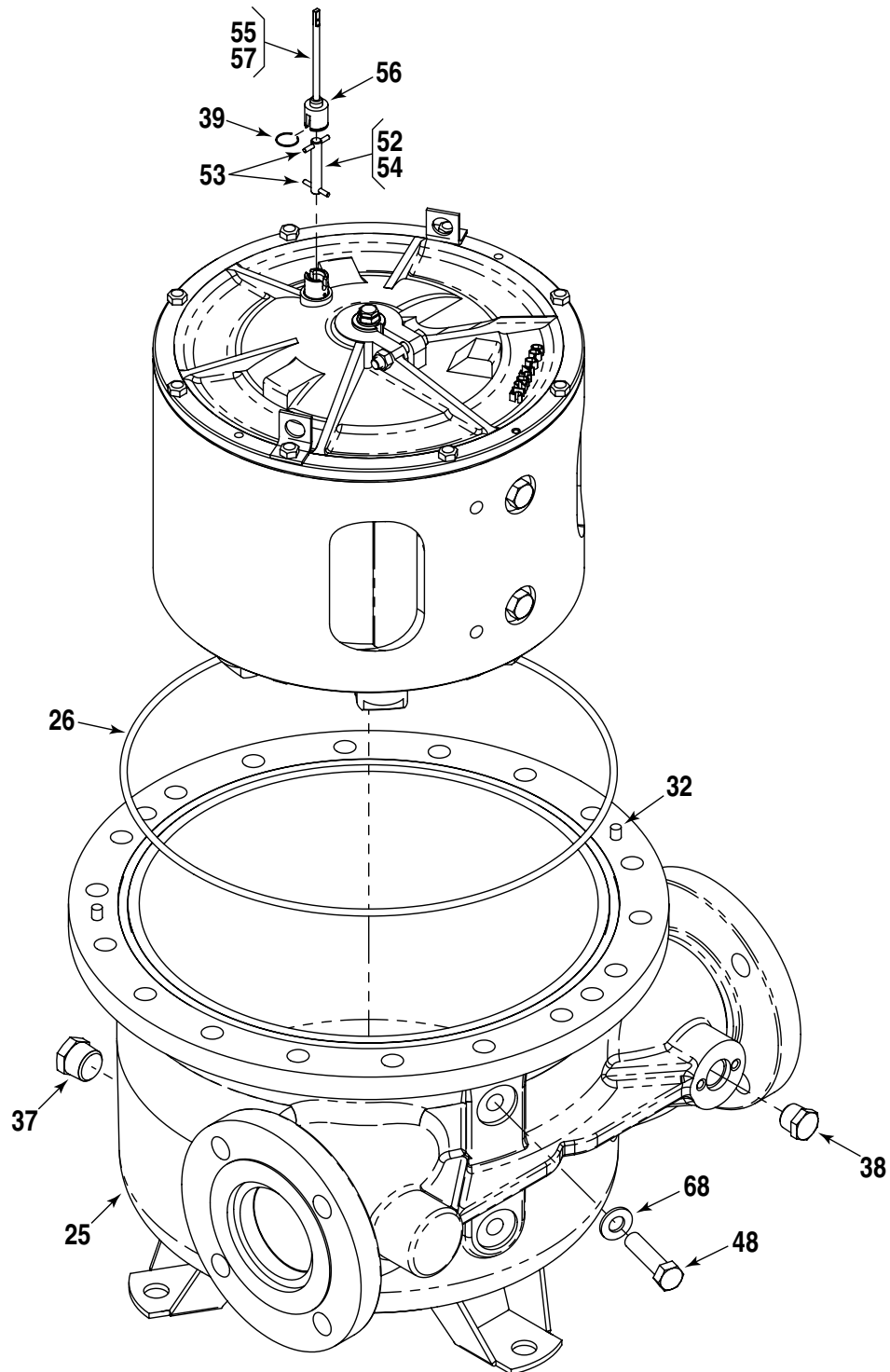


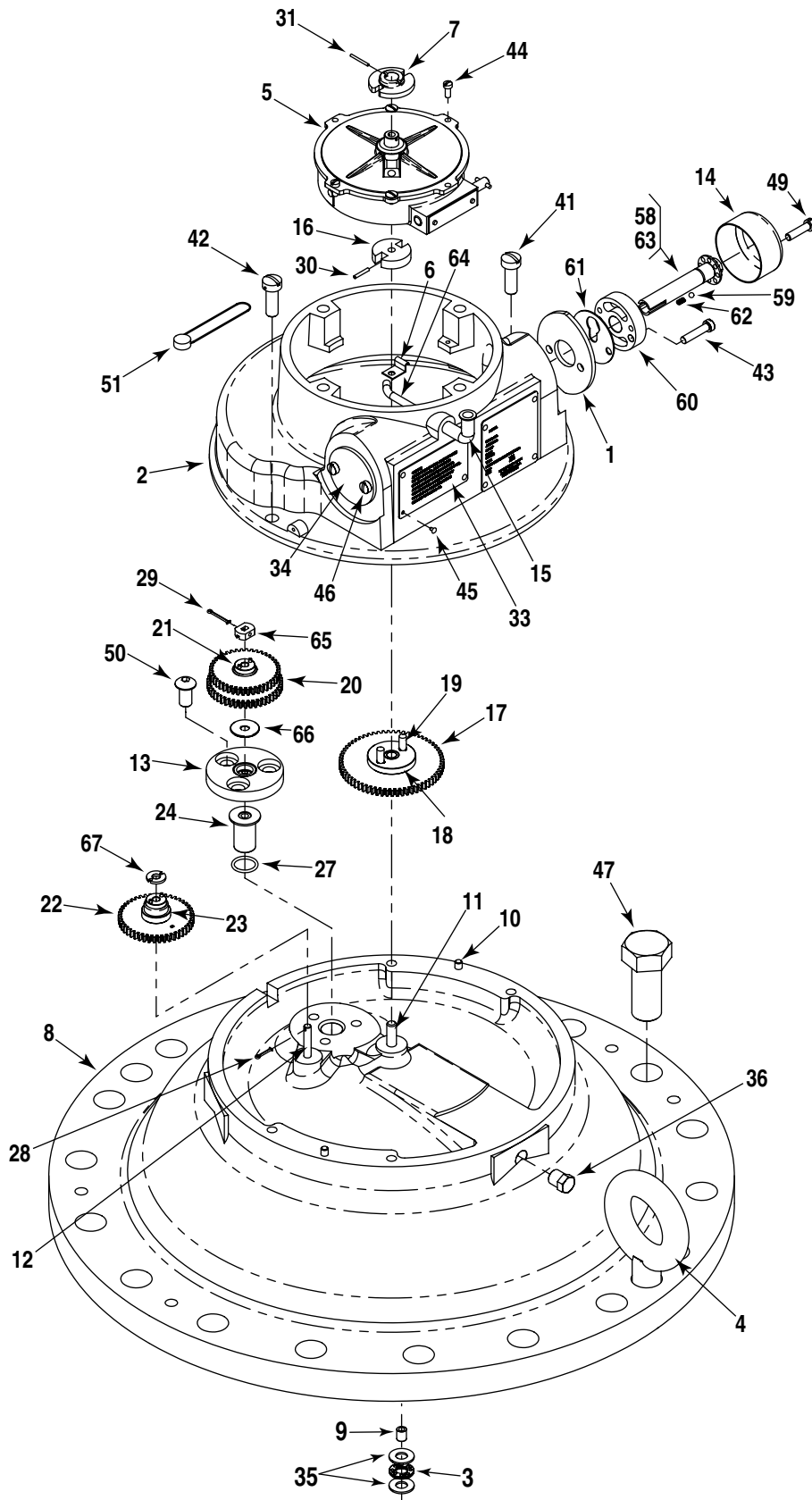
# Meter, PD Series E3-S3, S5 and E4-S3

Bulletin P001003 Issue/Rev. 0.1 (7/14)

