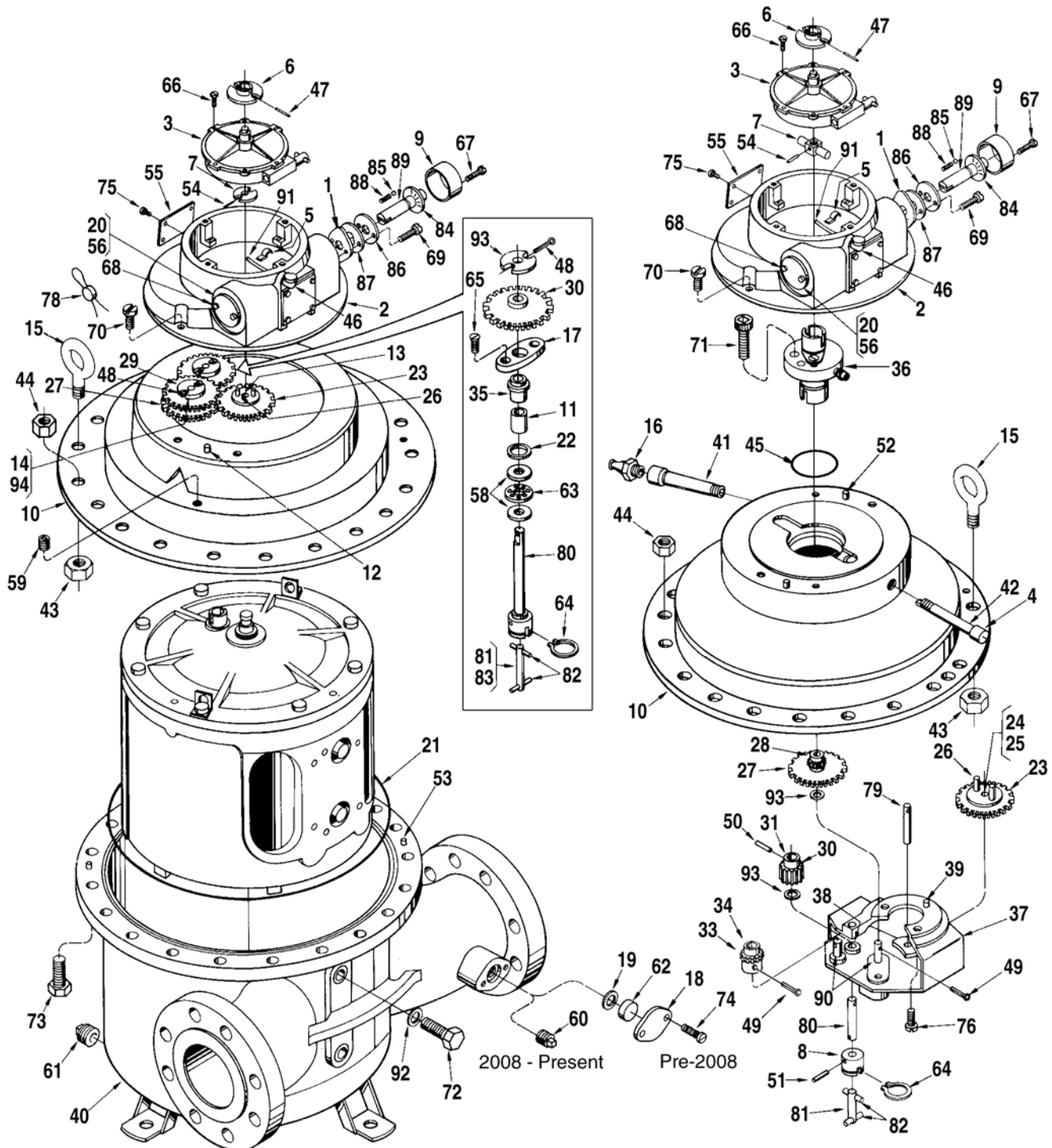
