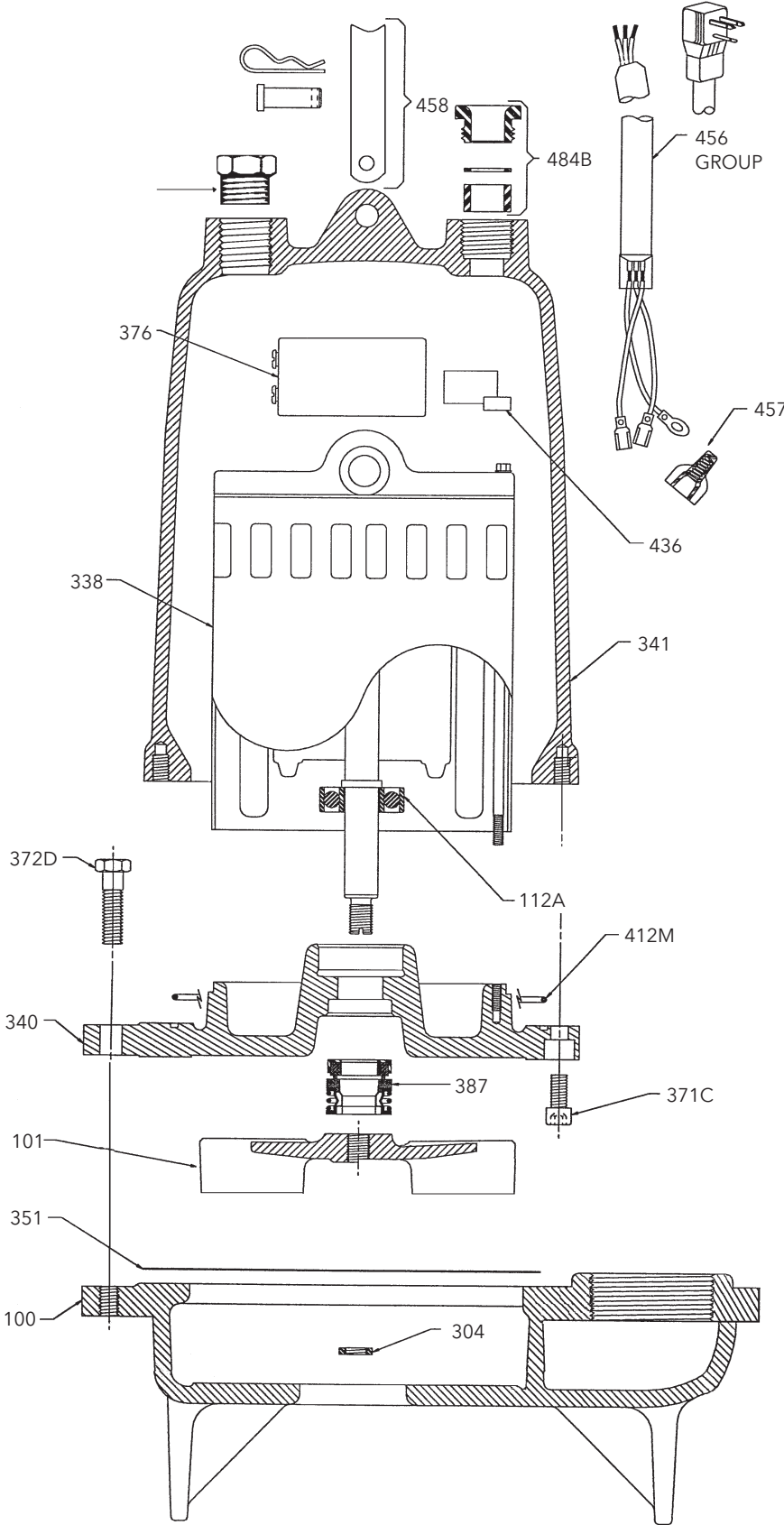
### MODEL 1SC - 4/97 to 6/02

Item Number	Part Description		Repair Parts Order Number		
			½ HP - 3 Stage	¾ HP - 4 Stage	1 HP - 5 Stage
1	Suction Strainer		15L28		
2	Lower Bearing Support Package		15L29		
3	Pump Seal Package (Mechanical Seal and O-Rings) - New		(15L30 Obs.) - 15L52		
4	Bushing Package		15L31		
5	Capacitor Box / Cord Assembly	230V, Single Phase	15L16		15L32
6	Capacitor	115V, Single Phase	No Longer Available		
		230V, Single Phase	9L113 (20 mfd, 450V)		9L114 (25 mfd, 450V)
7	Impeller / Diffuser Package - Low Flow		15L33 (3)	15L33 (4)	15L33 (5)
	Impeller / Diffuser Package - High Flow		15L34 (3)	15L34 (4)	15L34 (5)

Old Pump had a single mechanical seal and the capacitor was located outside the pump.

New Pump has a dual mechanical seal and the capacitor is located inside the pump (except ½ HP, 1/60/115 V model).

**MODEL 3885 - WE SERIES**



CAPACITOR DATA		
"K" no.	MFD	VAC
9K197	161/193	110
9K351	30	370
9K352	200/240	220

### MODEL 3885 - WE SERIES

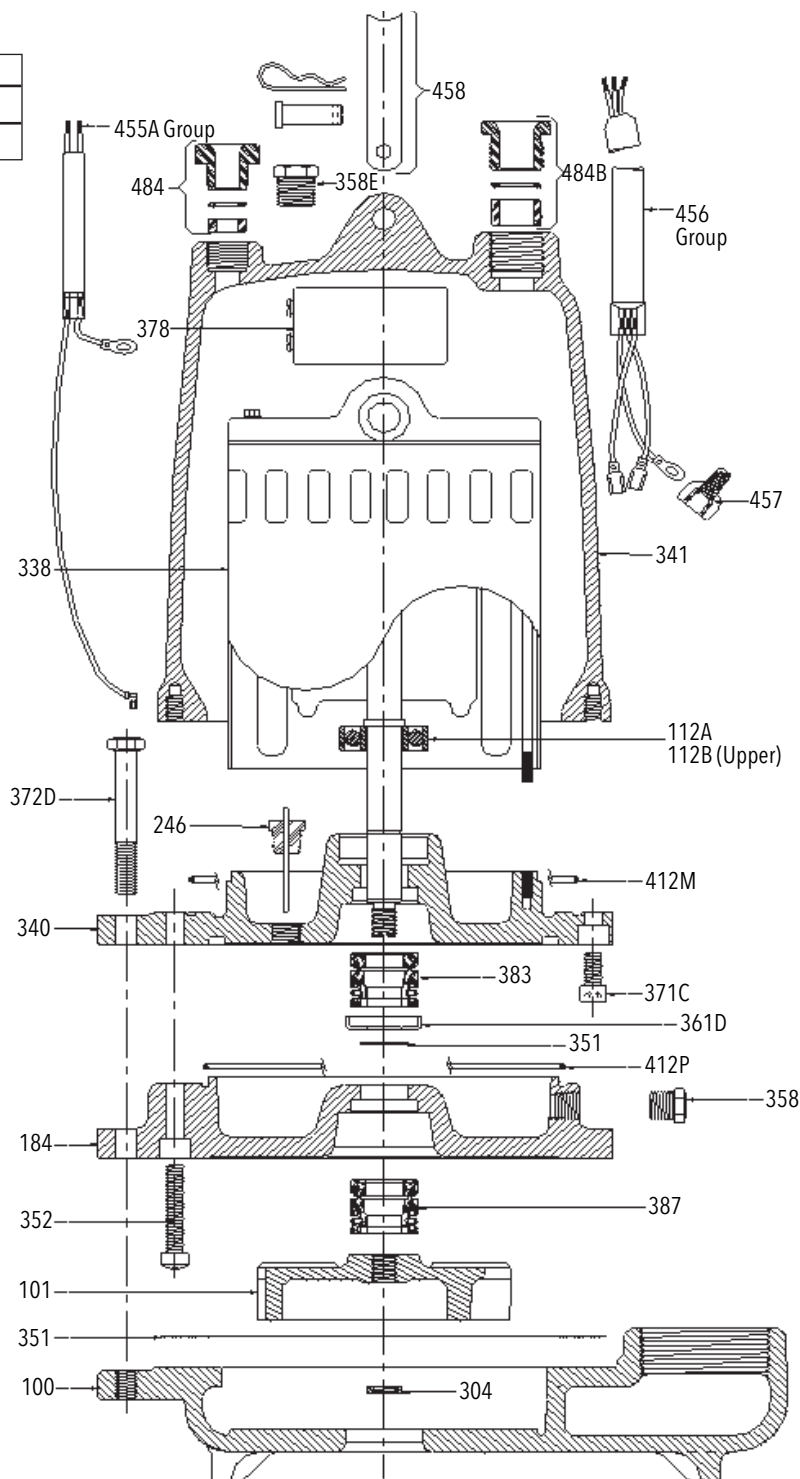
Item No.	Part Description	Material	Qty. Req'd.	Repair Parts Order Number						Max. Wt. (lbs.)
				1725 RPM		3450 RPM				
				½ HP	½ HP	¾ HP	1 HP	1½ HP	2 HP	
100	Casing - ½ HP "L" Model Only 59115	Cast Iron	1	1K171	N/A					13.0
	Casing - All Others (M, H, HH) 59114			1K170						
101	Impeller	Cast Iron	1	2K158	2K220	2K219	2K218	2K217	2K840	2.0
	Impeller	Bronze		2K271	2K272	2K273	2K274	2K275	2K841	2½
	Impeller - High Head "HH"	Cast Iron		N/A	2K225	N/A	N/A	2K221	N/A	3½
	Impeller - High Head "HH"	Bronze		N/A	2K276	N/A	N/A	2K277	N/A	4.0
112A	Lower Ball Bearing	Steel	1	4K132					4K384	-
112B	Upper Ball Bearing	Steel	1	4K132						-
218	Insulating Turbine Oil	ASTM150		4K432 (1 gallon ½-1½ HP, .88 gallons 2 HP)						7½ lbs./gal.
304	Impeller Locknut - All	AISI 300 SS	1	13K286						-
338	Motor	Motor with Stainless Steel Shaft	1	118-121R	118-1222R	N/A	N/A	N/A	N/A	13.0 to 24.0
				118-1215R	118-1236R	118-1236R	118-1238R	118-1238R	N/A	
				118-122R	118-1223R	118-1232R	118-1233R	118-1234R	120-845R	
				N/A	118-1333R	118-1334R	118-1335R	118-1336R	120-8425R	
				N/A	118-1321R	118-1322R	118-1323R	118-1324R	120-8425R	
				N/A	118-1328R	118-1330R	118-1330R	118-1331R	120-8435R	
340	Seal / Bearing Housing	Cast Iron	1	1K167					1K332	10.0
341	Motor Cover	Cast Iron	1	1K207			1K208			23.0
				N/A	1K208					
351	Casing Gasket - All Except "HH"		Composite	1	5K170					-
	Shim Set - "HH" Models Only		Plastic	1	5K169					-
358E	Plug - Motor Cover ¾" NPT		AISI 300 SS	1	6K169					-
371C	Skt. Hd. Screw - Housing to Motor Cover		AISI 300 SS	4	13K271					-
372D	Hex Cap Screw - Housing to Casing		AISI 300 SS	4	13K186					-
376	Capacitor (1 Phase Only)	Varies	1	9K197				9K352	-	
				N/A				9K351		
387	Mechanical Seal - Standard		Silicon Carbide	1	10K120			10K119	-	
	Mechanical Seal - Optional		Tungsten Carbide	1	10K122			10K123	-	
412M	O-ring - Motor Cover		BUNA-N, AS568A-166	1	4K252					-
436	Motor Start Switch (1 Phase Only)			1	629002-2				9K356	-
457	Wire Nut (Power Cable)	Special Nylon Housing	2 up to 6	N/A				9K145	-	
				N/A	9K145					
458	Handle Assembly		AISI 300 SS	1	4K243					-
484B	Strain Relief Assembly (Power Cable)	Varies	1	5K113			5K111		-	
				1	N/A	5K111				-
	Loctite #271 - Impeller / Nut			1	AL27121					-

Item No. 456, Power Cables	Type and AWG Size	Standard length	Optional Lengths				Wt. (lbs./5 ft.)
		20'	30'	50'	100'		
1 PH: ½ HP, 115 V; standard with plug, optional length cords have bare leads.	SJTOW - 16/3	9K165	9K214	9K215	N/A	0.5	
1 PH: ½ HP, 115 V; standard with plug, optional length cords have bare leads.	STOW - 14/3	9K385 - SJTOW	9K216*	9K161*	9K217*	0.9	
1 PH: ¾ & 1 HP, 208 & 230 V; standard with plug, opt. length cords have bare leads.	SJTOW - 16/3	9K164	9K214	9K215	N/A	0.5	
1 PH: ¾ & 1 HP, 208 & 230 V; standard with plug, opt. length cords have bare leads.	STOW - 14/3	9K444 - SJTOW	9K216*	9K161*	9K217*	0.9	
1 PH: 1½ HP, 208 & 230 V with bare leads.	STOW - 14/3	9K163	9K216*	9K161*	9K217*	0.9	
1 PH: 2 HP, 230 V with bare leads.	STOW - 14/3	9K266	9K267	9K268	9K269	0.9	
3 PH: ½ - 2 HP, 200-230/460/575 V with bare leads.	STOW - 14/4	9K153	9K218	9K154	9K219	1.1	

\* Requires 5K111 Strain Relief Assembly and 1K208 Motor Cover.  
 "P" option -9K445 1PH, 208/230 V, 14/3 SJTOW Cord with Plug, 30 ft.

