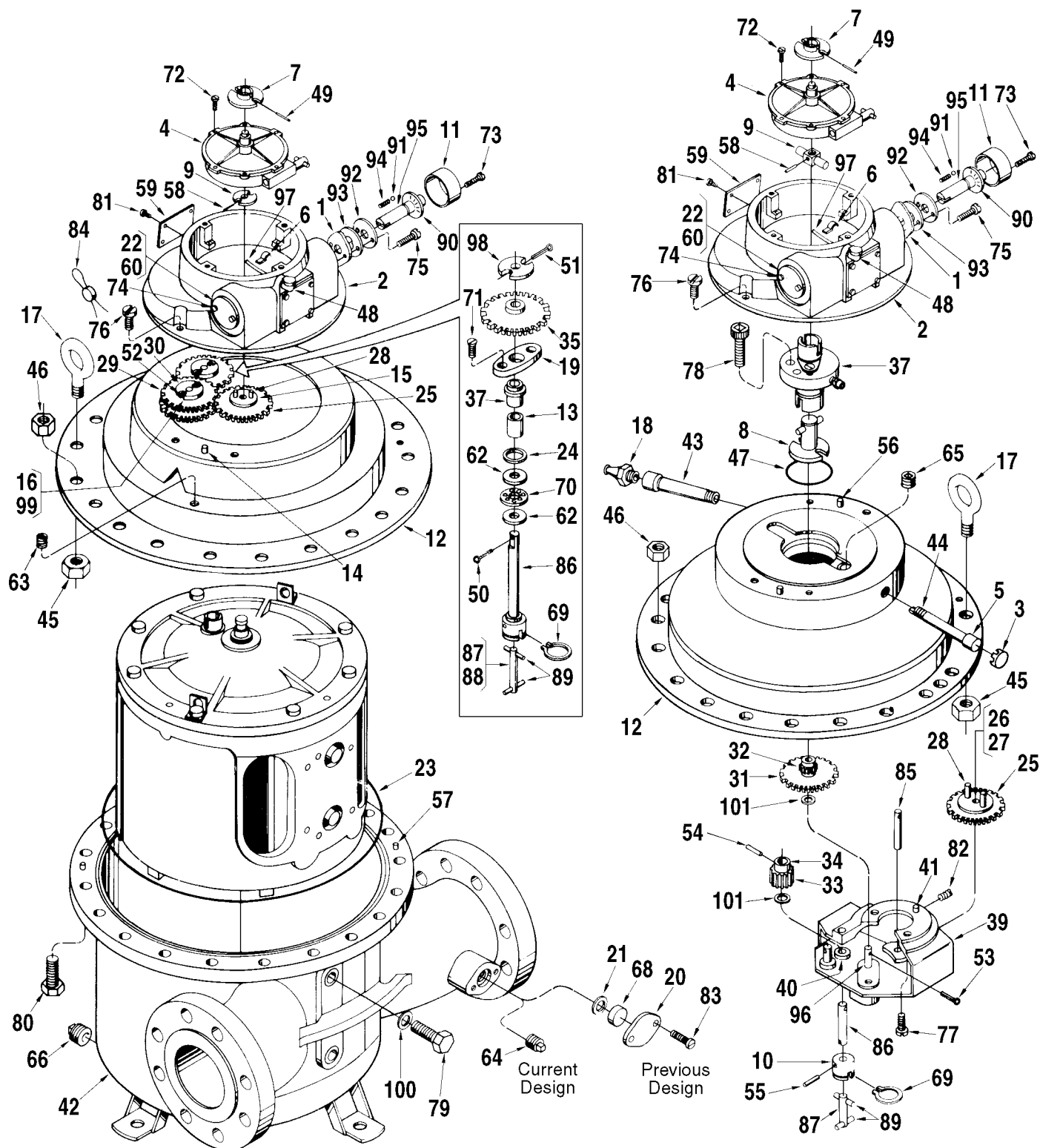