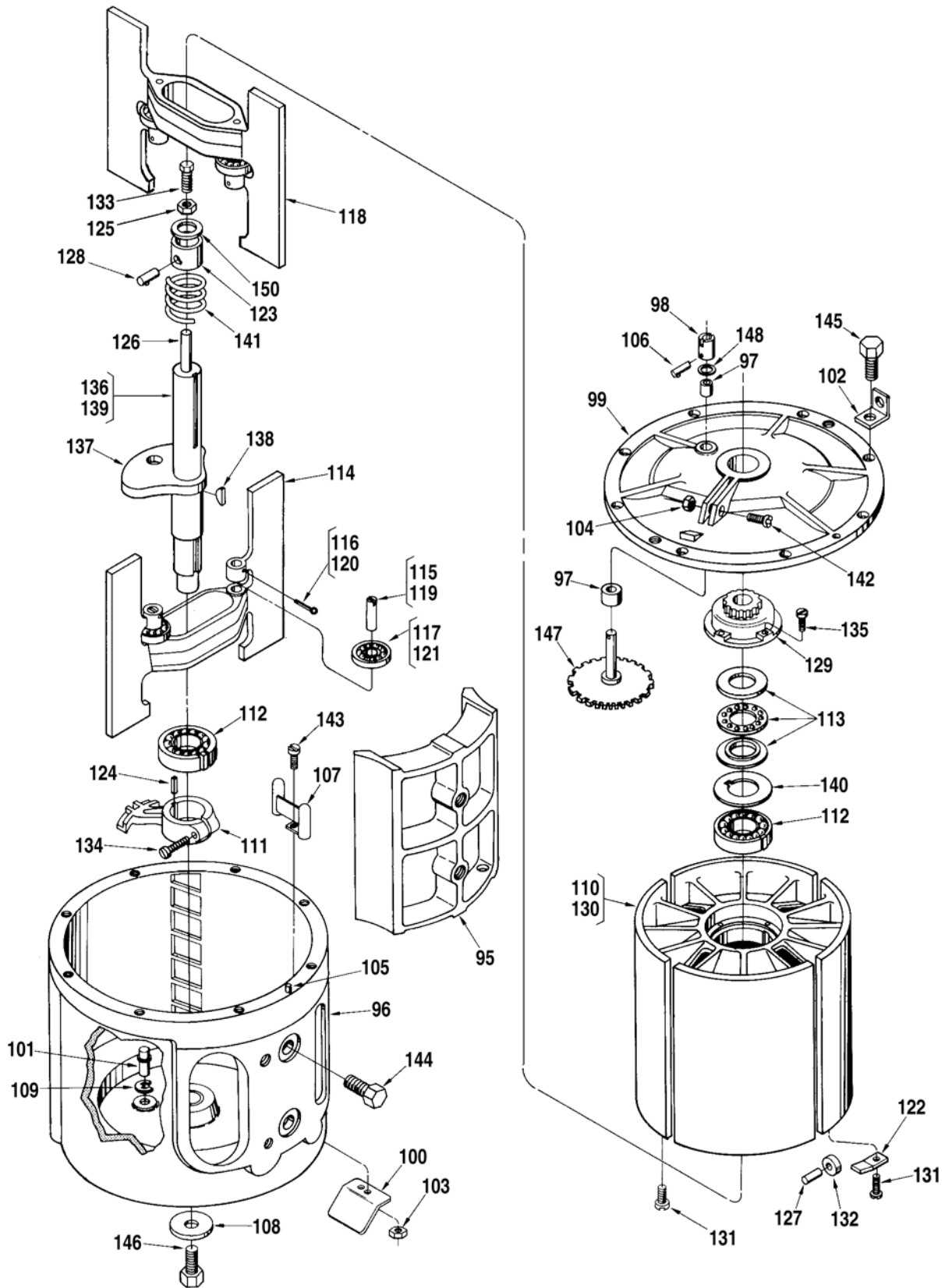