### MODEL 2ED

CAPACITOR DATA		
"K" no.	MFD	VAC
9K197	161/193	110



Item No. 456, Power Cables	Type and AWG Size	Standard length				Wt. (lbs./5 ft.)
		20'	30'	50'	100'	
1 PH: 1/3 HP, 115 V; standard with plug, optional lengths have bare leads.	SJTOW - 16/3	9K165	9K214	9K215	N/A	0.5
1 PH: 1/2 HP, 115 V; standard with plug, optional lengths have bare leads.	STOW - 14/3	9K385 - SJTOW	9K216*	9K161*	9K217*	0.9
1 PH: 1/3 & 1/2 HP, 208 & 230 V; standard with plug, opt. lengths have bare leads.	SJTOW - 16/3	9K164	9K214	9K215	N/A	0.5
1 PH: 3/4 - 1 1/2 HP, 208 & 230 V with bare leads.	STOW - 14/3	9K163	9K216	9K161	9K217	0.9
3 PH: 1/2 - 1 1/2 HP, 200-230/460/575 V with bare leads.	STOW - 14/4	9K153	9K218	9K154	9K219	1.1
<b>Item No. 455A, Sensor Cables</b>						
Mechanical Seal Sensor - Standard for All Models	SJTOW - 16/2	9K189	9K220	9K221	9K222	0.5
Mechanical Seal/Heat Sensor - Optional for 3-Phase Models	SJTOW - 18/4	9K237	9K238	9K239	9K240	0.5

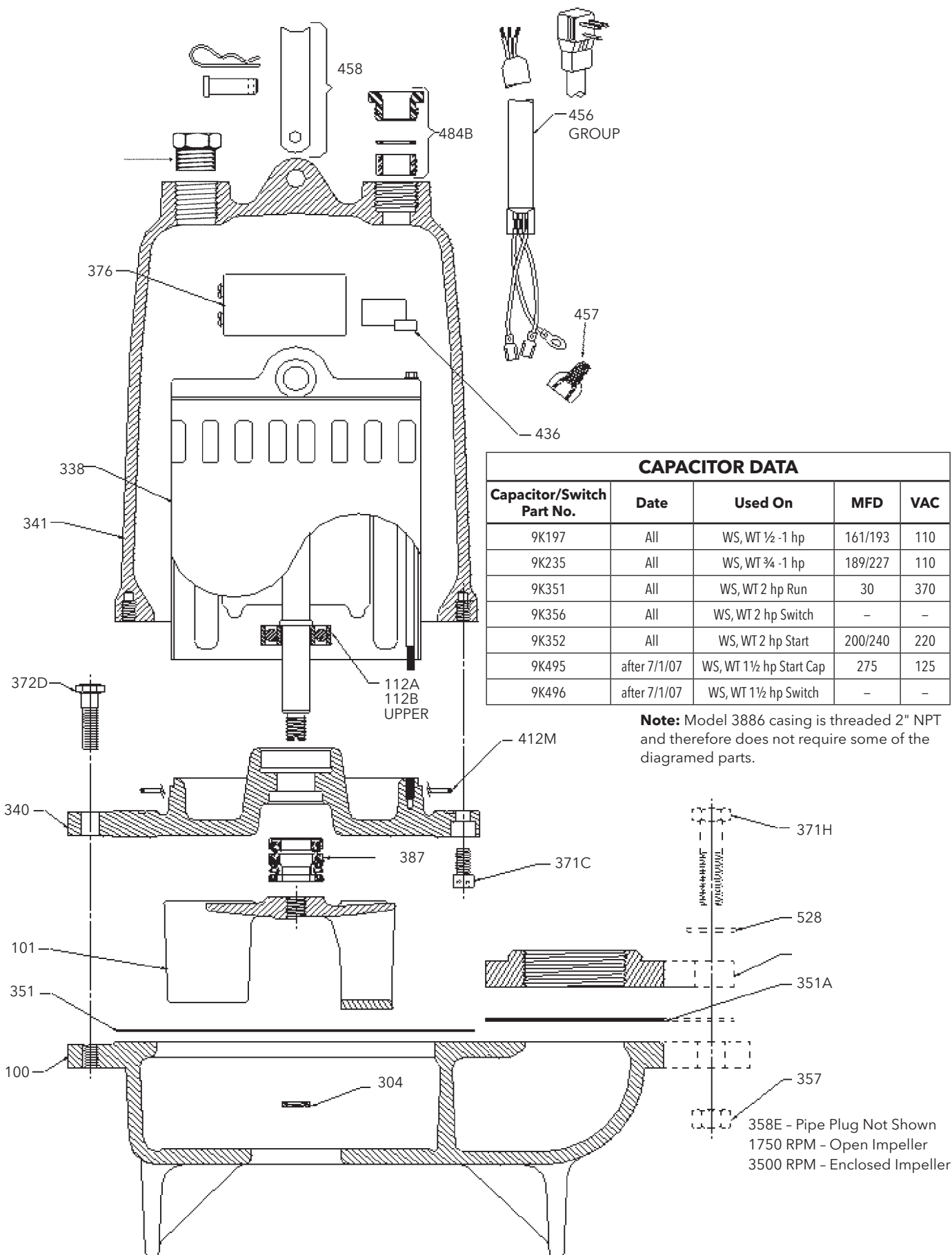
\* Requires 5K111 Strain Relief Assembly and 1K208 Motor Cover.



### MODEL 2ED (Dual Seal)

Item No.	Part Description	Material	Qty. Req'd.	Repair Parts Order Number					Max. Wt. (lbs.)
				1725 RPM	3450 RPM				
				1/2 HP	1/2 HP	3/4 HP	1 HP	1 1/2 HP	
100	Casing - "F" Model Only (8th Digit)	Cast Iron	1	1K171	N/A				13.0
	Casing - All Others			N/A	1K170				
101	Impeller - Standard	Cast Iron	1	2K158 E, F = 5 3/8"	2K220 D = 3 1/16"	2K219 C = 4 1/16"	2K218 B = 4 7/16"	2K217 A = 4 7/16"	4.0
	Model Number (8th Digit) = Diameter	Bronze		2K271 E, F = 5 3/8"	2K272 D = 3 1/16"	2K273 C = 4 1/16"	2K274 B = 4 7/16"	2K275 A = 4 7/16"	2.5
	Impeller - High Head	Cast Iron		N/A	2K225 H = 3 3/8"	N/A	N/A	2K221 G = 5 1/2"	3.5
	Model Number (8th Digit) = Diameter	Bronze		N/A	2K276 H = 3 3/8"	N/A	N/A	2K277 G = 5 1/2"	4.0
	Impeller - High Head								
	Model Number (8th Digit) = Diameter								
112A	Lower Ball Bearing	Steel	1	4K132				-	
112B	Upper Ball Bearing	Steel	1	4K132				-	
184	Seal Housing	Cast Iron	1	1K229				9.5	
218	Insulating Oil - Gallons Required	Turbine Oil - ASTM150	-	4K432				7 1/2 lbs./gal.	
	Gallons Required in Seal Housing			0.10					
	Gallons Required in Motor Cover			1.0					
246	Seal Sensor - Plug and Rod	Nylon/Brass	1	9K191				-	
304	Impeller Locknut - All	AISI 300 SS	1	13K286				-	
338	Motor	Stainless Steel Shaft	1	119-493R	119-4931R	N/A			13.0 to 24.0
				119-49815R	119-4992R	119-4992R	119-4994R	119-4994R	
				119-494R	119-4932R	119-4934R	119-4934R	119-4935R	
				N/A	119-4971R	119-4973R	119-4973R	119-4974R	
				N/A	119-4941R	119-4943R	119-4943R	119-4944R	
				N/A	119-4951R	119-4954R	119-4954R	119-4954R	
340	Bearing Housing	Cast Iron	1	1K228				10.0	
341	Motor Cover	Cast Iron	1	1K230		1K231			23.0
				N/A	1K231				
351	Casing Gasket	Composite	1	5K170				-	
	Shim Set - "High Head" Models Only	Plastic	1	5K169				-	
352	Skt. Hd. Screw - Seal Housing to Motor Cover	AISI 300 SS	2	13K219				-	
358	Plug - Seal Housing 1/4" NPT	AISI 300 SS	1	6K168				-	
358E	Plug - Motor Cover 3/8" NPT	AISI 300 SS	1	6K169				-	
361	Retaining Ring	AISI 300 SS	1	4K375				-	
361D	Seal Retainer	AISI 300 SS	1	4K379				-	
371C	Skt. Hd. Screw - Bearing Housing to Motor Cover	AISI 300 SS	2	13K271				-	
372D	Hex Cap Screw - Housing to Casing	AISI 300 SS	4	13K222				-	
376	Capacitor (1 Phase Only) - Start	-	1	9K197				-	
383	Mechanical Seal - Upper	Carbon/Ceramic	1	10K121 (Type 16)				-	
387	Mechanical Seal - Lower (Standard)	Silicon Carbon	1	10K120 (Type 16)				-	
	Mechanical Seal - Lower (Optional)	Tungsten Carbon	1	10K122 (Type 16)				-	
412M	O-ring - Motor Cover	BUNA-N, AS 568A-166	1	4K252				-	
412P	O-ring - Seal/Bearing Housing	BUNA-N, AS 568A-163	1	5K181				-	
457	Wire Nut	Special Nylon Housing	N/A	None Required				-	
			1 pkg.	N/A	9K145 (package of 8)			-	
			1 pkg.	9K145 (package of 8)				-	
458	Handle Assembly	AISI 300 SS	1	4K243				-	
484	Strain Relief Assembly, Sensor Cable	Varies	1	5K113				-	
484B	Strain Relief Assembly (Power Cable)	Varies	1	5K113		5K111		-	
			1	N/A	5K111			-	
	Heat Sensor Kit (Optional)	-	1	9K261				-	
	Seal Installation Tool	-	1	A02A013				-	
	Loctite #271	-	1	AL27121				-	

### MODELS 3886, 3887 (WS\_B, WS\_BF, WS\_BHF)



### MODEL 3886 (WS\_B)

Item No.	Part Description	Material	Qty. Req.	Repair Parts Order Number				Max. Wt. (lbs.)
				1725 RPM				
				1/3 HP	1/2 HP	3/4 HP	1 HP	
100	Casing	Cast Iron	1	1K168				16.5
101	Impeller	Cast Iron	1	2K268	2K239	2K240	2K241	3.0
	Impeller	Bronze	1	2K279	2K280	2K281	2K282	3.5
112A	Lower Ball Bearing	Steel	1	4K132				-
112B	Upper Ball Bearing	Steel	1	4K132				-
218	Insulating Turbine Oil	ASTM150	-	4K432 (1 gallon 1/3 - 1 HP)				7.5 lbs./gal.
304	Impeller Locknut - All	AISI 300 SS	1	13K286				-
338	Motor - 1 Phase, 115V	Motor with Stainless Steel Shaft	1	118-121R	118-123R	N/A	N/A	13.0 to 24.0
	Motor - 1 Phase, 208V			118-1215R	118-1215R	118-1217R	118-1217R	
	Motor - 1 Phase, 230V			118-122R	118-124R	118-1212R	118-1213R	
	Motor - 3 Phase, 200 V			N/A	118-1314R	118-1316R	118-1316R	
	Motor - 3 Phase, 230/460 V			N/A	118-132R	118-134R	118-134R	
	Motor - 3 Phase, 575 V			N/A	118-139R	118-1311R	118-1311R	
340	Seal / Bearing Housing	Cast Iron	1	1K167				10.0
341	Motor Cover - 1 Phase	Cast Iron	1	1K207				20.0
	Motor Cover - 3 Phase			1K208				
351	Casing Gasket	Composite	1	5K170				-
358E	Plug - Motor Cover 3/8" NPT	AISI 300 SS	1	6K169				-
371C	Skt. Hd. Screw - Housing to Motor Cover	AISI 300 SS	4	13K271				-
372D	Hex Cap Screw - Housing to Casing	AISI 300 SS	4	13K186				-
376	Capacitor (1 Phase only) Start	Varies	1	9K197		9K235		-
387	Mechanical Seal - Standard	Silicon Carbide	1	10K120				-
	Mechanical Seal - Optional	Tungsten Carbide	1	10K122				-
412M	O-ring - Motor Cover	BUNA-N, A5568A-166	1	4K252				-
457	Wire Nut (Power Cable)	1 Phase	-	N/A				-
		3 Phase	upto 6	N/A	9K145			-
458	Handle Assembly	AISI 300 SS	1	4K243				-
484B	Strain Relief Assembly (Power Cable)	1 Phase	1	5K113				-
		3 Phase	1	N/A	5K111			-
	Loctite #271	-	1	AL27121				-

Item No. 456, Power Cables	Type and AWG Size	Standard length	Optional Lengths			Wt. (lbs./5 ft.)
		20'	30'	50'	100'	
1 PH: 1/3 HP, 115 V; standard with plug, optional length cords have bare leads.	SJTOW - 16/3	9K165	9K214	9K215	N/A	0.5
1 PH: 1/2 HP, 115 V; standard with plug, optional length cords have bare leads.	STOW - 14/3	9K385 - SJTOW	9K216*	9K161*	9K217*	0.9
1 PH: 1/3 and 1/2 HP, 208 & 230 V; standard with plug, opt. length cords have bare leads.	SJTOW - 16/3	9K164	9K214	9K215	N/A	0.5
1 PH: 3/4 & 1 HP, 208 & 230 V; standard with plug, opt. length cords have bare leads.	STOW - 14/3	9K444 - SJTOW	9K216*	9K161*	9K217*	0.9
3 PH: 1/2 - 1 HP, 200-230/460/575 V with bare leads.	STOW - 14/4	9K153	9K218	9K154	9K219	1.1

\* Requires 5K111 Strain Relief Assembly and 1K208 Motor Cover.

"P" option -9K445 1PH, 208/230 V, 14/3 SJTOW Cord with Plug, 30 ft.

### MODEL 3887 (WS\_BF)

Item No.	Part Description	Material	Qty. Req.	Repair Parts Order Number				Max. Wt. (lbs.)
				1725 RPM				
				1/3 HP	1/2 HP	3/4 HP	1 HP	
100	Casing	Cast Iron	1	1K178				16.5
101	Impeller	Cast Iron	1	2K268	2K239	2K240	2K241	3.0
	Impeller	Bronze	1	2K279	2K280	2K281	2K282	3.5
112A	Lower Ball Bearing	Steel	1	4K132				-
112B	Upper Ball Bearing	Steel	1	4K132				-
195C	Discharge Flange (2" NPT STD.)	Cast Iron	1	6K76				1.5
	Discharge Flange (3" NPT OPT.)			A1-3				
218	Insulating Turbine Oil	ASTM150	1	4K432 (1.0 gallons, 1/3 - 1 HP)				7.5 lbs./gal.
304	Impeller Locknut - All	AISI 300 SS	1	13K286				-
338	Motor - 1 Phase, 115V	Motor with Stainless Steel Shaft	1	118-121R	118-123R	N/A	N/A	13.0 to 24.0
	Motor - 1 Phase, 208V			118-1215R	118-1215R	118-1217R	118-1217R	
	Motor - 1 Phase, 230V			118-122R	118-124R	118-1212R	118-1213R	
	Motor - 3 Phase, 200 V			N/A	118-1314R	118-1316R	118-1316R	
	Motor - 3 Phase, 230/460 V			N/A	118-132R	118-134R	118-134R	
	Motor - 3 Phase, 575 V			N/A	118-139R	118-1311R	118-1311R	
340	Seal / Bearing Housing	Cast Iron	1	1K167				10.0
341	Motor Cover - 1 Phase	Cast Iron	1	1K207				20.0
	Motor Cover - 3 Phase			1K208				
351	Casing Gasket	Composite	1	5K170				-
351A	Discharge Flange Gasket	Composite	1	5K150				-
357	Hex Nut - Discharge Flange	AISI 300 SS	2	13K99				-
358E	Plug - Motor Cover 3/8" NPT	AISI 300 SS	1	6K169				-
371C	Skt. Hd. Screw - Housing to Motor Cover	AISI 300 SS	4	13K271				-
371H	Hex Cap Screw - Discharge Flange	AISI 300 SS	2	13K153				-
372D	Hex Screw - Housing to Casing	AISI 300 SS	4	13K186				-
376	Capacitor (1 Phase Only) Start	Varies	1	9K197		9K235		-
387	Mechanical Seal - Standard	Silicon Carbide	1	10K120				-
	Mechanical Seal - Optional	Tungsten Carbide	1	10K122				-
412M	O-Ring - Motor Cover	Buna-N, AS 568A-166	1	4K252				-
457	Wire Nut, Power Cable, 3 Phase	Special Nylon Housing	Up to 6	N/A	9K145		-	
458	Handle Assembly	AISI 300 SS	1	4K243				-
484B	Strain Relief Assembly (Power Cable)	1 PH	1	5K113				-
		3 PH		N/A	5K111			
528	Washer - Discharge Flange	AISI 300 SS	2	13K82				-
	Loctite #271	-	1	AL27121				-

Item No. 456, Power Cables	Type and AWG Size	Standard length	Optional Lengths			Wt. (lbs./5 ft.)
		20'	30'	50'	100'	
1 PH: 1/3 HP, 115 V; standard with plug, optional length cords have bare leads.	SJTOW - 16/3	9K165	9K214	9K215	N/A	0.5
1 PH: 1/2 HP, 115 V; standard with plug, optional length cords have bare leads.	STOW - 14/3	9K385 - SJTOW	9K216*	9K161*	9K217*	0.9
1 PH: 1/3 & 1/2 HP, 208 & 230 V; standard with plug, optional length cords have bare leads.	SJTOW - 16/3	9K164	9K214	9K215	N/A	0.5
1 PH: 3/4 & 1 HP, 208 & 230 V; standard with plug, optional length cords have bare leads.	STOW - 14/3	9K444 - SJTOW	9K216*	9K161*	9K217*	0.9
3 PH: 1/2 - 1 HP, 200-230/460/575 V with bare leads.	STOW - 14/4	9K153	9K218	9K154	9K219	1.1

\* Requires 5K111 Strain Relief Assembly and 1K208 Motor Cover.  
 "P" option -9K445 1PH, 208/230 V, 14/3 SJTOW Cord with Plug, 30 ft.