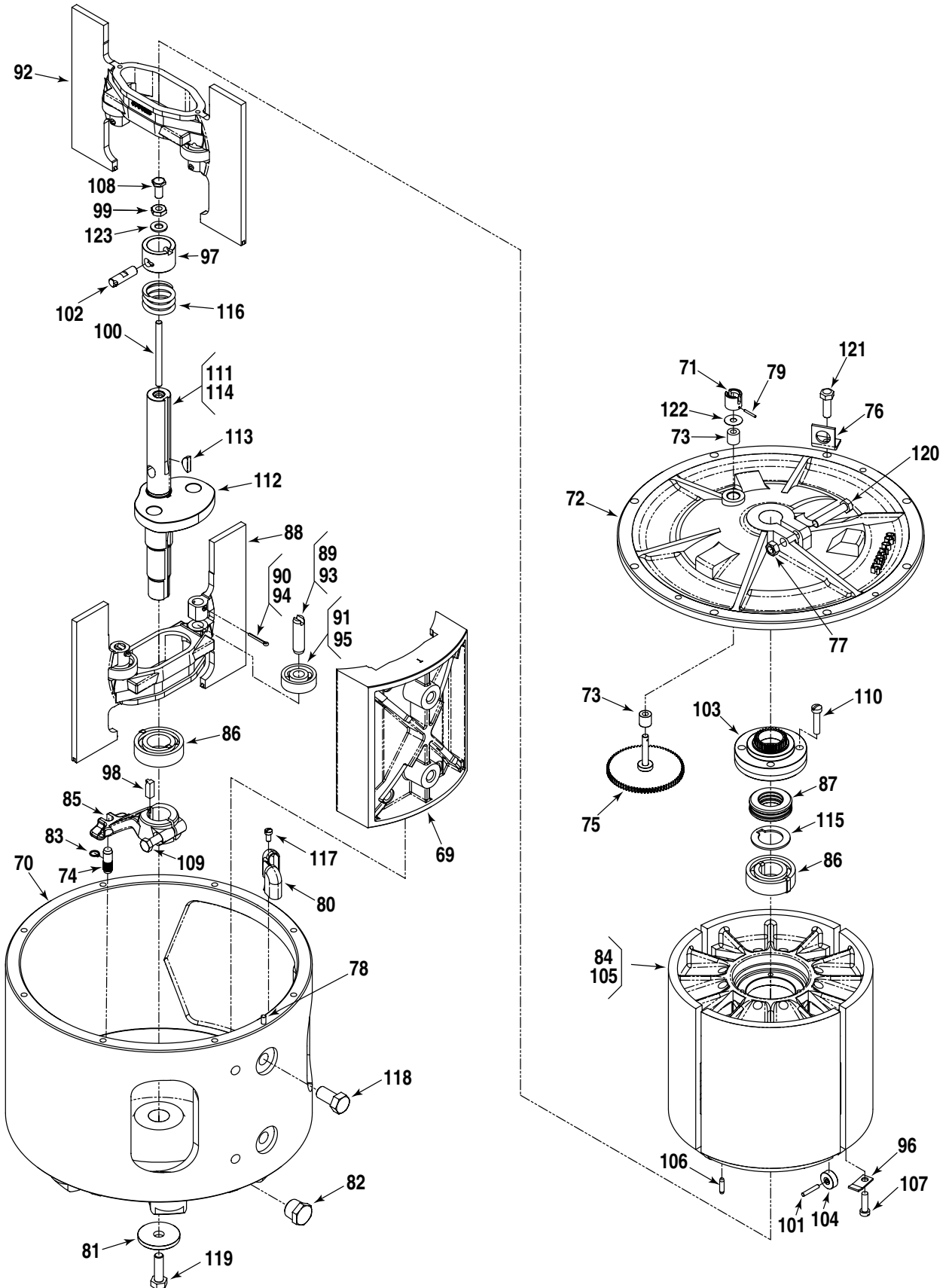
**FMC**Technologies

We put you first.  
And keep you ahead.