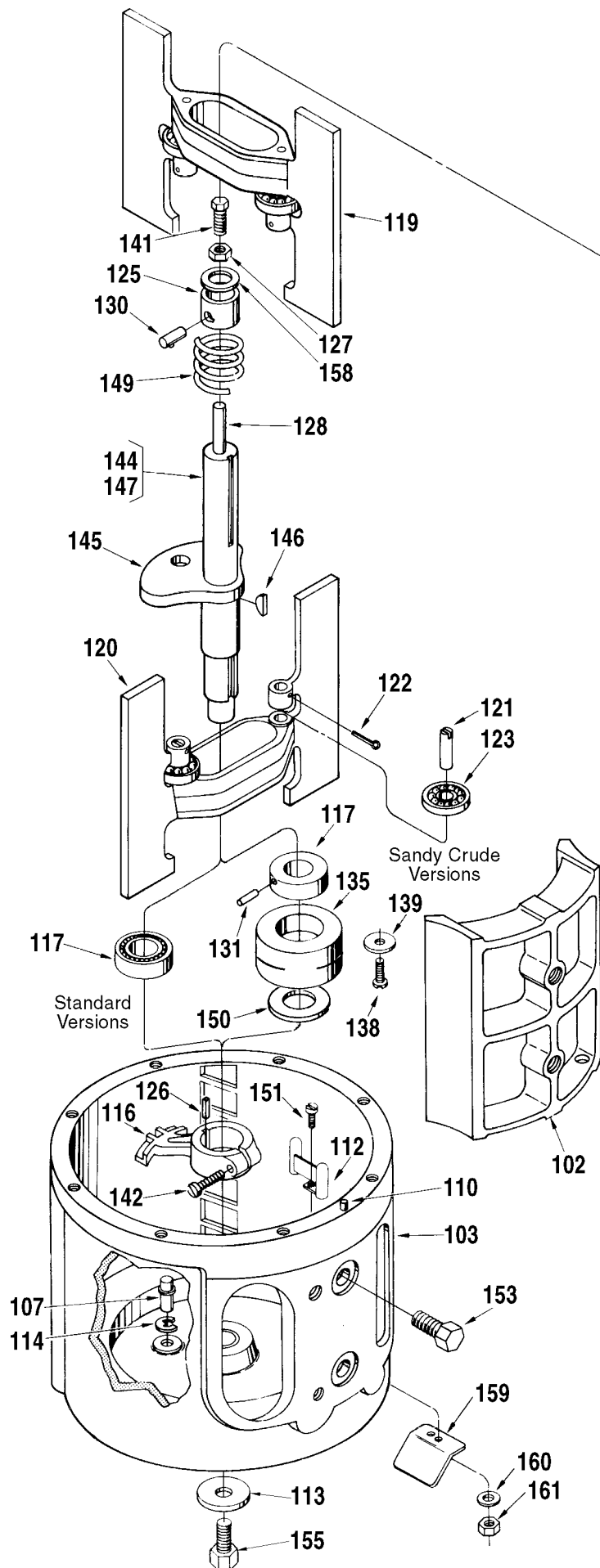