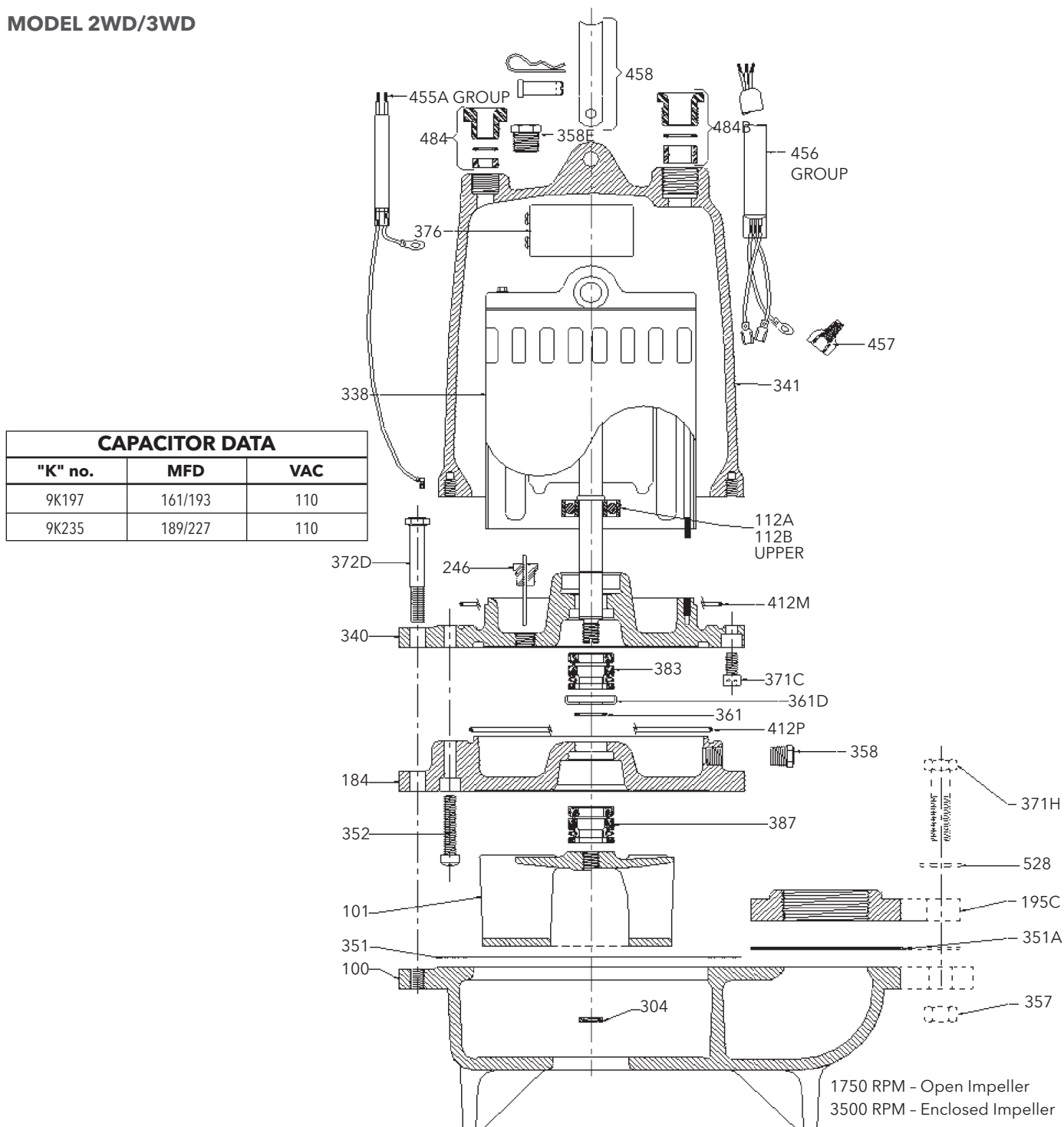
### MODEL 3887 (WS\_BHF)

Item No.	Part Description	Material	Qty. Req.	Repair Parts Order Number						Max. Wt. (lbs.)
				3450 RPM						
				1/2 HP	1/2 HP	3/4 HP	1 HP	1 1/2 HP	2 HP	
100	Casing	Cast Iron	1	1K330						16.5
101	Impeller	Cast Iron	1	2K858	2K856	2K854	2K852	2K800	2K798	3.0
	Impeller	Bronze	1	2K859	2K857	2K855	2K853	2K801	2K799	3.5
112A	Lower Ball Bearing	Steel	1	4K132			4K384			-
112B	Upper Ball Bearing	Steel	1	4K132						-
195C	Discharge Flange (2" NPT STD.)	Cast Iron	1	6K76						1.5
	Discharge Flange (3" NPT OPT.)	Cast Iron	1	A1-3						1.5
218	Insulating Turbine Oil	ASTM150	-	4K432 (1 gallon 1/2-1 HP, .88 gallons 1 1/2 and 2 HP)						7.5 lbs./gal.
304	Impeller Locknut - All	AISI 300 SS	1	13K286						-
338	Motor - 1 Phase, 115V	Stainless Steel Shaft	1	118-1222R	118-1222R	N/A	N/A	N/A	N/A	13.0 to 24.0
	Motor - 1 Phase, 208V			118-1236R	118-1236R	118-1236R	118-1238R	N/A	N/A	
	Motor - 1 Phase, 230V			118-1223R	118-1223R	118-1232R	118-1233R	120-844R	120-845R	
	Motor - 3 Phase, 200 V			N/A	118-1333R	118-1334R	118-1335R	120-8425R	120-8425R	
	Motor - 3 Phase, 230/460 V			N/A	118-1321R	118-1322R	118-1323R	120-8425R	120-8425R	
	Motor - 3 Phase, 575 V			N/A	118-1328R	118-1330R	118-1330R	120-8435R	120-8435R	
340	Seal / Bearing Housing	Cast Iron	1	1K167			1K332			10.0
341	Motor Cover - 1 Phase	Cast Iron	1	1K207			1K208			20.0
	Motor Cover - 3 Phase			1K208						
351	Casing Gasket	Composite	1	5K170						-
351A	Discharge Flange Gasket	Composite	1	5K150						-
357	Hex Nut - Discharge Flange	AISI 300 SS	2	13K99						-
358E	Plug - Motor Cover 3/8" NPT	AISI 300 SS	1	6K169						-
371C	Skt. Hd. Screw - Housing to Motor Cover	AISI 300 SS	4	13K271						-
371H	Hex Cap Screw - Discharge Flange	AISI 300 SS	2	13K153						-
372D	Hex Cap Screw - Housing to Casing	AISI 300 SS	4	13K186						-
387	Mechanical Seal - Standard	Silicon Carbide	1	10K120			10K119			-
	Mechanical Seal - Optional	Tungsten Carbide	1	10K122			10K123			-
412M	O-Ring - Motor Cover	BUNA-N, AS568A-166	1	4K252						-
457	Wire Nut (Power Cable)	Special Nylon Housing	2	N/A			9K145			-
				upto 6	N/A	9K145				-
458	Handle Assembly	AISI 300 SS	1	4K243						-
484B	Strain Relief Assembly (Power Cable)	Varies	1	5K113			5K111			-
				N/A	5K111					
528	Washer - Discharge Flange	AISI 300 SS	2	13K82						-
	Loctite #271	-	1	AL27121						-

Item No. 456, Power Cables	Type and AWG Size	Standard length	Optional Lengths			Wt. (lbs./5 ft.)
		20'	30'	50'	100'	
1 PH: 1/2 HP, 115 V; standard with plug, optional lengths have bare leads.	SJTOW - 16/3	9K165	9K214	9K215	N/A	0.5
1 PH: 1/2 HP, 115 V; standard with plug, optional lengths have bare leads.	STOW - 14/3	9K385 - SJTOW	9K216*	9K161*	9K217*	0.9
1 PH: 1/3 and 1/2 HP, 208 & 230 V; standard with plug, optional lengths have bare leads.	SJTOW - 16/3	9K164	9K214	9K215	N/A	0.5
1 PH: 3/4 - 1 HP, 208 & 230 V; standard with plug, optional lengths have bare leads.	STOW - 14/3	9K444 - SJTOW	9K216*	9K161*	9K217*	0.9
1 PH: 1 1/2 and 2 HP, 230 V with bare leads.	STOW - 14/3	9K266	9K267	9K268	9K269	0.9
3 PH: 1/2 - 2 HP, 200-230/460/575 V with bare leads.	STOW - 14/4	9K153	9K218	9K154	9K219	1.1

\* Requires 5K111 Strain Relief Assembly and 1K208 Motor Cover.  
 "P" option -9K445 1PH, 208/230 V, 14/3 SJTOW Cord with Plug, 30 ft.

### MODEL 2WD/3WD



#### CAPACITOR DATA

"K" no.	MFD	VAC
9K197	161/193	110
9K235	189/227	110

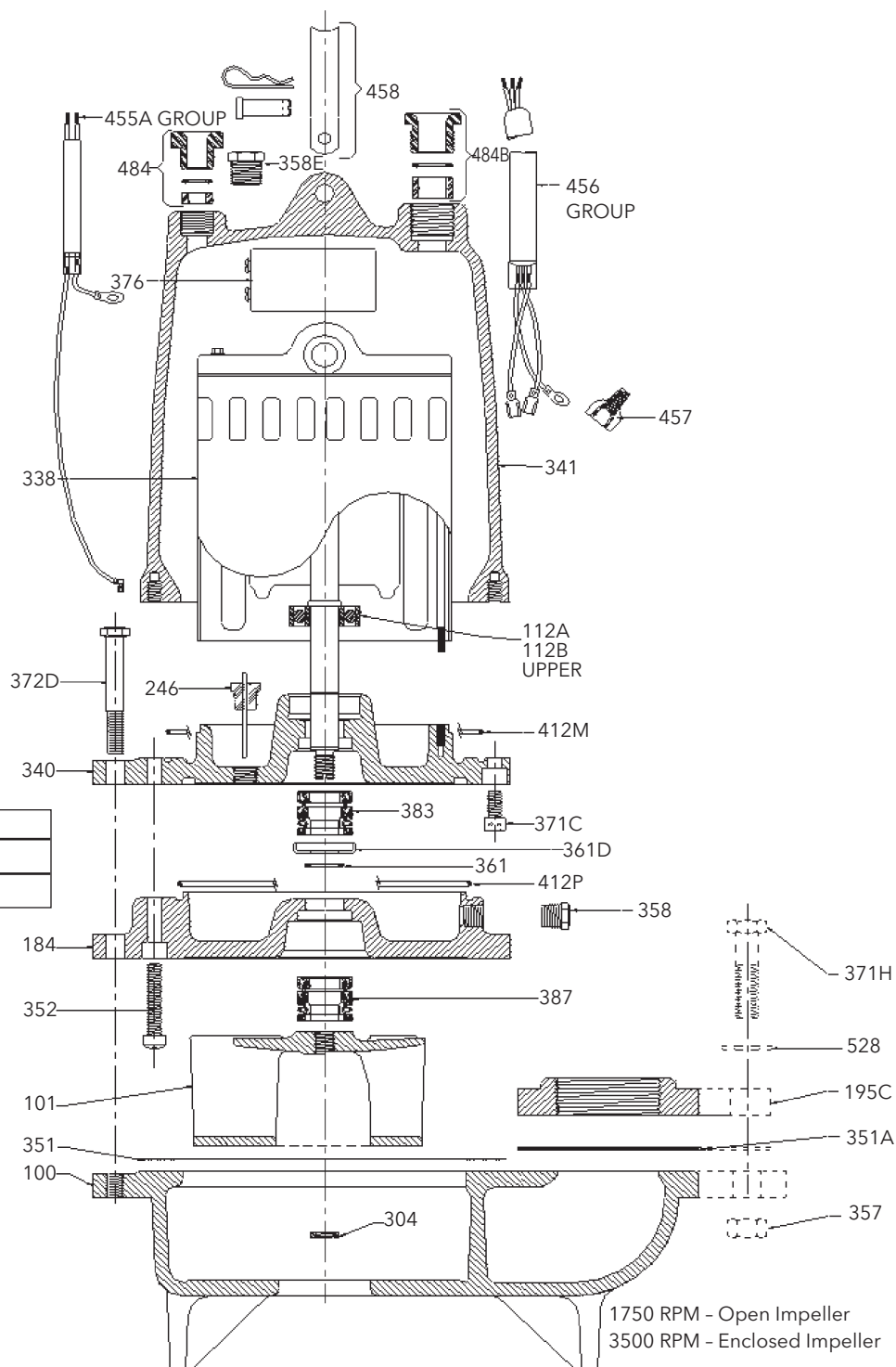
Item No. 456, Power Cables	Type and AWG Size	Standard length				Wt. (lbs./5 ft.)
		20'	30'	50'	100'	
1 PH: 1/3 HP, 115 V; standard with plug, optional lengths have bare leads.	SJTOW - 16/3	9K165	9K214	9K215	N/A	0.5
1 PH: 1/2 HP, 115 V; standard with plug, optional lengths have bare leads.	STOW - 14/3	9K385 - SJTOW	9K216*	9K161*	9K217*	0.9
1 PH: 1/3 & 1/2 HP, 208 & 230 V; standard with plug, opt. lengths have bare leads.	SJTOW - 16/3	9K164	9K214	9K215	N/A	0.5
1 PH: 3/4 - 1 HP, 208 & 230 V with bare leads.	STOW - 14/3	9K163	9K216	9K161	9K217	0.9
3 PH: 1/2 - 1 HP, 200-230/460/575 V with bare leads.	STOW - 14/4	9K153	9K218	9K154	9K219	1.1
<b>Item No. 455A, Sensor Cables</b>						
Mechanical Seal Sensor - Standard for All Models	SJTOW - 16/2	9K189	9K220	9K221	9K222	0.5
Mechanical Seal/Heat Sensor - Optional for 3-Phase Models	SJTOW - 18/4	9K237	9K238	9K239	9K240	0.5

\* Requires 5K111 Strain Relief Assembly and 1K208 Motor Cover.