**Pre – 2008**

**2008 – Present**



# Inner Mechanism



<u>Item</u>	<u>Description</u>	<u>Qty.</u>	<u>Pre-2008</u>	<u>2008-Present</u>
1	Adapter, Calibrator Adjusting Stem.....	1	512372-001	512372-001
2	Adapter:			
	Standard and ATC .....	1	511946-001	511946-001
	ATG .....	1	512916-001	512916-002
3	+ Calibrator:			
	Standard.....	1	512059-001	512059-001
	With ATC (Standard).....	1	512060-001	512060-001
@1	With ATC (Special Temp. or API) .....	1	516130-xxx	516130-xxx
	Dummy Calibrator.....	1	516105-001	516105-001
4	Cap:			
	Standard.....	1	.....	641746-401
	NACE.....	1	.....	645238-401
5	Clamp, Oil Tube.....	1	003905-001	003905-001
6	+ Coupling, Drive .....	1	072103-001	072103-001
7	Coupling, Input.....	1	014356-001	003821-001
8	Coupling, Jackshaft.....	1	.....	514633-001
9	Cover, Knob .....	1	003553-001	003553-001
10	Cover, Outer Housing:			
	All Others.....	1	512125-091	512682-091
	NACE.....	1	552162-001	551173-001
	Teflon .....	1	512125-099	.....
11	Bushing.....	1	519882-002	.....
12	Pin, Groove 3/16 x 3/8" .....	1	641007-401	.....
13	Shaft, Calibrator Drive.....	1	003775-001	.....
14	Shaft, Idler Pinion .....	1	512077-001	.....
15	Eyebolt, for Lifting .....	2	644974-403	644974-403
16	Fitting, Grease .....	1	.....	006408-001
17	Flange, Packing Gland.....	1	010171-001	.....
18	Flange, Temperature Well Plug .....	1	011941-001	011941-001
19	Gasket.....	1	060341-001	060341-001
20	Gasket, Cover Plate .....	1	003834-001	003834-001
21	+ Gasket, Cover O-Ring:			
	Buna-N .....	1	512140-001	512140-001
	Viton .....	1	512140-002	512140-002
	EPR .....	1	512140-003	512140-003
	Teflon .....	1	645842-401	645842-401
22	Gasket, Packing Gland.....	1	010173-001	.....
23	@2 Gear, Calibrator Drive:			
	U.S. Barrels .....	1	516490-001	514368-001
	U.S. Barrels, LPG .....	1	516490-001	512239-001
	U.S. Gallons.....	1	008248-001	008248-001
	U.S. Gallons, LPG.....	1	008248-001	511858-001
	Imperial Gallons .....	1	071007-001	514368-001
	Imperial Gallons, LPG .....	1	071007-001	512239-001
	Dekalitres .....	1	070728-001	515934-001
	Dekalitres, LPG .....	1	070728-001	516373-001
24	Bushing, Standard and All Iron.....	1	013372-001	013372-001
25	Bushing, LPG .....	1	504653-001	504653-001
26	Pin .....	2	003325-001	003325-001
27	@2 Gear, Intermediate Pinion:			
	U.S. Barrels .....	1	516488-001	514366-001
	U.S. Barrels, LPG .....	1	516488-001	515068-001
	U.S. Gallons.....	1	008250-001	514770-001
	U.S. Gallons, LPG.....	1	008250-001	515071-001
	Imperial Gallons .....	1	072076-001	515769-001
	Imperial Gallons, LPG .....	1	072076-001	515072-001
	Dekalitres .....	1	072056-001	515932-001
	Dekalitres, LPG .....	1	072056-001	516372-001
28	Bushing, LPG Only .....	1	.....	504653-001
29	Pin.....	2	001126-001	.....