# Inner Mechanism



Item	Description	Qty.	Part Number
1	Adapter, Calibrator Adjusting Stem .....	1 .....	512372-001
2	Adapter .....	1 .....	511946-001
3	+ Bearing, Thrust:		
	Standard .....	1 .....	070360-002
	All Iron .....	1 .....	070360-001
4	Bolt, Eye .....	2 .....	065433-005
5	+ Calibrator:		
	Standard .....	1 .....	512059-001
	w/ ATC (Standard) .....	1 .....	512060-001
	@1 w/ ATC (Special Temp. or API) .....	1 .....	516130-xxx
	Dummy Calibrator .....	1 .....	516105-001
6	Clamp, Oil Tube .....	1 .....	003905-001
7	+ Coupling, Drive .....	1 .....	072103-001
8	Cover Assembly .....	1 .....	553719-091
9	Bearing, Packing Gland .....	1 .....	646178-401
10	Pin, Groove, .19 x .38 .....	2 .....	641007-401
11	Shaft, Gear .....	1 .....	003775-001
12	Shaft, Idler Pinion .....	1 .....	512077-001
13	Cover, Assembly, Packing Gland .....	1 .....	553723-001
14	Cover, Knob .....	1 .....	003553-001
15	Cup, Oil .....	1 .....	006588-001
16	Disc Coupling .....	1 .....	014356-001
17	@2 Gear, Calibrator Drive:		
	U.S. Gallons .....	1 .....	514632-001
	U.S. Gallons, LPG .....	1 .....	515045-001
	Imperial Gallons .....	1 .....	514773-001
	Dekalitres .....	1 .....	514774-001
	Dekalitres, LPG .....	1 .....	515049-001
18	Bushing:		
	LPG .....	1 .....	504653-001
	Standard and All Iron .....	1 .....	013372-001
19	Pin:		
	LPG .....	2 .....	003325-001
	Standard and All Iron .....	2 .....	003325-002
20	@2 Gear, Jack Shaft Idler Assembly:		
	U.S. Gallons, All .....	1 .....	072477-001
	Imperial Gallons, All .....	1 .....	072491-001
	Dekalitres, All .....	1 .....	072485-001
21	Pin .....	2 .....	001126-001
22	@2 Gear Shaft .....	1 .....	072478-001
23	Pin .....	2 .....	001126-001
24	+@3 Gland, Packing .....	1 .....	553722-001
25	Housing, Outer:		
	E3 – S3, S5 .....	1 .....	553720-002
	E4 .....	1 .....	553720-011
26	+ O-ring, Cover:		
	Buna-N .....	1 .....	512278-001
	Viton .....	1 .....	512278-002
27	+ O-ring, Packing Gland:		
	PTFE1 .....	1 .....	645904-402
	All others .....	1 .....	642586-406
28	Pin, Cotter, 1/16 Dia. x 1/2 Long, S.S. ....	1 .....	001095-401
29	Pin, Cotter, Jackshaft, 1/16 Dia. x 5/8" .....	1 .....	641042-401
30	Pin, Groove, Coupling Disc, .08 x .50" .....	1 .....	006053-002
31	Pin, Groove, Drive Coupling, 1/16 x 5/8" .....	1 .....	006028-002
32	Pin, Groove, Outer Housing, 5/16 x 3/4" .....	2 .....	640985-401

1 Polytetrafluoroethylene (PTFE).

Item	Description	Qty.	Part Number
33	Plate, Caution Calibrator .....	1 .....	006571-001
34	Plate, Cover.....	1 .....	003440-001
35	+ Plate, Thrust Bearing.....	2 .....	001111-001
36	Plug, Pipe, 1/8 NPT 1010 Thru 101.....	1 .....	006073-002
37	Plug, Pipe, .75 NPT .....	1 .....	006878-002
38	Plug, Temp. Well, .50 NPT .....	1 .....	006505-002
39	Ring, Snap .....	1 .....	512066-001
40	* Screw, 10-32 x 1/2" .....	2 .....	006764-002
41	Screw, Adapter, 5/16-18 x 7/8" .....	1 .....	009563-400
42	Screw, Adapter, 5/16-18 x 7/8" .....	1 .....	009563-401
43	Screw, Base Plate, 10-32 x 7/8" .....	2 .....	640835-001
44	Screw, Calibrator, 6-32 x 5/16".....	2 .....	006048-002
45	Screw, Caution Plate, 1/8" Self Tapping.....	8 .....	009880-400
46	Screw, Cover Plate, 10-32 x 3/8" .....	2 .....	006045-002
47	Screw, Cover, .75-10 x 1.75".....	18 .....	646186-401
48	Screw, Housing to Inner Mechanism, 1/2-13 x 2.00" .....	2 .....	646134-401
49	Screw, Knob Cover, 10-24 x 3/4" .....	2 .....	006481-003
50	Screw, Packing Gland, .312-18 x .62".....	3 .....	646181-401
51	+ Seal, Lead and Wire .....	3 .....	001627-400
52	+ Shaft, Link .....	1 .....	512069-001
53	Pin, Groove, 1/8 x 1" .....	2 .....	065217-402
54	Shaft, Link.....	1 .....	512068-001
55	Shaft Assembly, Packing Gland .....	1 .....	553716-001
56	Coupling, Drive.....	1 .....	512065-001
57	Shaft .....	1 .....	553715-001
58	Stem, Adjusting.....	1 .....	009838-001
59	Ball, 1/8 Dia .....	2 .....	006427-001
60	Plate, Base.....	1 .....	003552-001
61	Plate, Retainer .....	1 .....	003556-001
62	Spring, Knob .....	2 .....	003557-001
63	Stem, Adjusting.....	1 .....	003551-001
64	Tube, Oil.....	1 .....	514658-001
65	Washer, Jack Shaft .....	1 .....	001125-001
66	Washer, 7/32 ID x 3/4" OD .....	1 .....	553712-001
67	Washer, Pinion.....	1 .....	003599-001
68	Washer, Flat, 17/32 ID x 1-1/16" OD.....	2 .....	065309-002