### MODEL 2WD/3WD (1725 RPM)

Item No.	Part Description	Material	Qty. Req.	Repair Parts Order Number				Max. Wt. (lbs.)
				1725 RPM				
				1/3 HP	1/2 HP	3/4 HP	1 HP	
100	Casing	Cast Iron	1	1K178				16.5
101	Impeller	Cast Iron	1	2K268 E = 4 <sup>11</sup> / <sub>16</sub> "	2K239 D = 5"	2K240 C = 5 <sup>3</sup> / <sub>8</sub> "	2K241 B = 5 <sup>3</sup> / <sub>4</sub> "	3.0
	Impeller	Bronze	1	2K279 E = 4 <sup>11</sup> / <sub>16</sub> "	2K280 D = 5"	2K281 C = 5 <sup>3</sup> / <sub>8</sub> "	2K282 B = 5 <sup>3</sup> / <sub>4</sub> "	3.5
112A	Lower Ball Bearing	Steel	1	4K132				-
112B	Upper Ball Bearing	Steel	1	4K132				-
184	Seal Housing	Cast Iron	1	1K229				9.5
195C	Discharge Flange - Standard 2" NPT	Cast Iron	1	6K76				1.5
	Discharge Flange - Optional 3" NPT			A1-3				
218	Insulating Oil - Gallons Required	Turbine Oil - ASTM150	-	4K432				7.5 lbs./gal.
	Gallons Required in Seal Housing			0.10				
	Gallons Required in Motor Cover			1.0				
246	Seal Sensor - Plug and Rod	Nylon/Brass	1	9K198				-
304	Impeller Locknut - All	AISI 300 SS	1	13K286				-
338	Motor - 1 Phase, 115V	Stainless Steel Shaft	1	119-493R	119-493R	N/A	N/A	13.0 to 24.0
	Motor - 1 Phase, 208V			119-4981R	119-4981R	119-4983R	119-4983R	
	Motor - 1 Phase, 230V			119-494R	119-494R	119-496R	119-496R	
	Motor - 3 Phase, 200V			N/A	119-4961R	119-4963R	119-4963R	
	Motor - 3 Phase, 230/460V			N/A	119-4911R	119-4913R	119-4913R	
	Motor - 3 Phase, 575V			N/A	119-4921R	119-4923R	119-4923R	
340	Bearing Housing	Cast Iron	1	1K228				10.0
341	Motor Cover - 1 Phase	Cast Iron	1	1K230		1K231		20.0
	Motor Cover - 3 Phase			1K231				
351	Casing Gasket	Composite	1	5K170				-
351A	Discharge Flange Gasket	Composite	1	5K150				-
352	Skt. Hd. Screw - Seal Hsg. to Motor Cover	AISI 300 SS	2	13K219				-
357	Hex Nut - Discharge Flange	AISI 300 SS	2	13K99				-
358	Plug - Seal Housing 1/4" NPT	AISI 300 SS	1	6K168				-
358E	Plug - Motor Cover 3/8" NPT	AISI 300 SS	1	6K169				-
361	Retaining Ring	AISI 300 SS	1	4K375				-
361D	Seal Retainer	AISI 300 SS	1	4K379				-
371C	Skt. Hd. Screw - Brg. Hsg. to Motor Cover	AISI 300 SS	2	13K271				-
371H	Hex Cap Screw - Discharge Flange	AISI 300 SS	2	13K153				-
372D	Hex Cap Screw - Housing to Casing	AISI 300 SS	4	13K222				-
376	Capacitor (1 Phase only) - Start	Varies	1	9K197		9K235		-
383	Mechanical Seal - Upper	Carbon/Ceramic	1	10K121 (Type 16)				-
387	Mechanical Seal - Lower (Standard)	Silicon Carbide	1	10K120 (Type 16)				-
	Mechanical Seal - Lower (Optional)	Tungsten Carbide	1	10K122 (Type 16)				-
412M	O-ring - Motor Cover	BUNA-N, AS568A-166	1	4K252				-
412P	O-ring - Seal/Bearing Housing	BUNA-N, AS568A-163	1	5K181				-
457	Wire Nut	Power Cable - 3 Ph., 460V	1 pkg.	N/A	9K145 (package of 8)			-
		Seal/Heat Cable - Opt. 3 Ph. Only	1 pkg.	9K145 (package of 8)				-
458	Handle Assembly	AISI 300 SS	1	4K243				-
484	Strain Relief Assembly, Sensor Cable	Varies	1	5K113				-
484B	Strain Relief Assembly (Power Cable)	1 Phase	1	5K113		5K111		-
		3 Phase		N/A	5K111			
528	Washer - Discharge Flange	AISI 300 SS	2	13K82				-
-	Heat Sensor Kit (Optional)	-	1	9K261				-
-	Seal Installation Tool	-	1	A02A013				-
-	Loctite #271	-	1	AL27121				-

### MODEL 2WD/3WD



#### CAPACITOR DATA

"K" no.	MFD	VAC
9K197	161/193	110

Item No. 456, Power Cables	Type and AWG Size	Standard length				Wt. (lbs./5 ft.)
		20'	30'	50'	100'	
1 PH: 1/3 HP, 115 V; standard with plug, optional lengths have bare leads.	SJTOW - 16/3	9K165	9K214	9K215	N/A	0.5
1 PH: 1/2 HP, 115 V; standard with plug, optional lengths have bare leads.	STOW - 14/3	9K385 - SJTOW	9K216*	9K161*	9K217*	0.9
1 PH: 1/3 & 1/2 HP, 208 & 230 V; standard with plug, opt. lengths have bare leads.	SJTOW - 16/3	9K164	9K214	9K215	N/A	0.5
1 PH: 3/4 - 1 HP, 208 & 230 V with bare leads.	STOW - 14/3	9K163	9K216	9K161	9K217	0.9
3 PH: 1/2 - 1 HP, 200-230/460/575 V with bare leads.	STOW - 14/4	9K153	9K218	9K154	9K219	1.1
Item No. 455A, Sensor Cables						
Mechanical Seal Sensor - Standard for All Models	SJTOW - 16/2	9K189	9K220	9K221	9K222	0.5
Mechanical Seal/Heat Sensor - Optional for 3-Phase Models	SJTOW - 18/4	9K237	9K238	9K239	9K240	0.5

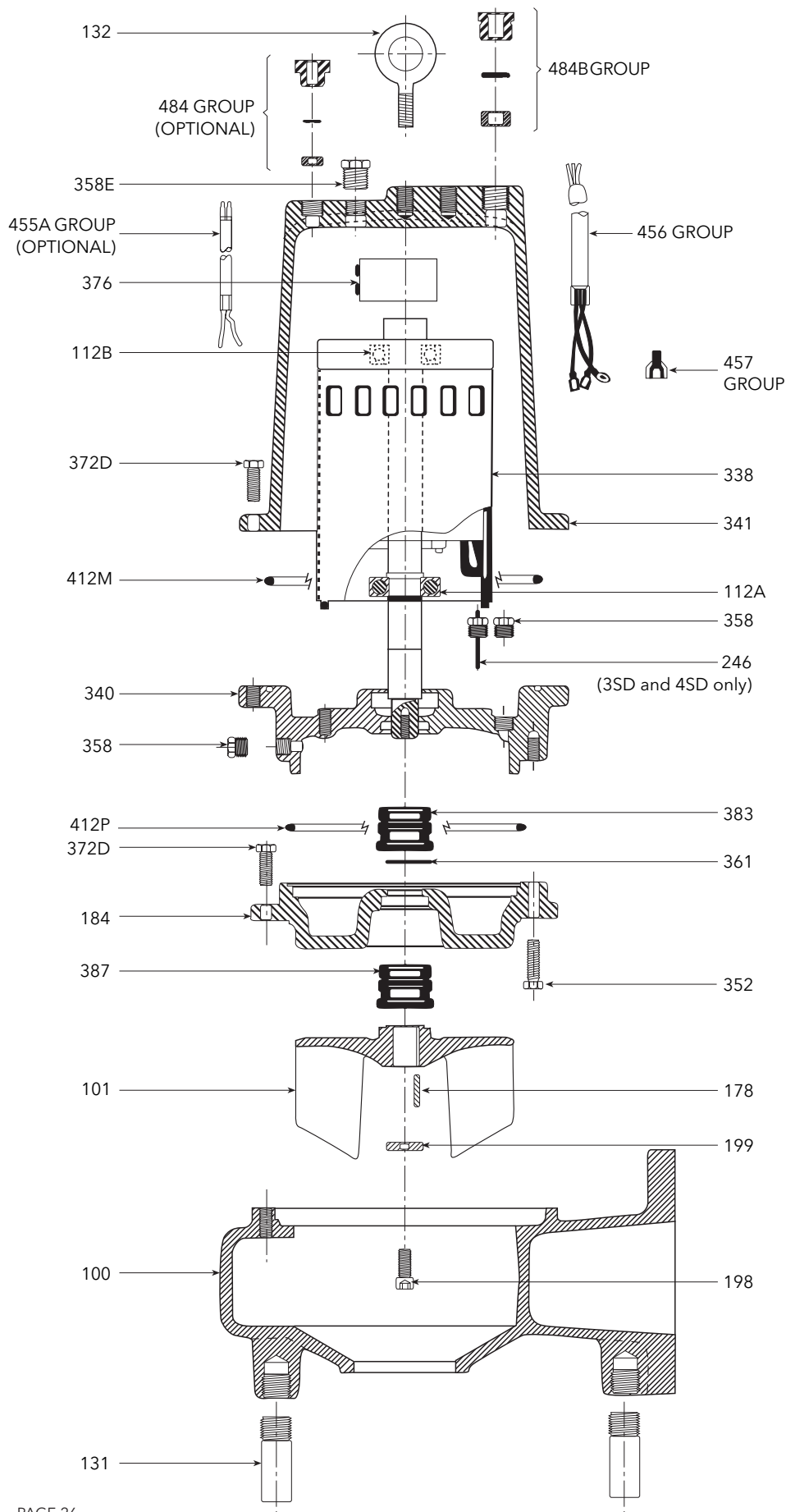
\* Requires 5K111 Strain Relief Assembly and 1K208 Motor Cover.



### MODEL 2WD/3WD (3500 RPM)

Item No.	Part Description	Material	Qty. Req.	Repair Parts Order Number				Max. Wt. (lbs.)
				3450 RPM				
				1/3 HP	1/2 HP	3/4 HP	1 HP	
100	Casing	Cast Iron	1	1K330				16.5
101	Impeller	Cast Iron	1	2K858 K = 2 <sup>15</sup> / <sub>16</sub> "	2K856 J = 3 <sup>3</sup> / <sub>16</sub> "	2K854 H = 3 <sup>7</sup> / <sub>16</sub> "	2K852 A = 3 <sup>3</sup> / <sub>4</sub> "	3.0
	Impeller	Bronze	1	2K859 E = 2 <sup>19</sup> / <sub>16</sub> "	2K857 J = 3 <sup>3</sup> / <sub>16</sub> "	2K855 H = 3 <sup>7</sup> / <sub>16</sub> "	2K853 A = 3 <sup>3</sup> / <sub>4</sub> "	3.5
112A	Lower Ball Bearing	Steel	1	4K132				-
112B	Upper Ball Bearing	Steel	1	4K132				-
184	Seal Housing	Cast Iron	1	1K229				9.5
195C	Discharge Flange - Standard 2" NPT	Cast Iron	1	6K76				1.5
	Discharge Flange - Optional 3" NPT			A1-3				
218	Insulating Oil - Gallons Required	Turbine Oil - ASTM150	-	4K432				7.5 lbs./gal.
	Gallons Required in Seal Housing			0.10				
	Gallons Required in Motor Cover			1.0				
246	Seal Sensor - Plug and Rod	Nylon/Brass	1	9K191				-
304	Impeller Locknut - All	AISI 300 SS	1	13K286				-
338	Motor - 1 Phase, 115V	Stainless Steel Shaft	1	119-4931R	119-4931R	N/A	N/A	13.0 to 24.0
	Motor - 1 Phase, 208V			119-4992R	119-4992R	119-4992R	119-4994R	
	Motor - 1 Phase, 230V			119-4932R	119-4932R	119-4934R	119-4934R	
	Motor - 3 Phase, 200V			N/A	119-4971R	119-4973R	119-4973R	
	Motor - 3 Phase, 230/460V			N/A	119-4941R	119-4943R	119-4943R	
	Motor - 3 Phase, 575V			N/A	119-4951R	119-4954R	119-4954R	
340	Bearing Housing	Cast Iron	1	1K228				10.0
341	Motor Cover - 1 Phase	Cast Iron	1	1K230		1K231		20.0
	Motor Cover - 3 Phase			1K231				
351	Casing Gasket	Composite	1	5K170				-
351A	Discharge Flange Gasket	Composite	1	5K150				-
352	Skt. Hd. Screw - Seal Hsg. to Motor Cover	AISI 300 SS	2	13K219				-
357	Hex Nut - Discharge Flange	AISI 300 SS	2	13K99				-
358	Plug - Seal Housing 1/4" NPT	AISI 300 SS	1	6K168				-
358E	Plug - Motor Cover 3/8" NPT	AISI 300SS	1	6K169				-
361	Retaining Ring	AISI 300 SS	1	4K375				-
361D	Seal Retainer	AISI 300 SS	1	4K379				-
371C	Skt. Hd. Screw - Brg. Hsg. to Motor Cover	AISI 300 SS	2	13K271				-
371H	Hex Cap Screw - Discharge Flange	AISI 300 SS	2	13K153				-
372D	Hex Cap Screw - Housing to Casing	AISI 300 SS	4	13K222				-
376	Capacitor (1 Phase only) - Start	Varies	1	9K197				-
383	Mechanical Seal - Upper	Carbon/Ceramic	1	10K121 (Type 16)				-
387	Mechanical Seal - Lower (Standard)	Silicon Carbide	1	10K120 (Type 16)				-
	Mechanical Seal - Lower (Optional)	Tungsten Carbide	1	10K122 (Type 16)				-
412M	O-ring - Motor Cover	BUNA-N, AS568A-166	1	4K252				-
412P	O-ring - Seal/Bearing Housing	BUNA-N, AS568A-163	1	5K181				-
457	Wire Nut	Power Cable - 3 Ph., 460V	1 pkg.	N/A	9K145 (package of 8)			-
		Seal/Heat Cable - Opt. 3 Ph. Only	1 pkg.	9K145 (package of 8)				-
458	Handle Assembly	AISI 300 SS	1	4K243				-
484	Strain Relief Assembly, Sensor Cable	Varies	1	5K113				-
484B	Strain Relief Assembly (Power Cable)	1 Phase	1	5K113		5K111		-
		3 Phase		N/A	5K111			
528	Washer - Discharge Flange	AISI 300 SS	2	13K82				-
-	Heat Sensor Kit (Optional)	-	1	9K261				-
-	Seal Installation Tool	-	1	A02A013				-
-	Loctite #271	-	1	AL27121				-

### MODELS 3888D3/3SD, 3888D4/4SD



#### CAPACITOR DATA

"K" no.	MFD	VAC	Qty. Req.
9K144 <sup>①</sup>	20	370	2
9K233 <sup>②</sup>	30	370	2
9K262	50	370	2
9K332	60	370	See item 376
9K456 <sup>③</sup>	40	370	2

① Used prior to March 1991.