<u>Item</u>	<u>Description</u>	<u>Qty.</u>	<u>Pre-2008</u>	<u>2008-Present</u>
30	@2 Gear, Jackshaft Pinion:			
	U.S. Barrels .....	1	516485-001	514363-001
	U.S. Barrels, LPG .....	1	516485-001	515066-001
	U.S. Gallons .....	1	008249-001	514767-001
	U.S. Gallons, LPG .....	1	008249-001	515070-001
	Imperial Gallons .....	1	008249-001	514767-001
	Imperial Gallons, LPG .....	1	008249-001	515070-001
	Dekalitres .....	1	008249-001	514767-001
	Dekalitres, LPG .....	1	008249-001	515070-001
31	Bushing, LPG Only .....	1	.....	504653-001
32	Pin .....	2	001126-001	.....
33	@2 Gear, Reversing Pinion:			
	U.S. Barrels .....	1	.....	514361-001
	U.S. Barrels, LPG .....	1	.....	515067-001
34	Bushing, LPG Only .....	1	.....	504653-001
35	+ Gland, Packing:			
	Buna-N .....	1	518630-001	.....
	Viton .....	1	518630-002	.....
	Teflon .....	1	009535-001	.....
	Brass .....	1	008934-001	.....
36	+@3 Gland, Packing:			
	Standard – Buna-N .....	1	.....	513644-001
	Teflon .....	1	.....	513644-002
	NACE .....	1	.....	551178-001
37	Housing, Gear:			
	Standard and All Iron .....	1	.....	514628-001
	LPG .....	1	.....	514628-002
38	Bushing:			
	Standard and All Iron .....	1	.....	519882-001
	LPG .....	1	.....	514835-001
39	Dowel .....	1	.....	003628-001
40	Housing, Outer:			
	NACE .....	1	.....	551168-001
	Teflon .....	1	511989-099	511989-099
41	Lubrication Assembly .....	1	.....	514659-001
42	Nipple:			
	Standard .....	1	.....	641111-404
	NACE .....	1	.....	645185-401
43	Nut, Eyebolt .....	2	006399-002	006399-002
44	Nut, Hex (9/16" - 12) .....	20	642138-401	642138-401
45	+ O-Ring, Packing Gland:			
	Buna-N .....	1	.....	640173-023
	Viton .....	1	.....	640894-403
	EPR .....	1	.....	641560-408
	Teflon .....	1	.....	645905-402
46	Oiler .....	1	006588-001	006588-001
47	Pin, Counter Drive Coupling .....	1	006028-002	006028-002
48	Pin, Cotter (1/16 x 5/8") .....	2	641042-401	.....
49	Pin, Cotter (1/16 x 3/8") .....	2	.....	009825-400
50	Pin, Groove (1/16 x 1/2" .....	1	.....	006054-002
51	Pin, Groove (5/64 x 5/8") .....	1	.....	009593-400
52	Pin, Groove (3/16 x 3/8") .....	2	.....	641007-401
53	Pin, Groove, Outer Cover .....	2	640985-401	640985-401
54	Pin, Input Coupling .....	1	006053-002	006317-002
55	Plate, Caution .....	1	006571-003	006571-003
56	Plate, Cover .....	1	003440-001	003440-001
57	Plate, Gland Lubrication .....	1	.....	517715-001
58	+ Plate, Thrust Bearing:			
	Standard and All Iron .....	2	001111-001	.....
	LPG .....	1	504720-001	.....