#### INNER MECHANISM

Item	Description	Qty.	Part Number
69	Block .....	1 .....	538361-001
70	Body .....	1 .....	512071-001
71	+ Coupling, Drive.....	1 .....	512064-002
72	Cover, Inner:		
	Standard and All Iron .....	1 .....	516455-001
	LPG.....	1 .....	516455-002
73	+ Bushing, Jack Shaft:		
	Standard and All Iron .....	2 .....	519882-001
	LPG.....	2 .....	512796-001
74	Dowel, Locating Arm.....	1 .....	512115-001
75	Gear, Jack Shaft.....	1 .....	512282-001
76	Lug, Lift .....	2 .....	512002-001
77	Nut, 5/16-18.....	1 .....	009552-400
78	Pin, Groove, 3/16" x 3/4".....	1 .....	007900-400

**INNER MECHANISM**

Item	Description	Qty.	Part Number
79	Pin, Groove, 1.08 x .63 .....	1	009593-400
80	Pitot Assembly .....	1	072186-001
81	Plate .....	1	512714-001
82	Plug, Pipe, Hex Head, .50 NPT .....	1	006505-002
83	Ring, Retaining .....	1	064150-001
84	Rotor and Blade Assembly:		
	Standard .....	1	515705-001
	All Iron .....	1	515705-002
	LPG .....	1	515705-003
85	Arm, Rotor Shaft Locating .....	1	512192-001
86	+ Bearing and Clamp:		
	Standard and All Iron .....	2	516108-001
	LPG .....	2	516108-002
87	+ Bearing, Rotor Thrust:		
	Standard and All Iron .....	1	009589-001
	LPG .....	1	504819-001
88	+ Blade Assembly, Lower:		
	Standard .....	1	008899-001
	All Iron .....	1	009454-001
	LPG .....	1	504807-001
	High Viscosity (2,000 to 10,000 SSU) .....	1	008899-041
	High Temperature (200°F Max) .....	1	008899-042
	High Visc./High Temp. (2,000 to 10,000 SSU/200°F Max) .....	1	008899-043
89	Pin, Blade Bearing .....	2	003449-001
90	Pin, Cotter, 3/32 x 1" .....	2	006308-001
91	Bearing, Blade:		
	Standard and All Iron .....	2	065109-001
	LPG .....	2	644412-402
92	+ Blade Assembly, Upper:		
	Standard .....	1	008898-001
	All Iron .....	1	009453-001
	LPG .....	1	504806-001
	High Viscosity (2,000 to 10,000 SSU) .....	1	008898-041
	High Temperature (200°F Max) .....	1	008898-042
	High Visc./ High Temp. (2,000 to 10,000 SSU/200°F Max) .....	1	008898-043
93	Pin, Blade Bearing .....	2	003449-001
94	Pin, Cotter, 3/32 x 1" .....	2	006308-001
95	Bearing, Blade:		
	Standard and All Iron .....	2	065109-001
	LPG .....	2	644412-402
96	Clamp, Roller .....	8	011226-001
97	Collar, Thrust Bearing .....	1	512047-001
98	Key .....	1	512722-001
99	Nut, 5/16-24 .....	1	006835-002
100	Pin, Extension .....	1	512279-001
101	Pin, Roller .....	4	002034-001
102	Pin, Collar Thrust Bearing .....	1	008166-001
103	Plate, Rotor Gear .....	1	512049-001
104	Roller, Cover:		
	LPG .....	4	514750-001
	All others .....	4	011227-001
105	Rotor Sub Assembly:		
	Standard .....	1	008096-002
	High Viscosity .....	1	008096-041
	LPG .....	1	008096-042
106	Dowel, Rotor .....	9	001636-001
107	Screw, 1/4-20 x 7/8" .....	8	006100-002