② Replaced by 60 mfd.

③ Used on new 1½ & 2 HP motors after May 2006 – check capacitor ratings before ordering replacements.

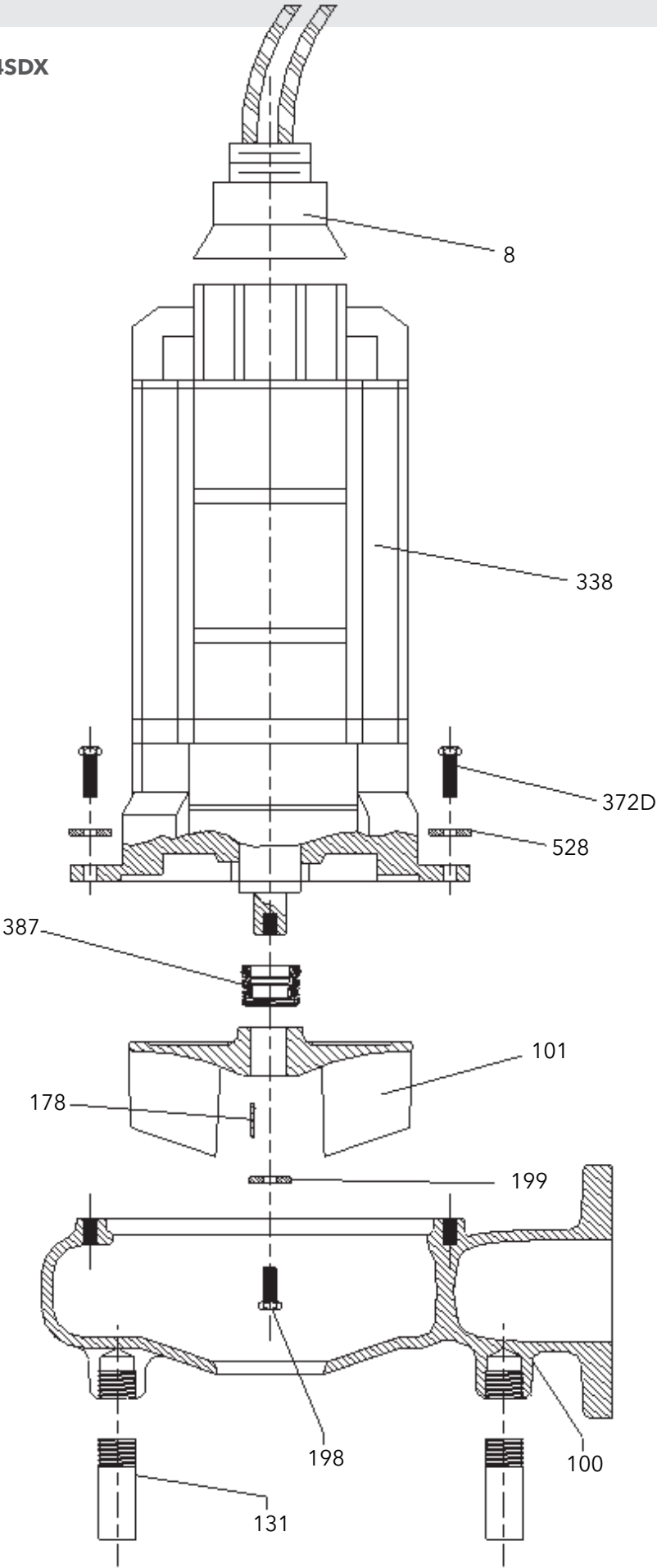
### MODELS 3888D3/3SD, 3888D4/4SD

Item No.	Part Description	Material	Qty. Req.	Repair Parts Order Number - 1725 RPM						Max. Wt. (Lbs.)	
				1½ HP M	1½ HP	2 HP	3 HP	5 HP	7½ HP		
100	Casing - 3888D3, 3SD	Cast Iron	1	1K190						42.0	
	Casing - 3888D4, 4SD			1K219						52.0	
101	Impeller - 3888D3, 3SD, Standard	Cast Iron	1	2K514 5¼"	2K24 6½"	2K25 7.0"	2K26 7¼"	2K27 8.0"	N/A	7.0	
	Impeller - 3888D3, 3SD, Optional	Bronze		2K515 5¼"	2K284 6½"	2K285 7.0"	2K286 7¼"	2K287 8.0"	N/A	8.0	
	Impeller - 3888D4, 4SD, Standard	Cast Iron		2K512 5½"	2K294 6¼"	2K295 6½"	2K296 7.0"	2K830 7¼"	2K532 7 <sup>11</sup> / <sub>16</sub> "	7.5	
	Impeller - 3888D4, 4SD, Optional	Bronze		2K513 5½"	2K329 6¼"	2K328 6½"	2K327 7.0"	2K326 7¼"	2K533 7 <sup>11</sup> / <sub>16</sub> "	8.5	
112A	Lower Ball Bearing	Steel	1	4K135						4K402	-
112B	Upper Ball Bearing	Steel	1	4K384						-	
131	Pump Leg - Standard	Steel	3	4K42						-	
	Pump Leg - Optional	Cast Iron	1	4K625						-	
132	Eye Bolt	Galvanized Steel	1	13K193						-	
178	Impeller Key	AISI 300 SS	1	4K11						-	
184	Seal Housing - 3888D3, 3SD	Cast Iron	1	1K189						N/A	19.0
	Seal Housing - 3888D4, 4SD	Cast Iron	1	1K218						18.0	
198	Impeller Bolt	17-4PH SS	1	13K48						-	
199	Impeller Washer	AISI 300 SS	1	13L39						-	
218	Insulating Turbine Oil	Turbine Oil - ASTM 150	-	4K432						7.5 lbs./gal.	
	Gallons required in Seal Housing			3888D3, 3SD - .44 - 3888D4, 4SD - .38							
	Gallons required in Motor Cover			1.75				1.5			
246	Seal Sensor - Available Only on 3SD, 4SD	Nylon/Brass	1	9K191						-	
338	Motor - 1 Phase, 208V	Stainless Steel Shaft	1	114-9210R	114-9210R	114-9210R	114-9210R	N/A	N/A	-	
	Motor - 1 Phase, 230V			114-925R	114-925R	114-926R	114-927R	114-928R	N/A		
	Motor - 3 Phase, 200 V			114-9230R	114-9230R	114-9230R	114-9231R	114-9232R	N/A		
	Motor - 3 Phase, 230/460 V			114-9217R	114-9217R	114-9217R	114-9218R	114-9219R	119-961R		
	Motor - 3 Phase, 575 V			114-9227R	114-9227R	114-9227R	114-9228R	114-9229R	119-963R		
340	Bearing Housing	Cast Iron	1	1K176						1K303	28.0
341	Motor Cover - 3888D3, 3888D4	Cast Iron	1	1K177						39.0	
	Motor Cover - 3SD, 4SD	Cast Iron	1	1K299						39.0	
352	Hex Cap Screw-Seal Housing to Bearing Housing	AISI 300 SS	4	13K81						-	
358	Plug - Seal Housing ¼" NPT	AISI 300 SS	2	6K168						-	
358E	Plug - Motor Cover ½" NPT	AISI 300 SS	1*	6K170						-	
361	Retaining Ring	AISI 300 SS	1	4K305						-	
372D	Hex Screw - Bearing Housing to Motor Cover and Seal Housing to Casing	AISI 300 SS	8	13K186						-	
376	Capacitor, Run - 1 Phase, 208 V	Varies	1	9K262 Qty. - 2	9K262 Qty. - 2	9K262 Qty. - 2	9K262 Qty. - 2	N/A		-	
	Capacitor, Run - 1 Phase, 230 V - 9K332, pre D06 - 2 HP, pre F06 - 1.5 HP			9K332 Qty. - 1	9K332 Qty. - 1	9K332 Qty. - 1	9K262 Qty. - 2	9K332 Qty. - 2	N/A	-	
	Capacitor, Run - 1 Phase, 230 V - 9K456, D06 - 2 HP, F06 - 1.5 HP			9K456 Qty. - 2	9K456 Qty. - 2	9K456 Qty. - 2	9K262 Qty. - 2	9K332 Qty. - 2	N/A	-	
383	Mechanical Seal - Upper	Carbon/Ceramic	1	10K21 (Type 21)						-	
387	Mechanical Seal - Lower (Standard)	Silicon Carbide	1	10K28 (Type 31)						-	
	Mechanical Seal - Lower (Optional)	Tungsten Carbide	1	10K22 (Type 31)						-	
412M	O-Ring - Bearing Housing to Motor Cover	BUNA-N, AS568A-374	1	4K242						-	
412P	O-Ring - Bearing Housing to Seal Housing	BUNA-N, AS568A-265	1	5K74						-	
457	Wire Nut (Power Cable)	Special Nylon Housing	2	9K145 (14/3 Cords), 9K252 (10/3 Cords)						N/A	-
				6	9K145 (14/4 Cords), 9K252 (10/4 Cords)						-
					2	9K145					
484	Strain Relief Assembly - Sensor Cable	Varies	1	5K113						-	
484B	Strain Relief Assembly (Power Cable)	Varies	1	5K234 (14/3 Cords), 5K355 (10/3 Cords)						N/A	-
				5K226 (14/4 Cords), 5K227 (10/4 Cords)						-	
	Seal Installation Tool - Guide	Delrin	1	A01A008						-	
	Seal Installation Tool - Driver	Delrin	1	A02A017						-	
	Loctite #271		1	AL27121						-	

\* 1 for 3SD/4SD and 2 for 3888D3/3888D4.

Power and Sensor Cables Description	Type and AWG Size	Standard Length	Optional Lengths				Wt. (lbs./5 ft.)
		20'	30'	50'	100'		
<b>Item No. 456, Power Cables</b>							
1 PH: 1½ and 2 HP, 230 V, standard with bare leads.	STOW - 14/3	9K266	9K267	9K268	9K269	0.9	
1 PH: 2 HP, 3 HP and 5 HP, 208 V, standard with bare leads.	STOW - 10/3	9K289	9K290	9K291	9K293	1.6	
3 PH: 1½, 2 HP, 3 HP (except 200 V) and 5 HP, 460 V, 575 V - bare leads.	STOW - 14/4	9K153	9K218	9K154	9K219	1.1	
3 PH: 3 HP, 200 V, 5 HP 200/230 V and all 7½ HP - bare leads.	STOW - 10/4	9K251	9K247	9K248	9K250	1.6	
<b>Item No. 455A, Sensor Cables</b>							
Mechanical Seal Sensor: Standard on 3SD and 4SD. (N/A on 3888D3 and 3888D4)	SJTOW - 16/2	9K189	9K220	9K221	9K222	0.5	
Seal/Heat Sensor: Optional on 3SD and 4SD.	SJTOW - 18/4	9K237	9K238	9K239	9K240	0.5	

MODELS 3SDX/4SDX



### MODELS 3SDX/4SDX

Item No.	Part Description	Material	Qty. Req'd.	Repair Parts Order Number					Max. Wt. (lbs.)	
				1750 RPM						
				1½ HP	2 HP	3 HP	5 HP	7½ HP		
100	Casing - 3SDX	Cast Iron	1	1K429					35.0	
	Casing - 4SDX			1K428					53.0	
101	Impeller - 3SDX	Cast Iron	1	2K918 5 <sup>13</sup> / <sub>16</sub> "	2K916 6 <sup>1</sup> / <sub>8</sub> "	2K914 6 <sup>3</sup> / <sub>4</sub> "	2K912 7 <sup>5</sup> / <sub>8</sub> "	2K910 8 <sup>5</sup> / <sub>16</sub> "		
	Impeller - 3SDX	Bronze		2K919 5 <sup>13</sup> / <sub>16</sub> "	2K917 6 <sup>1</sup> / <sub>8</sub> "	2K915 6 <sup>3</sup> / <sub>4</sub> "	2K913 7 <sup>5</sup> / <sub>8</sub> "	2K911 8 <sup>5</sup> / <sub>16</sub> "		
	Impeller - 4SDX	Cast Iron		N/A	2K904 5 <sup>11</sup> / <sub>16</sub> "	2K906 6 <sup>5</sup> / <sub>16</sub> "	2K908 7 <sup>1</sup> / <sub>8</sub> "	2K532 7 <sup>11</sup> / <sub>16</sub> "		
	Impeller - 4SDX	Bronze			2K905 5 <sup>11</sup> / <sub>16</sub> "	2K907 6 <sup>5</sup> / <sub>16</sub> "	2K909 7 <sup>1</sup> / <sub>8</sub> "	2K533 7 <sup>11</sup> / <sub>16</sub> "		
131	Foot - Standard	Steel	3	4K42					-	
	Foot - Optional	Cast Iron	1 Kit	4K625					-	
178	Impeller Key	AISI 300 SS	1	4K11					-	
198	Impeller Bolt	17-4 PH	1	13K48					-	
199	Impeller Washer	AISI 300 SS	1	13L39					-	
338	Motor	Stainless Steel	1	1 Phase, 230V	278-72 12	278-72 22	278-72 32	N/A	N/A	180TY 200 lbs. Air Filled
				3 Phase, 200V	278-72 13	278-72 23	278-72 33	278-72 43	278-72 53	
				3 Phase, 230V	278-72 14	278-72 24	278-72 34	278-72 44	278-72 54	
				3 Phase, 460V	278-72 15	278-72 25	278-72 35	278-72 45	278-72 55	
				3 Phase, 575V	278-72 16	278-72 26	278-72 36	278-72 46	278-72 56	
372D	Hex Cap Screw - Casing to Motor	AISI 300 SS	8	13K304					-	
NEW STYLE	387	Mechanical Seal - Standard	Carbon/Ceramic	1	10K137 (180TY)					-
		Mechanical Seal - Optional	Silicon/Silicon	1	10K134 (180TY)					
		Mechanical Seal - Optional	Silicon/Tungsten	1	10K135 (180TY)					
OLD STYLE	387	Mechanical Seal - Standard	Carbon/Ceramic	1	10K136 (140TY)					-
		Mechanical Seal - Optional	Silicon/Silicon	1	10K132 (140TY)					
		Mechanical Seal - Optional	Silicon/Tungsten	1	10K133 (140TY)					
528	Lockwasher	AISI 300 SS	8	13K158					-	