<u>Item</u>	<u>Description</u>	<u>Qty.</u>	<u>Pre-2008</u>	<u>2008-Present</u>
59	Plug, Pipe.....	1	006073-002	.....
60	Plug, Pipe:			
	Standard.....	1	006505-002	006505-002
	NACE.....	1	645242-402	645242-402
61	Plug, Pipe:			
	Standard.....	1	006878-002	006878-002
	NACE.....	1	645242-403	645242-403
62	Plug, Temperature Well.....	1	012025-001	012025-001
63	+ Retainer, Ball:			
	Standard.....	1	070360-002	.....
	All Iron.....	1	070360-001	.....
64	Ring, Snap.....	1	512066-001	512066-001
65	Screw, #10-32 x 1/2".....	2	006764-002	.....
66	Screw, #6-32 x 5/16".....	2	006048-002	006048-002
67	Screw, #10-24 x 3/4", Drilled.....	2	006481-003	006481-003
68	Screw, #10-32 x 3/8".....	2	006045-002	006045-002
69	Screw, #10-32 x 7/8".....	2	640835-001	640835-001
70	Screw, Adapter to Cover:			
	5/16-18 x 3/4", Drilled.....	2	009563-400	009563-400
	5/16-18 x 1", Drilled.....	2	.....	065075-003
71	Screw, Cap – Packing Gland to Cover (5/16-18 x 1-1/4").....	2	.....	006511-002
72	Screw, Cap – Inner Mechanism:			
	1/2-13 UNC-2A x 2".....	2	.....	646134-401
	1/2-13 x 1-3/4".....	2	006169-002	.....
	NACE, 1/2-13 x 1-3/4".....	2	645182-401	645182-401
73	Screw, Cap – Outer Housing:			
	9/16-12 x 2".....	20	640975-404	.....
	9/16-12 x 2-1/4".....	20	.....	640975-403
	3/4-10 x 4-1/4".....	20	.....	641068-409
74	Screw, Temperature Well Flange (5/16-18 x 1").....	2	060133-002	060133-002
75	Screw, Drive, #2 x 1/8".....	12	009880-400	009880-400
76	Screw, Gear Housing, 5/16-18 x 5/8".....	2	.....	009813-400
77	Screw Set-Gear Housing, #10-32 x 1/4".....	1	.....	009469-400
78	+ Seal, Lead and Wire.....	1	001627-400	001627-400
79	+ Shaft, Calibrator Drive Gear.....	1	.....	515341-001
80	+ Shaft, Jack (Upper).....	1	512116-001	514634-002
81	+ Shaft, Link Assembly.....	1	512069-001	514757-001
82	Pin.....	2	065217-402	065217-402
83	Shaft.....	1	512068-002	.....
84	Stem, Adjusting Assembly.....	1	009838-001	009838-001
85	Ball.....	2	006427-001	006427-001
86	Plate, Base.....	1	003552-001	003552-001
87	Plate, Retainer.....	1	003556-001	003556-001
88	Spring, Knob.....	2	003557-001	003557-001
89	Stem, Adjusting.....	1	003551-001	003551-001
90	Stud, Gear Shaft.....	2	.....	514370-001
91	Tube, Oil.....	1	514658-001	514658-001
92	Washer.....	2	065309-002	065309-002
93	Washer, Jackshaft:			
	Pre-2008.....	1	001125-001	.....
	2008-Present.....	3	.....	641985-402
94	Washer, Idler Pinion Shaft.....	1	003599-001	.....

Item	Inner Mechanism Description	Qty.	Part Number
95	+@4 Block:		
	Standard.....	1	517085-001
	High Viscosity:		
	For 2,000 SSU to 10,000 SSU.....	1	517085-041
96	Body.....	1	511997-001
97	+ Bushing, Jackshaft:		
	Standard and All Iron.....	2	519882-001
	LPG.....	2	512796-001
98	+ Coupling, Drive.....	1	512064-002
99	Cover, Inner (Includes Item #100):		
	Standard and All Iron.....	1	516456-001
	LPG.....	1	516456-002
100	Cover, Pitot.....	1	512719-001
101	Dowel, Locating Arm.....	1	512115-001
102	Lug, Lift.....	2	512002-001
103	Nut, Pitot Assembly, #10-32 Hex.....	2	001723-400
104	Nut, 5/16-18 Shakeproof.....	1	009552-400
105	Pin, Groove, 3/16 x 3/4".....	1	007900-400
106	Pin, Groove, 5/64 x 5/8".....	1	009593-400
107	Pitot.....	1	072186-001
108	Plate.....	1	512714-001
109	Ring, Retaining.....	1	064150-001
110	@4 Rotor and Blade Assembly:		
	Previous Design (Prior to 1973):		
	Standard.....	1	515706-001
	All Iron.....	1	515706-002
	Current Design (1973 to present):		
	Standard.....	1	517231-001
	All Iron.....	1	517231-002
	LPG.....	1	517231-003
111	Arm, Locating.....	1	511945-001
112	+ Bearing, Rotor:		
	Standard and All Iron.....	2	516109-001
	LPG.....	2	516109-002
113	+ Bearing, Thrust:		
	Standard and All Iron.....	1	006519-001
	LPG.....	1	504658-001
114	+ Blade, Lower:		
	Standard.....	1	008901-001
	All Iron.....	1	009441-042
	LPG.....	1	504662-001
	Standard – Modified for 2,000 SSU to 10,000 SSU.....	1	008901-041
	Standard – Modified for 200°F Max.....	1	008901-042
	Standard – Modified for 2,000 SSU to 10,000 SSU and 200°F Max.....	1	008901-043
	A.I. – Modified for 2,000 SSU to 10,000 SSU.....	1	009441-041
115	Pin, Blade Roller.....	2	003449-001
116	Pin, Cotter, 3/32 x 1".....	2	006308-001
117	+ Roller, Blade:		
	Standard and All Iron.....	2	065109-001
	LPG.....	2	644412-402
118	+ Blade, Upper:		
	Standard.....	1	008900-001
	All Iron.....	1	009441-042
	LPG.....	1	504663-001
	Standard – Modified for 2,000 SSU to 10,000 SSU.....	1	008900-041
	Standard – Modified for 200°F Max.....	1	008900-042
	Standard – Modified for 2,000 SSU to 10,000 SSU and 200°F Max.....	1	008900-043
	A.I. – Modified for 2,000 SSU to 10,000 SSU.....	1	009442-041