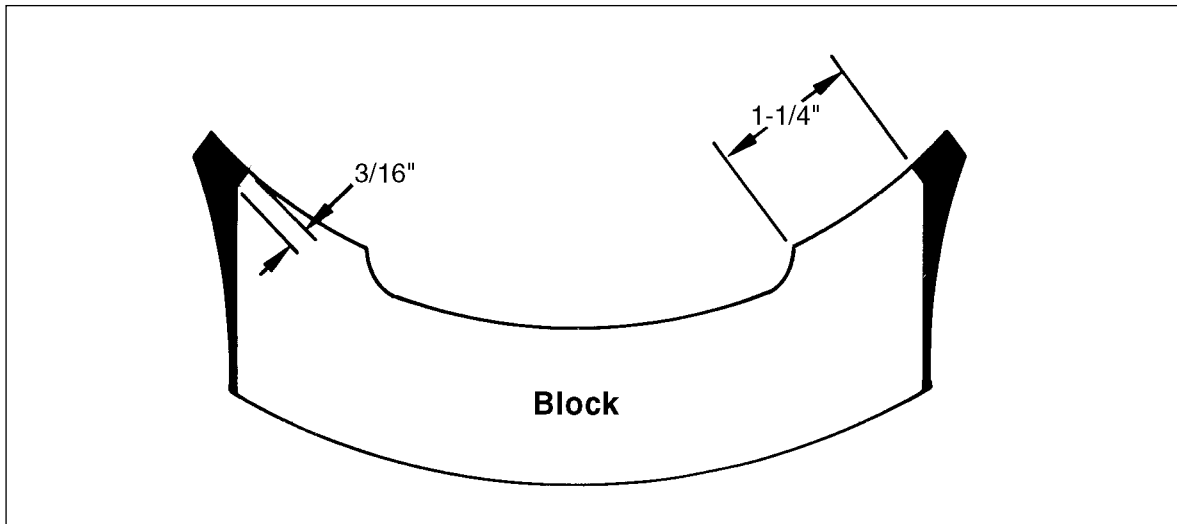
**INNER MECHANISM**

Item	Description	Qty.	Part Number
108	Screw, Adjusting .....	1 .....	002351-001
109	Screw, 5/16-18 x 1-1/4" .....	1 .....	006511-002
110	Screw, M-1/4-20 x 1-1/8" LG .....	4 .....	640992-400
111	Shaft and Cam Assembly .....	1 .....	538426-001
112	Cam .....	1 .....	538360-001
113	Key, Woodruff .....	1 .....	005535-800
114	Shaft .....	1 .....	512042-001
115	Spacer, Rotor Bearing .....	1 .....	512144-001
116	+ Spring, Rotor .....	1 .....	003525-002
117	Screw, #10-32 x 3/8" Fill HD Slot .....	2 .....	006045-002
118	Screw, 1/2-13 x 1" Hex HD .....	2 .....	010525-400
119	Screw, 3/8-16 x 1-1/4" Hex HD .....	1 .....	641044-401
120	Screw, 5/16-18 x 1-3/4" Hex HD .....	1 .....	006325-002
121	Screw, 5/16-18 x 1" Hex HD .....	8 .....	006140-002
122	Washer, Flat, .75 OD, .265 ID, .010 Thick .....	1 .....	643249-401
123	Washer, Flat, 11/16 OD 11/32 ID .....	1 .....	642495-406
124	* Washer, Lock .....	2 .....	642482-406

**Inner Mechanism General Assembly Numbers**

	Standard .....	538476-091
	All Iron .....	538476-092
	LPG .....	538476-093
R	Low Flow .....	538476-094

- \* Not illustrated.
- + Recommended stock.
- R Indicates change since last revision.
- @1 When ordering, include temperature range, specific or API gravity, API table used, and meter gearing.
- @2 Only standard gearing is listed. For additional gearing combinations, see Gear Train Bulletin AB01023.
- @3 See Form No. P001042 for component parts.





**We put you first.  
And keep you ahead.**

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.

[www.fmctechnologies.com/measurementsolutions](http://www.fmctechnologies.com/measurementsolutions)

© 2014 FMC Technologies. All rights reserved. P001003 Issue/Rev. 0.1 (7/14)

**FMC Technologies**  
**Measurement Solutions, Inc.**  
500 North Sam Houston Parkway West,  
Suite 100  
Houston, Texas 77067 USA  
P:+1 281.260.2190

USA Operation  
1602 Wagner Avenue  
Erie, Pennsylvania 16510 USA  
P:+1 814.898.5000

Germany Operation  
Smith Meter GmbH  
Regentstrasse 1  
25474 Ellerbek, Germany  
P:+49 4101 304.0