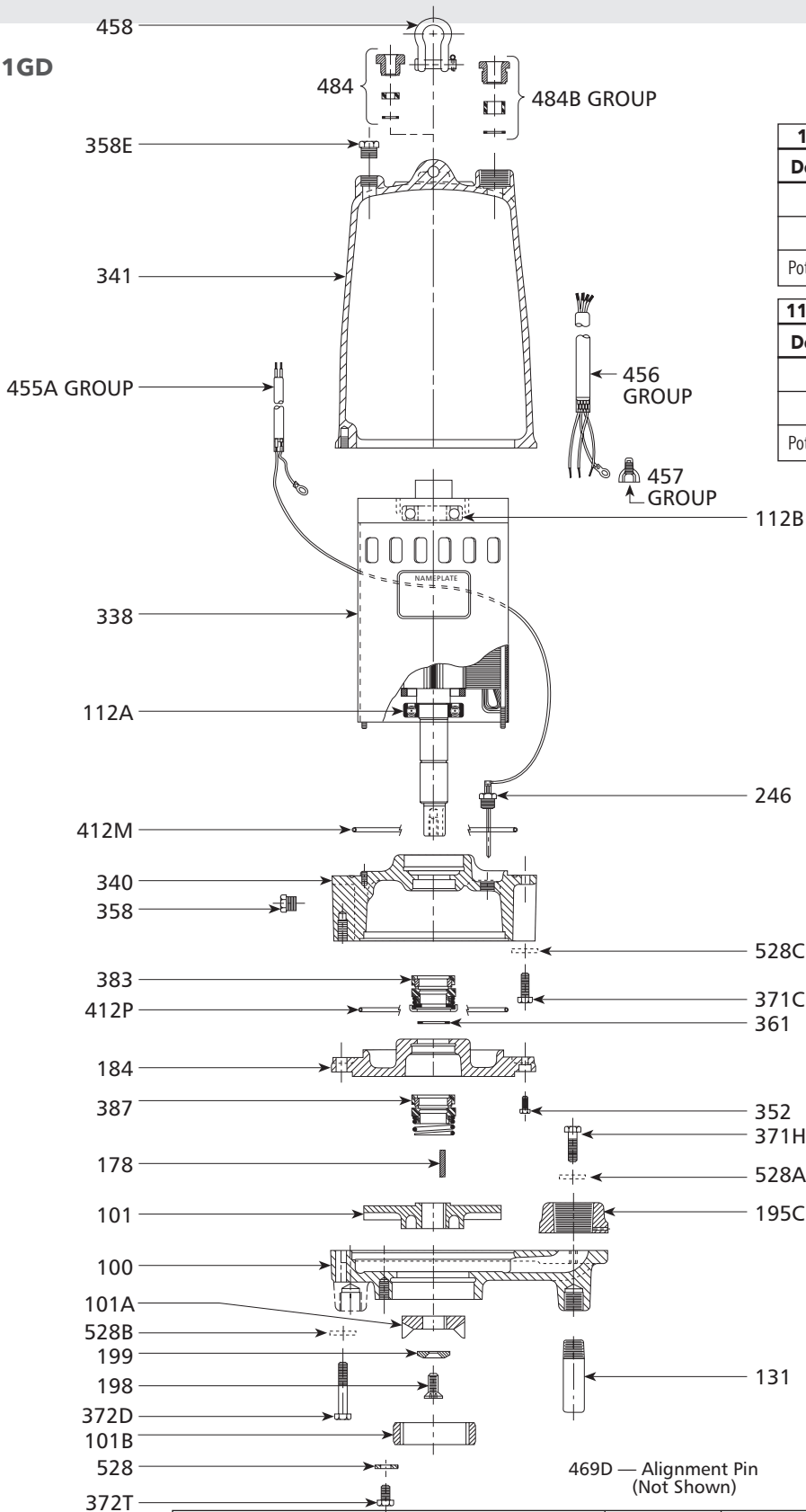
Reliance	Part Description	Material	Quantity	Repair No.	Motor Frame
Motor Repair Parts	Mechanical Seal Kit - Upper & Lower	Carbon/Ceramic	1 Set	10K183	180TY
	Bearing Kit - Upper & Lower	Steel	1 Set	4K700	
	O-Ring Kit	BUNA-N	1 Set	5K422	

Item No.	Models 3SDX/4SDX, Power and Control Cap/Cables	Type and AWG Size	Standard length	Optional Lengths	Wt. (lbs./5 ft.)
			25'	50'	
8	1 PH: 1½ HP, 230V, 140TY	SOW, SOOW - 10/4	9K357	9K358	
	1 PH: 1½, 2 and 3 HP, 230V, 180TY	SOW, SOOW - 8/4	9K359	9K360	
	3 PH: 1½, 2 and 3 HP, 200-230/460/575V, 140TY	SOW, SOOW - 14/4	9K361	9K362	
	3 PH: 5 HP, 200-230/460V, 180TY	SOW, SOOW - 12/4	9K365	9K366	
	3 PH: 7½ HP, 200-230/460V, 180TY	SOW, SOOW - 10/4	9K367	9K368	
	3 PH: 5 and 7½ HP, 575V, 180TY	SOW, SOOW - 14/4	9K363	9K364	
	3 PH: 1½, 2 and 3 HP, 200, 230, 460, 575V, 180TY	SOW, SOOW - 14/4	9K363	9K364	

Control Cable is AWG Size 18/5 - SOW.

## Wastewater

### MODEL 1GD



114-92 New Capacitor Package - 10/05			
Description	Repair	MFD	VAC
Start Cap		238	330
Run Cap	CP1GDB	50	370
Potential Relay		155031 - 102 or 110	

114-92 Old Capacitor Package - Pre 10/05			
Description	Repair	MFD	VAC
Start Cap		594	125
Run Cap	CP-1B	30	370
Potential Relay		RB60 (155031 - 102)	

Item No. 456, Power Cables	Type and AWG Size	Standard length				Wt. (lbs./5 ft.)
		20'	30'	50'	100'	
1 and 3 PH: 2 HP, 200-230/460/575V with bare leads.	STOW - 14/4	9K153	9K218	9K154	9K219	1.1
Item No. 455A, Sensor Cables						
Mechanical Seal Sensor - Optional	SJTOW - 16/2	9K189	9K220	9K221	9K222	0.5
Heat Sensor - Standard 1 Phase, Optional 3 Phase.	SJTOW - 16/2	9K189	9K258	9K259	9K260	0.5
Mechanical Seal/Heat Sensor - Optional	SJTOW - 18/4	9K237	9K238	9K239	9K240	0.5

### MODEL 1GD

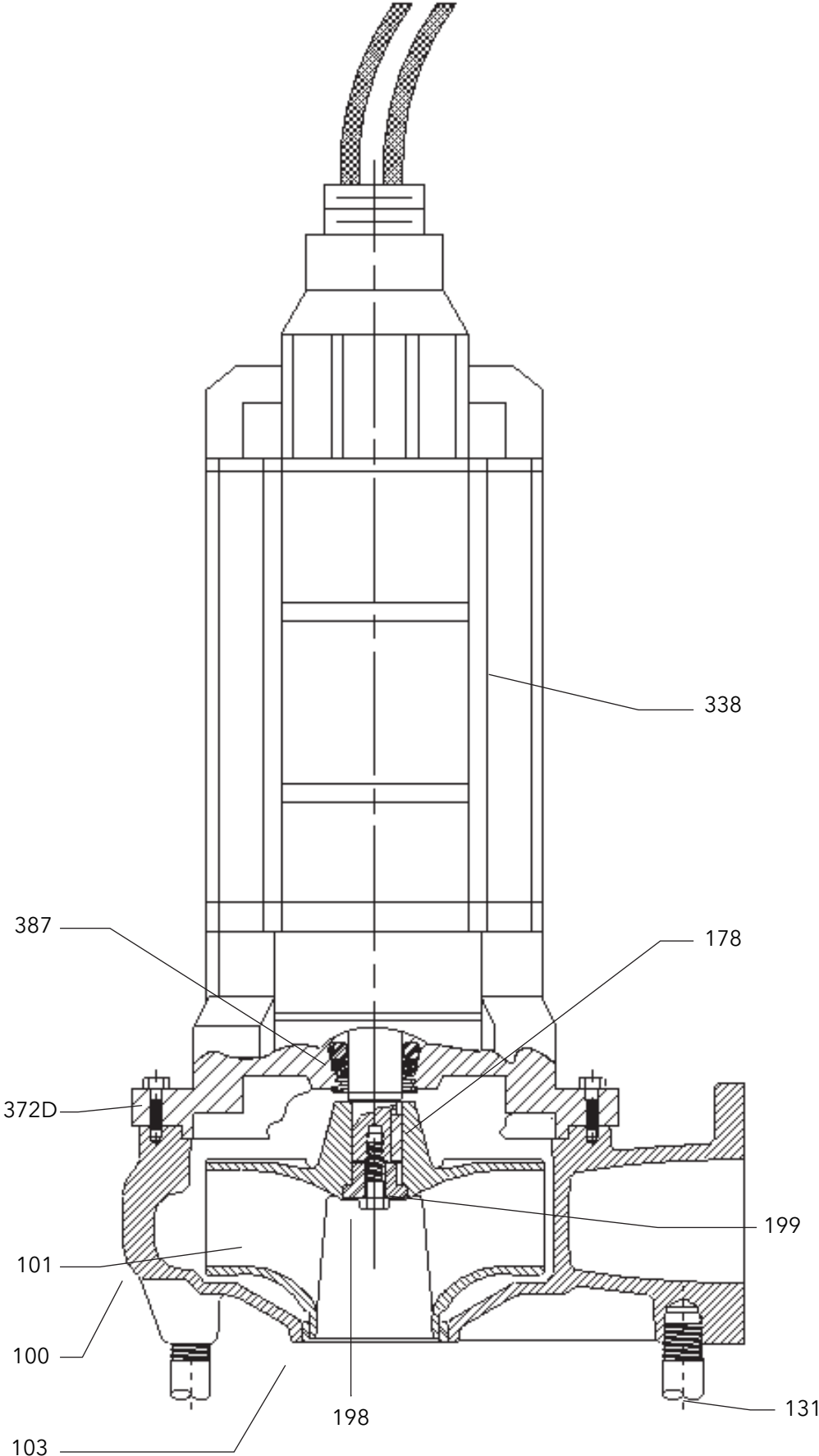
Item No.	Part Description	Material	Quantity Required	Repair Parts Order Number	Weight (lbs.)
100	Casing	Cast Iron	1	1K174	10.5
101	Impeller - 8th Digit Model Designation and Diameter	Bronze	1	2K247 A = 5 $\frac{5}{8}$ "	3.0
				2K332 B = 5 $\frac{1}{4}$ "	
				2K333 C = 4 $\frac{3}{4}$ "	
				2K334 D = 4 $\frac{1}{4}$ "	
101A	Cutter	AISI 440C SS	1	4K303	0.5
101B	Cutter Ring	AISI 440C SS	1	4K304	0.5
112A	Lower Ball Bearing	Steel	1	4K135	-
112B	Upper Ball Bearing	Steel	1	4K384	-
131	Foot - Standard	Steel	3	4K343	-
	Foot - Optional	Cast Iron	1 Kit	4K639	
178	Impeller Key	AISI 300 SS	1	4K11	-
184	Seal Housing	Cast Iron	1	1K226	8.5
195C	Discharge Flange	Cast Iron	1	4K313	1.0
198	Impeller Screw	AISI 300 SS	1	13K190	-
199	Impeller Washer	AISI 300 SS	1	13K191	-
218	Insulating Oil - Gallons Required	Turbine Oil - ASTM150	-	4K245	7.5 lbs./gal.
	Gallons Required in Seal Housing			0.98	
	Gallons Required in Motor Cover			0.23	
246	Seal Sensor - Plug and Rod (See Note)	Nylon/Brass	1	9K191	-
338	Motor - 1 Phase, 208V	Stainless Steel Shaft	1	114-921R	26.0 to 40.0
	Motor - 1 Phase, 230V			114-921R	
	Motor - 3 Phase, 200V			114-9220R	
	Motor - 3 Phase, 230/460V			114-9212R	
	Motor - 3 Phase, 575V			114-9292R	
340	Bearing Housing	Cast Iron	1	1K227	14.5
341	Motor Cover with Seal Sensor (See Note)	Cast Iron	1	1K197	23.0
	Motor Cover without Seal Sensor (See Note)			1K209	
352	Screw - Seal Housing to Bearing Housing	AISI 300 SS	2	13K347	-
358	Plug - Bearing Housing $\frac{1}{4}$ " NPT	AISI 300 SS	1	6K168	-
358E	Plug - Motor Cover $\frac{3}{8}$ " NPT	AISI 300 SS	1	6K169	-
361	Retaining Ring	Steel	1	4K305	-
371C	Hex Cap Screw - Brg. Hsg. to Motor Cover	AISI 300 SS	4	13K78	-
371H	Hex Cap Screw - Discharge Flange to Casing	AISI 300 SS	2	13K186	-
372D	Hex Cap Screw - Casing to Bearing Housing	AISI 300 SS	4	13K52	-
372T	Hex Cap Screw - Cutter Ring Retainer	AISI 300 SS	3	13K218	-
383	Mechanical Seal - Upper	Carbon/Ceramic	1	10K21 (Type 21)	-
387	Mechanical Seal - Lower (Standard)	Silicon Carbon	1	10K28 (Type 31)	-
	Mechanical Seal - Lower (Optional)	Tungsten Carbon		10K22 (Type 31)	
412M	O-ring - Motor Cover	BUNA-N, AS568A-166	1	4K252	-
412P	O-ring - Seal/Bearing Housing	BUNA-N, AS568A-256	1	5K73	-
457	Wire Nut	Nylon Housing	Power Cable - 1 Ph., 230V	3	9K145
			Power Cable - 3 Ph., 200/230V	4	
			Power Cable - 3 Ph., 460V	6	
			Power Cable - 3 Ph., 575V	3	
			Seal/Heat Cable - See Note	2	
458	Lifting Handle	304 SS	1	4K494	-
469D	Alignment Roll Pin (Not Shown)	Steel	2	9K265	-
484	Strain Relief Assembly, Sensor Cable (See Note)	Varies	1	5K113	-
484B	Strain Relief Assembly, Power Cable	Varies	1	5K111	-
528	Washer - Cutter Ring Retainer	AISI 300 SS	3	13K212	-
528A	Lockwasher - Discharge Flange to Casing	AISI 300 SS	2	13K158	-
528B	Lockwasher - Casing to Bearing Housing	AISI 300 SS	4	13K158	-
528C	Lockwasher - Bearing Housing to Motor Cover	AISI 300 SS	4	13K117	-
-	Heat Sensor Kit (See Note)	-	1	9K261	-
-	Seal Installation Tool - Guide	Delrin*	1	A01A008	-
-	Seal Installation Tool - Driver	Delrin*	1	A02A017	-
-	Loctite* #271	-	1	AL27121	-

**Notes:** 1 phase (Old 114-92 #2 motor) has Heat Sensor (93711) supplied with motor, Goolds Water Technology 3 phase is optional, Marlow 3 phase is standard.