Item	Description	Qty.	Part Number
119	Pin, Blade Roller .....	2	003449-001
120	Pin, Cotter, 3/32 x 1" .....	2	006308-001
121	+ Roller, Blade:		
	Standard and All Iron.....	2	065109-001
	LPG .....	2	644412-402
122	Clamp, Rotor Cover Roller .....	8	011226-001
123	Clamp, Thrust Bearing .....	1	512074-001
124	Key .....	1	512715-001
125	Nut, Adjusting Screw .....	1	003527-001
126	Pin, Adjusting Screw Extension.....	1	512073-001
127	Pin, Rotor Cover Roller .....	4	001634-001
128	Pin, Thrust Bearing Collar .....	1	008251-001
129	Plate, Rotor Gear .....	1	512112-001
130	Rotor:		
	Standard .....	1	008253-002
	Old Style w/Drilled Holes .....	1	008253-191
	Standard – Modified for 2,000 SSU to 10,000 SSU.....	1	008253-041
	LPG and Standard – Modified for 200°F Max.....	1	008253-042
	Standard – Modified for 2,000 SSU to 10,000 SSU and 200°F Max. ....	1	008253-043
131	Screw, 1/4-20 x 7/8" .....	12	006100-002
132	+ Roller, Rotor Cover:		
	Standard and All Iron.....	4	011681-001
	LPG .....	4	514751-001
133	Screw, Adjusting.....	1	003526-002
134	Screw, Locating Arm, 5/16-18 x 1-1/4" .....	1	643764-402
135	Screw, Rotor Gear Plate, 1/4-20 x 7/8" .....	4	006100-002
136	+@4 Shaft and Cam Assembly:		
	Pre-2008.....	1	512113-001
	2008-Present.....	1	517152-001
137	@4 Cam:		
	Pre-2008.....	1	003814-001
	2008-Present.....	1	517019-001
138	Key:		
	2008-Present.....	1	005535-800
139	Shaft.....	1	511876-001
140	Spacer, Bearing .....	1	512075-001
141	+ Spring, Rotor Bearing .....	1	002198-002
142	Screw, 5/16-18 x 1" .....	1	006325-002
143	Screw, #10-32 x 1-1/2" .....	2	009606-400
144	Screw, Cap (Block) 1/2-13 x 1" .....	2	010525-400
145	Screw, Inner Cover to Body .....	8	006140-002
146	Screw, Nylok .....	1	641044-401
147	Shaft, Jack and Gear Assembly.....	1	512062-001
149	Washer, Lock #10 .....	2	642482-406
148	Washer.....	1	643249-401
150	* Washer, Special .....	1	516061-001

<u>Item</u>	<u>Description</u>	<u>Qty.</u>	<u>Part Number</u>
<b>Inner Mechanism General Assembly Numbers</b>			
	Standard .....		517153-091
	All Iron .....		517153-092
	LPG .....		517153-093

+ Recommended spares.

\* Not Illustrated.

R Indicates change since last revision.