New 1 Phase 114-92 #1 motor has in-line thermal protector

Old 1 Phase 114-92 #2 motor had pilot duty thermal protector

**MODELS 4NS/4XD with Reliance Motors**





### MODELS 4NS/4XD with Reliance Motors

Item No.	Part Description	Material	Qty. Req'd.	Repair Parts Order Number								Max. Wt. (lbs.)		
				1750 RPM				1150 RPM						
				7½ HP	10 HP	15 HP	20 HP	25 HP	30 HP	40 HP	7½ HP		10 HP	
100	Casing - with Wear Ring	Cast Iron	1	1K326								75.0		
101	Impeller - 4NS/4XD	Cast Iron		2K781 7½"	2K779 8"	2K776 9"	2K774 9¾"	2K772 10⅝"	2K771 10¾"	2K770 11"	2K773 10⅝"	2K770 11"	21.5-	
	Impeller - 4NS/4XD	Bronze		2K795 7½"	2K793 8"	2K790 9"	2K788 9¾"	2K786 10⅝"	2K785 10¾"	2K784 11"	2K787 10⅝"	2K784 11"	25.0-	
103	Casing Wear Ring	Bronze	1	4K264								2.0		
131	Foot - Standard	Steel	3	4K367 (Old), 4K42 (New)								2.0		
	Foot - Optional	Cast Iron	1 Kit	4K625								-		
178	Impeller Key	AISI 300 SS	1	4K392								-		
198	Impeller Bolt	AISI 300 SS	1	13K275								-		
199	Impeller Washer	AISI 300 SS	1	4K431								-		
338	Motor	3 Phase, 200V	Replace 279-26 with 279-27 for UL listed Explosion Proof Motor. Index Suffixes are the same.	1	279-261 (210TY)	279-2611 (210TY)	279-2621 (210TY)	279-2631 (210TY)	279-2641 (250TYS)	279-2651 (250TYS)	279-2661 (250TYS)	279-2671 (210TY)	279-2681 (210TY)	210TY 315 lbs. Air Filled 250TYS 750 lbs. Air Filled
				279-262 (210TY)	279-2612 (210TY)	279-2622 (210TY)	279-2632 (210TY)	279-2642 (250TYS)	279-2652 (250TYS)	279-2662 (250TYS)	279-2672 (210TY)	279-2682 (210TY)		
				279-263 (210TY)	279-2613 (210TY)	279-2623 (210TY)	279-2633 (210TY)	279-2643 (250TYS)	279-2653 (250TYS)	279-2663 (250TYS)	279-2673 (210TY)	279-2683 (210TY)		
				279-264 (210TY)	279-2614 (210TY)	279-2624 (210TY)	279-2634 (210TY)	279-2644 (250TYS)	279-2654 (250TYS)	279-2664 (250TYS)	279-2674 (210TY)	279-2684 (210TY)		
				279-265 (210TY)	279-2615 (210TY)	279-2625 (210TY)	279-2635 (210TY)	279-2645 (250TYS)	279-2655 (250TYS)	279-2665 (250TYS)	279-2675 (210TY)	279-2685 (210TY)		
372D	Hex Cap Screw - Casing to Motor	AISI 300 SS	8	13K45								-		
387	Mechanical Seal - Standard	Carbon/Ceramic	1	10K157				10K160		10K157		-		
	Mechanical Seal - Optional	Silicon/Silicon	1	10K158				10K161		10K158				
	Mechanical Seal - Optional	Silicon/Tungsten	1	10K159				10K162		10K159				

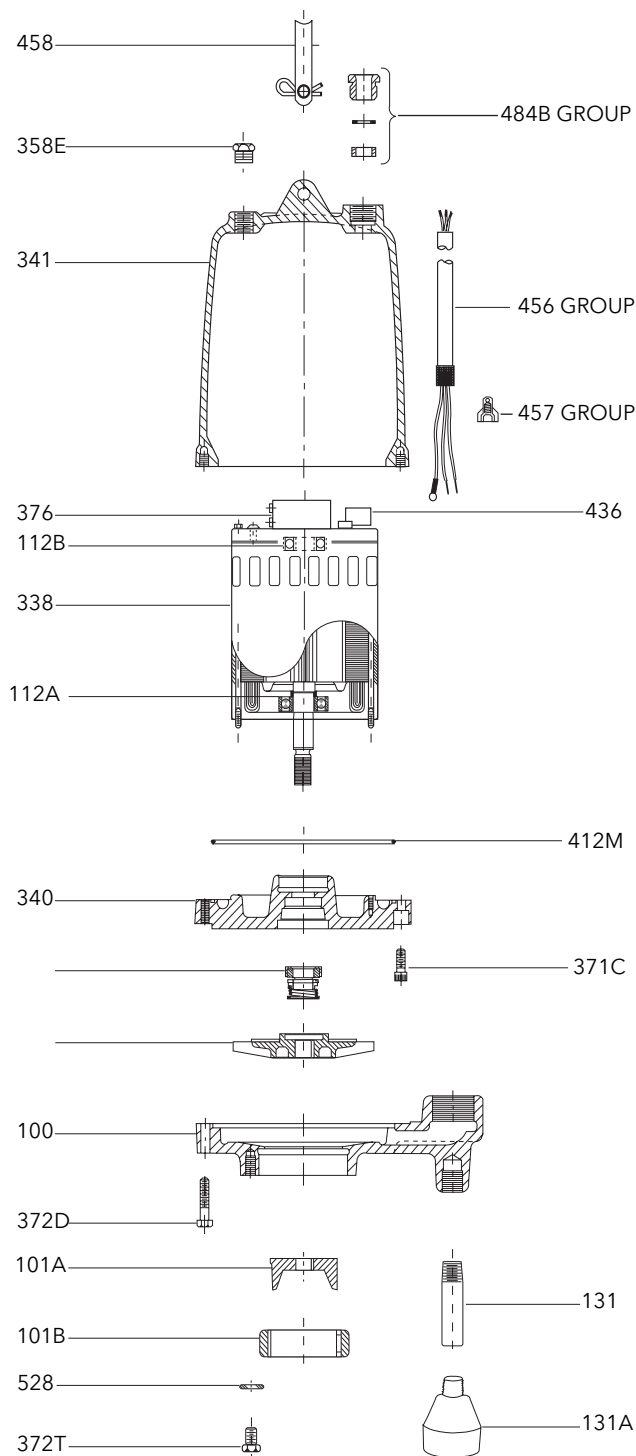
Power and Control Cap/Cables for Reliance Motors	Type and AWG Size	Standard length		Optional Lengths		Wt. (lbs./5 ft.)
		25'		50'		
	SOW, SOOW 14/4	9K423		9K431		
	SOW, SOOW 12/4	9K424		9K432		
	SOW, SOOW 10/4	9K425		9K433		
	SOW, SOOW 8/4	9K426		9K434		
	SOW, SOOW 6/4	9K427		9K435		
	SOW, SOOW 4/4	9K428		9K436		
	SOW, SOOW 2/4	9K429		9K437		
	SOW, SOOW 1/0/4	9K430		9K438		

Control Cable is AWG Size 18/5 - SOW-A, SO.

Parts for Pumps with USEM Motors							
372E	Hex Cap Screw - Bracket to Motor	AISI 300 SS	2	13K226	13K277	13K226	-
387	Mechanical Seal - Optional	Carbon/Ceramic	1	10K82	10K142	10K82	-
	Mechanical Seal - Optional	Silicon/Tungsten	1	10K83	10K85	10K83	-
458	Lift Bracket	AISI 300 SS	1	4K433	4K434	4K433	3.5

Reliance	Part Description	Material	Quantity	Repair No.	Motor Frame	Repair No.	Motor Frame
Motor Repair Parts	Mechanical Seal Kit - Upper & Lower	Carbon/Ceramic	1 Set	10K181	210TY	10K182	250TY
	Bearing Kit - Upper & Lower	Steel	1 Set	4K698		4K699	
	O-Ring Kit	BUNA-N	1 Set	5K420		5K421	

### MODEL RGS2012



Item No.	Part Name	Material	Qty.	Repair Parts Order Number	Wt. (lbs.)
100	Casing	Cast iron	1	1K313	11
101	Impeller 5.69" dia.	Bronze	1	2K705	2.0
101A	Cutter with shims	AISI 440C SS	1	4K409	0.5
101B	Cutter ring	AISI 440C SS	1	4K304	0.5
112A	Lower ball bearing	Steel	1	4K384	-
112B	Upper ball bearing	Steel	1	4K132	-
131	Foot	Steel	3	4K343	-
131A	Optional Pump Legs	Steel	3	4K639	-
218	Insulating oil	Turbine Oil ASTM150	.98 gal	4K432 See Index Page	7.5 lbs/gal
338	Motor with Brg. Hsg. #340	-	-	120-212R	19
340	Bearing housing	Cast iron	-		
341	Motor cover - Use with cord with NEMA plug	Cast iron	1	1K207	18.5
	power cable without plug			1K208	
358E	Plug - motor cover 3/8" NPT	AISI 300 SS	1	6K169	-
371C	Screw - bearing housing to motor cover	AISI 300 SS	4	13K271	-
372D	Screw - casing to bearing housing	AISI 300 SS	4	13K336	-
372T	Screw - cutter ring retainer	AISI 300 SS	3	13K218	-
376	Capacitor (start)	-	1	9K353	-
387	Mechanical seal (standard)	Silicon Carbide	1	10K119	-
	Mechanical seal (optional)	Tungsten Carbide		10K123	-
412M	O-ring - motor cover	BUNA-N	1	4K252	-
436	Solid state switch	-	1	9K395	-
456	Power cable	-	1	See power cable chart	-
457	Wire nut	Nylon	2	9K145	-
458	Handle assembly	AISI 300 SS	1	4K243	-
484B	Strain relief assembly - power cable with plug	Varies	1	5K113	-
	power cable without plug			5K111	-
528	Washer - cutter ring retainer	AISI 300 SS	3	13K212	-

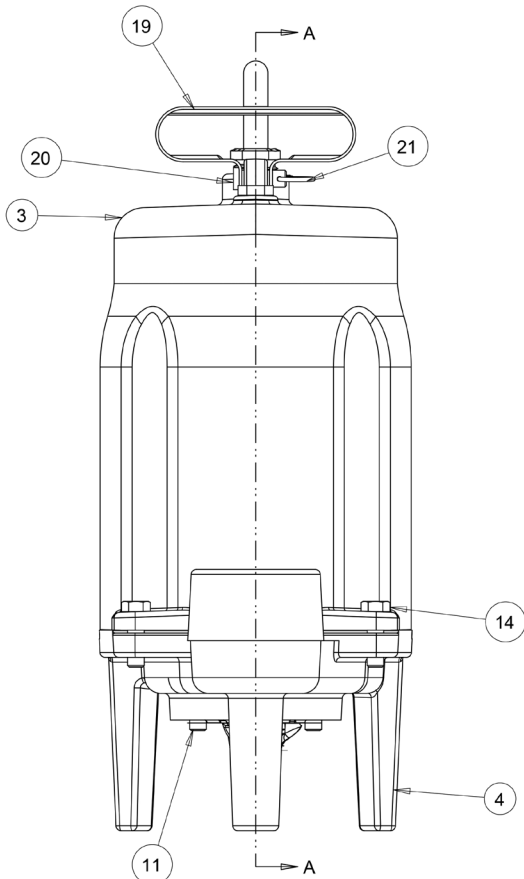
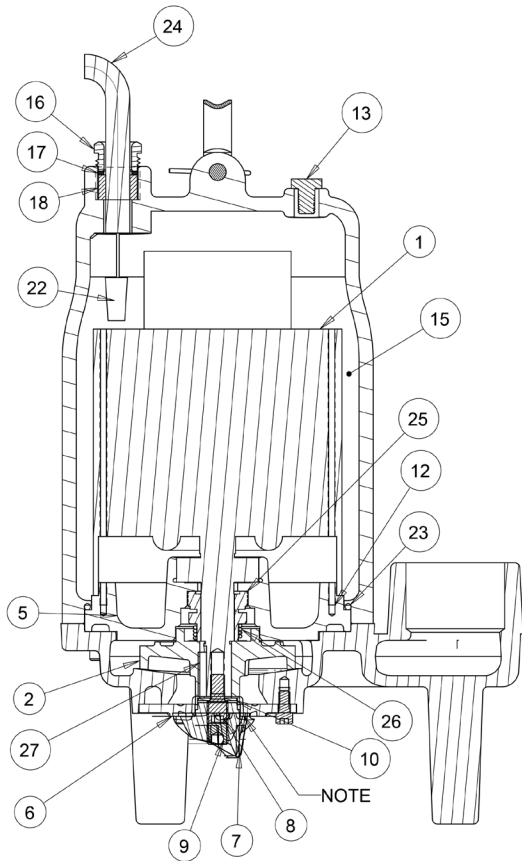
### RESIDENTIAL GRINDER POWER CABLES

Residential Grinder Power Cables	Standard length	Optional Lengths			Wt. (lbs./5 ft)
	20'	30'	50'	100'*	
1 Phase, 2 HP, 230V - STOW - 14/3 with bare leads	9K266	9K267	9K268	9K269	0.9
1 Phase, 2 HP, 230V - SJTOW - 14/3 with Nema plug	9K393	9K394	N/A	N/A	0.9

\* Maximum allowable cord length. \*\* Includes 230V NEMA plug.