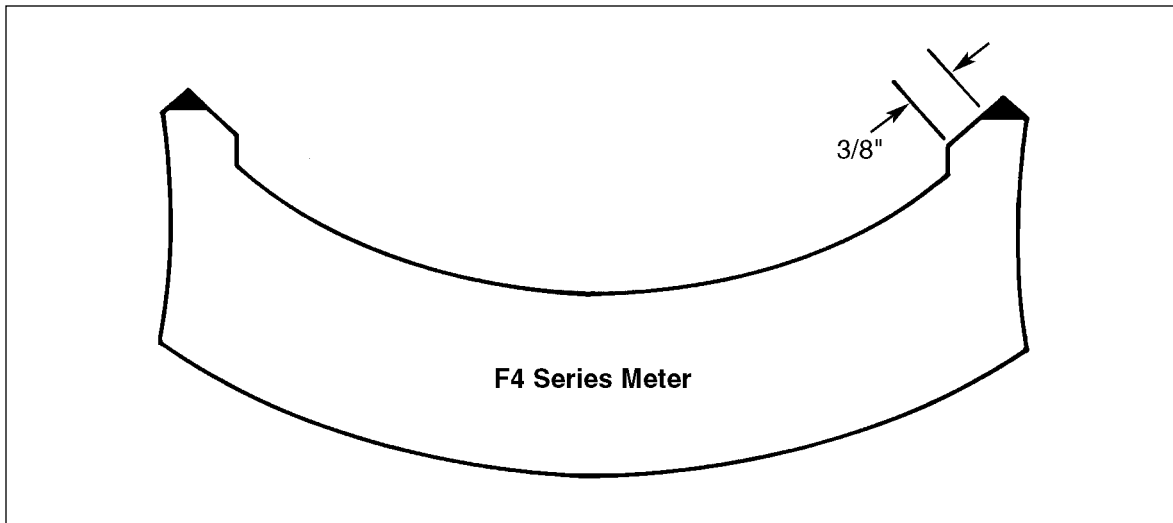
@1 Note 1: When ordering, include temperature range and specific API gravity.

@2 Note 2: Only standard gearing is listed. For additional gearing combinations, see Gear Train Bulletin SS01027.

@3 Note 3: See Form No. P0605.\*\* for components (PG-15 – Prior to 2008, PG-30 – After 2008).

@4 Note 4: In 1973 a change in design was made to the block and cam of the four-inch meter. To ensure proper operation, a current style block must be used with a current style cam. Either current or previous style block can be used with previous style cam. The shaded area of the block outline below represents the dimensioning of the previous style.

\*\* The latest edition is indicated by a 2-digit postscript (e.g., .01, .02, etc.).



F4 parts list P0546.08 is now replaced with P0546.20, P0546.40 and P0546.60.

The specifications contained herein are subject to change without notice and any user of said specifications should verify from the manufacturer that the specifications are currently in effect. Otherwise, the manufacturer assumes no responsibility for the use of specifications which may have been changed and are no longer in effect.

Contact information is subject to change. For the most current contact information, visit our website at [www.fmctechnologies.com/measurementsolutions](http://www.fmctechnologies.com/measurementsolutions) and click on the "Contact Us" link in the left-hand column.

**Headquarters:**

500 North Sam Houston Parkway West, Suite 100, Houston, TX 77067 USA, Phone: +1 (281) 260 2190, Fax: +1 (281) 260 2191

**Measurement Products and Equipment:**

**Erie, PA USA** +1 (814) 898 5000  
**Ellerbek, Germany** +49 (4101) 3040  
**Barcelona, Spain** +34 (93) 201 0989  
**Beijing, China** +86 (10) 6500 2251  
**Buenos Aires, Argentina** +54 (11) 4312 4736  
**Burnham, England** +44 (1628) 603205

**Dubai, United Arab Emirates** +971 (4) 883 0303  
**Los Angeles, CA USA** +1 (310) 328 1236  
**Melbourne, Australia** +61 (3) 9807 2818  
**Moscow, Russia** +7 (495) 5648705  
**Singapore**, +65 6861 3011  
**Thetford, England** +44 (1842) 822900

**Integrated Measurement Systems:**

**Corpus Christi, TX USA** +1 (361) 289 3400  
**Kongsberg, Norway** +47 (32) 286700  
**Dubai, United Arab Emirates** +971 (4) 883 0303

Visit our website at [www.fmctechnologies.com/measurementsolutions](http://www.fmctechnologies.com/measurementsolutions)