9K353 capacitor is a 295/355 MFD, 125 VAC start capacitor with resistor.

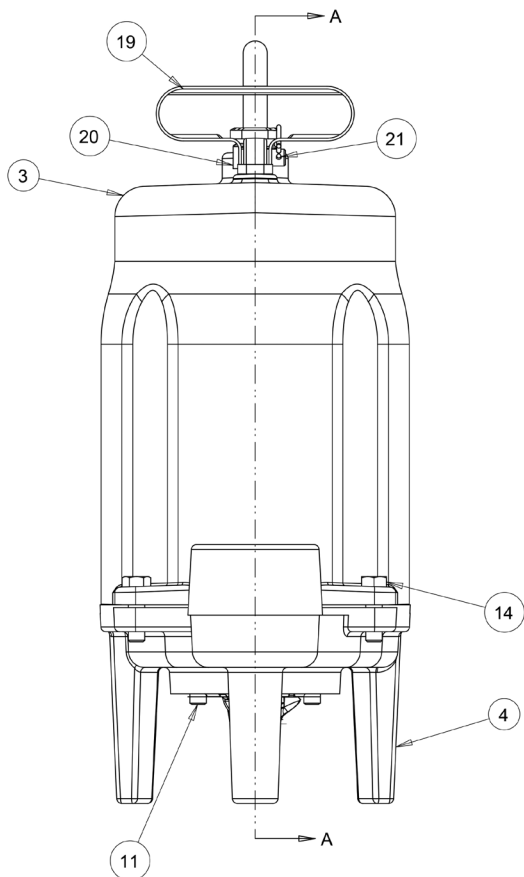
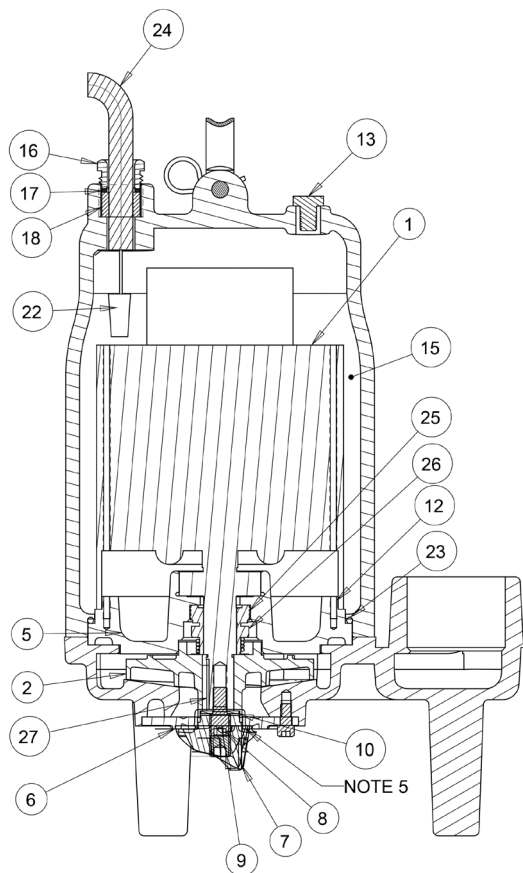
### MODEL AGS0511/AGS0512



ITEM #	DESCRIPTION	REPAIR PART #	QUANTITY
1	1 hp 1/60/115/208-230/3450	9K816	1
2	Impeller AGS 0.5 hp	2K1296	1
3	Motor cover	1K1118	1
4	Casing	1K1119	1
5	Bearing housing	1K1120	1
6	Cutter ring - 8 hole	15L64	1
7	Rotating cutter wheel		1
8	Impeller & cutter wheel screw M12/M8		1
9	Cutter wheel locking screw M12 x 12		1
10	Washer/shim 8.5 ID x 22 OD x 1.5 W		1
11	Cutter ring SKT head cap screw 1/4-20 x .5"		3
12	Roll pin 3/16" x 1 3/8"	13K406	1
13	3/8" NPT pipe plug SS	6K169	1
14	Hex cap screw 3/8" x 1.25"	13K462	4
15	Insulating oil (gallons)	4K432	0.50
16	Gland nut	5K111	1
17	Gland washer	5K554	2
18	Strain relief packing	5K553	1
19	Handle	4K243	1
20	Handle pin		1
21	Hair pin		1
22	Wire nut	9K145	2
23	O-ring bun	4K252	1
24	Cord set - 230V plug	9K393	1
	Cord set - 115V plug	9K771	1
25	Mech seal stat .75" Silcar/Buna type 16	10K119	1
26	Mech seal rot .75" Silcar/Buna type16		1
27	Key 3/16" x 1" long	4K1238	1

**NOTE:** 0.004" - 0.006" clearance between cutter wheel and cutter ring

### MODEL AGS1011/AGS1012



ITEM #	DESCRIPTION	REPAIR PART #	QUANTITY
1	1 hp 1/60/115/208-230/3450	9K816	1
2	Impeller AGS 1 hp	2K1296	1
3	Motor cover	1K1118	1
4	Casing	1K1119	1
5	Bearing housing	1K1120	1
6	Cutter ring - 8 hole	15L64	1
7	Rotating cutter wheel		1
8	Impeller & cutter wheel screw M12/M8		1
9	Cutter wheel locking screw M12 x 12		1
10	Washer/shim 8.5 ID x 22 OD x 1.5 W		1
11	Cutter ring SKT head cap screw 1/4-20 x .5"		3
12	Roll pin 3/16" x 1 3/8"	13K406	1
13	3/8" NPT pipe plug SS	6K169	1
14	Hex cap screw 3/8" x 1.25"	13K462	4
15	Insulating oil (gallons)	4K432	0.50
16	Gland nut	5K111	1
17	Gland washer	5K554	2
18	Strain relief packing	5K553	1
19	Handle	4K243	1
20	Handle pin		1
21	Hair pin		1
22	Wire nut	9K145	2
23	O-ring bun	4K252	1
24	Cord set - 230V plug	9K393	1
	Cord set - 115V plug	9K771	1
25	Mech seal stat .75" Silcar/Buna type 16	10K119	1
26	Mech seal rot .75" Silcar/Buna type16		1
27	Key 3/16" x 1" long	4K1238	1

### MODELS 1GA/2GA

Pump	Impeller Code	Phase	Impeller	Repair Kit	Inner Seal	Outer Seal	Cutter Wheel	Cutter Ring
3 hp	H	1	2K1227	5K481	10K201	10K208	4K812	4K814
3 hp	L	1	2K1228					4K818
5.4 hp	G	1	2K1229	5K482	10K202	10K207	4K813	4K817
5.4 hp	K	1	2K1230					4K816
9.4 hp	J	1	2K1225	5K483	10K205	10K209		4K819
9.4 hp	F	1						4K816
4 hp	C	3	2K1222	5K505	10K201	10K206	4K812	4K814
6 hp	B	3	2K1223	5K482	10K202	10K207	4K813	4K815
6 hp	E	3	2K1224					4K816
11 hp	A	3	2K1226	5K480	10K204	10K205		4K817
11 hp	D	3	2K1225					4K816

Repair Kit includes: Seals, O-rings, Bearings

O-Ring Kit includes all O-rings

### SUMP, EFFLUENT AND SEWAGE REPAIR PARTS OIL VOLUMES

Model	Oil Volume - Motor Housing	Oil Volume - Seal Housing
	Quarts	Quarts
ST 31	1.32	N/A
PE31	1.32	N/A
PE41	1.32	N/A
PE51	1.32	N/A
PS41	1.70	N/A
PS51, PV51	1.70	N/A
3871 (EP's - .4 hp)	1.00	N/A
3871 (EP's - .5 hp)	0.85	N/A
3872 (WW's)	0.85	N/A
3885 (WE's) - A.O. Smith	3.90	N/A
3885 (WE's) - Franklin	3.50	N/A
2ED's - A.O. Smith	3.90	0.40
3886 (WS—B)	3.90	N/A
3887BF (WS—BF)	3.90	N/A
3887BHF (WS—BHF) - A.O. Smith	3.90	N/A
3887BHF (WS—BHF) - Franklin	3.50	N/A
2/3WD's - A.O. Smith	3.90	0.40
3888D3 (WS—D3)	7.00	1.70
3SD's	7.00	1.70
3888D4 (WS—D4)	7.00	1.50
4SD's	7.00	1.50
3888D4 (WS—D4) - 7½ hp	6.00	1.50
4SD's - 7½ hp	6.00	1.50
RGS2012	3.90	N/A
1GD - Single Phase	3.55	0.90
1GD - Three Phase	3.90	0.90

Noco T-32 oil is standard.

**Note:** Normally a minimum of a 1" air gap at the top of the motor/seal housing should be maintained due to thermal expansion of the oil.

Please contact Customer Service for part information: Phone (866) 325-4210 or Fax (888) 322-5877 (toll free).

### CONTROL PANEL REPAIR PARTS

RB Number*	Description	Control Panel	Manufacturer Name and Part Number
RB-1*	Single Phase Contactor, 2 Pole	Use RB-81*	Furnas, 41NB20AFP
RB-4	Pump Circuit Breaker	SIFGC3-DIFGC3	Square D, QOU240
RB-5	Pump Circuit Breaker	SIFGC5-DIFGC5	Square D, QOU260
RB-6	Pump Circuit Breaker	A6-2012	Square D, QOU220
RB-24	Three Phase Contactor, 3 Pole	D3-S3	ABB DP30C3P-1/B
RB-25	Three Phase Contactor with Aux		ABB DP30C3P-CADP40-10
RB-30	Control Circuit Breaker	A6-2012	Square D - QOU110
RB-31	Seal Sensor Relay	A4-3, A4-4	BFI-SFR-120
RB-32*	Single Phase Contactor, 2 Pole	Use RB-24*	Furnas, 41NB20AFMGR
RB-34	Control Circuit Transformer	3 Phase Panels	Micron B100BTZ13JK
RB-35	Time Delay Relay	A6-1012, A6-2012	SSAC, TSD 74115
RB-36	Control Relay		Eaton D5PR3A
RB-37	Pump Circuit Breaker		Square D - QOU115
RB-38	Pump Circuit Breaker		Square D - QOU215
RB-39	Control Circuit Breaker		Square D - QOU210
RB-40	Pump Circuit Breaker		Square D - QOU330
RB-41	Control Circuit Breaker	A642510	Carling Switch EA2-B0-26-610-32E-GB
RB-42	Pump Circuit Breaker	A642510	Carling Switch EA2-B0-26-610-32E-GB
RB-46*	Three Phase Contactor, 3 Pole	Use RB-25*	Furnas, 41NB30AFMGR
RB-47*	Three Phase Contactor, 3 Pole	Use RB-24*	Furnas, 41NB30AFP
RB-50	Alarm Horn	All SES Control Panels	Floyd, MC-09-201-QC
RB-51	Control Relay	LAN4-LAN1	Sky SKMP-2C-120VAC
RB-52	Motor Circuit Protector	S31625, D31625	Eaton XTPR2P5BC1
RB-53	Motor Circuit Protector	S32540, D32540	Eaton XTPR004BC1
RB-54	Motor Circuit Protector	S34063, D34063	Eaton XTPR6P3BC1
RB-55	Motor Circuit Protector	S36310, D36310	Eaton XTPROLOBCL
RB-56	Motor Circuit Protector	S31016, D31016	Eaton XTPR016BC1
RB-57	Motor Circuit Protector	S31620, D31620	Eaton XTPR020BC1
RB-58	Motor Circuit Protector	S32025, D32025	Eaton XTPR025BC1
RB-59	Overload Relay		Furnas, 48DA18AA4
RB-60	Motor Start Relay	D1GD2	Franklin Electric, 155031102
RB-61	Motor Start Capacitor	D1GD2	216-259 UF
RB-62	Motor Run Capacitor	D1GD2	50 @ 370 VAC
RB-70	Flashing Red Alarm Light	All S31625-S32025 S10020, S10020NL D10020, D10020NL	Ingram Products, MX-15
RB-71	Flashing Red Alarm Light	All D31625-D32025 D12127, D12836	Ingram Products, LRX-25
RB-72*	Pump Run Light Assembly	Use RB-77G*	ZB5AV033 with LED

\* Indicates obsolete component. Use suggested replacement.

*Continued on next page*

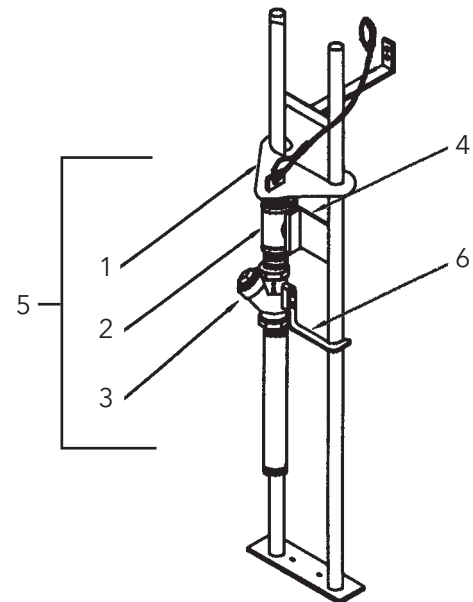
### CONTROL PANEL REPAIR PARTS (continued)

RB Number*	Description	Control Panel	Manufacturer Name and Part Number
RB-73	Alarm Test Button Assembly	All SES Panels Except S10020NI, D10020NI	ABB, CPLLOR-11
RB-74	Alarm Reset Button	D10020, D12127, D12836 D31625-D32025	ABB, CPL OG-11
RB-75	Duplex Logic Control Board	All SES Duplex Panels	BFL-LLC-120
RB-76	Alarm Silence Button	All SES Panels Except D10020NL, S10020NL	ABB, CPLLOG-11
RB-77G	Green LED Complete	All SES Panels Except D10020NL, S10020NL	ABB, CL-S13G
RB-77W	White LED Complete		ABB, CL-513W
RB-77R	Red LED Complete Assembly		ABB, CL-513R
RB-78	Pump Circuit Breaker	D10020NL, DL0020	Square D, QOU-225
RB-80	Simplex Logic Control Board		BFL-LLC-120-SIM
RB-81	Contactor	S10020, S10020N1 D10020, D10020NL	ABB, DP30C2P-1
RB-82	Fuse		ATDR2
RB-83	Alternator		TARS

\* Indicates obsolete component. Use suggested replacement.

### A10-12, A10-2015 and A10-20

Item No.	Description	A10-12	A10-20 and A2015
1	Upper Guide Bracket	4K800	4K801
2	Brass Qick Disconnect	4K802	4K803
3	Cl Ball Check Valve	4K804	4K805
4	O-Ring Disconnect	4K806	4K807
5	Movable Side	4K808	4K809
6	Lower Stand Off	4K810	4K811



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- 1) The tissue in plants that brings water upward from the roots;
- 2) a leading global water technology company.

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