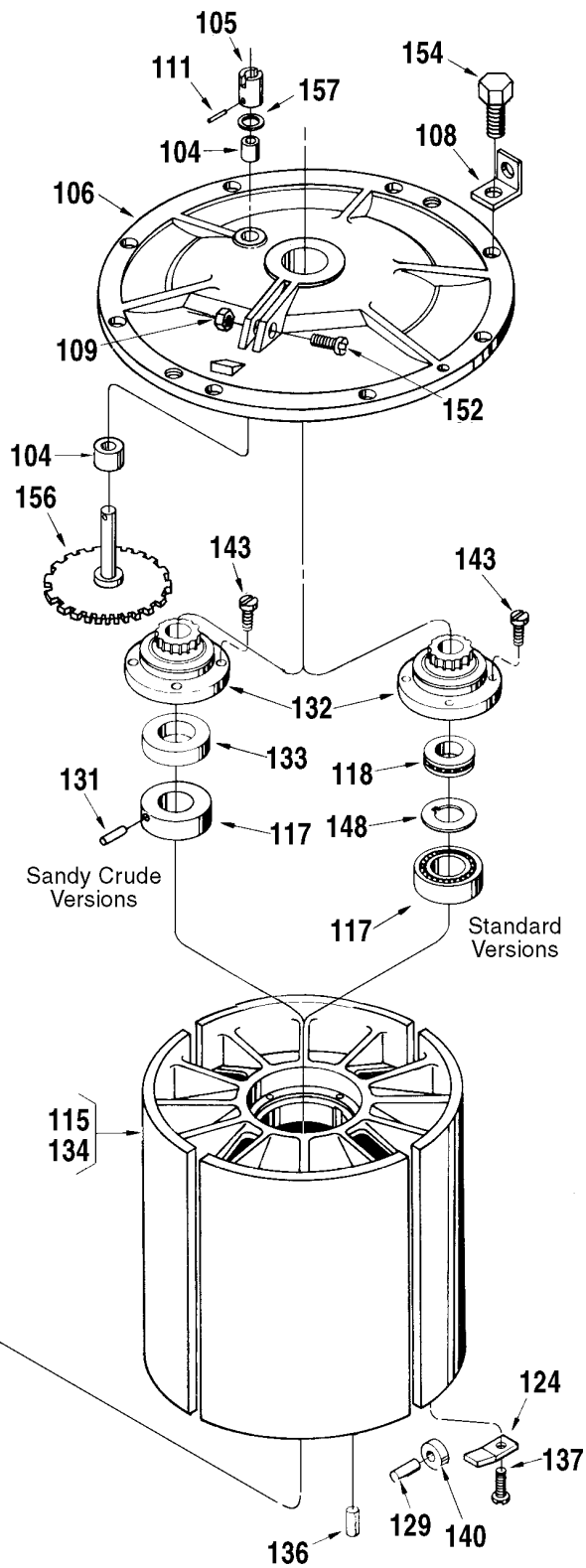


Inner Mechanism



Assembly Spider

516854-001 Spider
516854-002 Bushing



Item		Description	Qty.	E3-A1, A1C, S1, S1C	E3-A3, A3C, S3, S3C, S5, S5C	E3-S6, S7
1		Adapter, Calibrator Adjusting Stem	1	512372-001	512372-001	512372-001
2		Adapter, Counter	1	511946-001	511946-001	515755-001
3		Blank, Snap In	1	.....	.....	015533-401
4	+	Calibrator:				
		Standard	1	512059-001	512059-001	512059-001
		With ATC (Standard)	1	512060-001	512060-001	512060-001
	@1	With ATC (Special Temp. or API)	1	516130-	516130-	516130-
		Dummy Calibrator	1	516105-001	516105-001	516105-001
5		Cap:				
		Standard	1	.....	641746-401	.....
		NACE	1	.....	645238-401	.....
		NACE/B31.3, S1C, A1C, S3C, A3C, S5C	1	641746-401	645238-401	.....
6		Clamp, Oil Tube	1	003905-001	003905-001	003905-001
7	+	Coupling, Drive	1	072103-001	072103-001	072103-001
8		Coupling, Drive:				
		S6	1	.....	.....	518321-001
		S7	1	.....	.....	518321-004
9		Coupling, Input	1	014356-001	003821-001	005969-001
10		Coupling, Jackshaft	1	.....	514633-001	514633-001
11		Cover, Knob	1	003553-001	003553-001	003553-001
12		Cover, Outer Housing:				
		S7 Only, Standard	1	.....	.....	516017-001
	R	S7 Only, Teflon	1	.....	.....	516017-099
	R	All Others, Standard	1	512225-091	513299-091	515902-001
	R	All Others, Teflon	1	512225-099	513299-099	515902-099
		S7 Only, NACE	1	.....	.....	551433-001
		All Others, NACE	1	551737-001	551625-001	552035-001
		S1C,A1C, S3C, A3C, S5C, NACE/B31.3	1	552742-001	552796-001	.....
13		Bushing	1	519882-002	.....	.....
14		Pin, Groove	1	641007-001	.....	.....
15		Shaft, Calibrator Drive	1	003775-001	.....	.....
16		Shaft, Idler Pinion	1	512077-001	.....	.....
17		Eyebolt	2	644974-402	644974-404	643877-401
18		Fitting, Grease	1	.....	006408-001	.....
19		Flange, Packing	1	010171-001	.....	.....
20		Flange, Temperature Well Plug	1	011941-001	011941-001	012026-001
21		Gasket	1	060341-001	060341-001	060341-001
22		Gasket, Cover Plate	1	003834-001	003834-001	003834-001
23	+	Gasket, O-Ring:				
		A1, S1, A3, S3, S5, S6 Buna	1	512278-001	512278-001	515976-001
		S7 Buna	1	.....	.....	516018-001
		A1, S1, A3, S3, S5, S6 Viton	1	512278-002	512278-002	515976-002
		S7 Viton	1	.....	.....	516018-002
		A1, S3, A3, S3, S5, S6 EPR	1	512278-004	512278-004	515976-003
	R	A1, S1, A3, S3, S5, S6 Teflon	1	645842-403	645842-403	645842-408
24	+	Gasket, Packing Gland	1	010173-001	.....	.....
25	@2	Gear, Calibrator Drive:				
		U.S. Gallons	1	514632-001	514632-001	514632-001
		U.S. Gallons, LPG	1	514632-001	515045-001	515045-001
		Imperial Gallons	1	514773-001	514773-001	514773-001
		Imperial Gallons, LPG	1	514773-001	515047-001	515047-001
		Dekalitres	1	514774-001	514774-001	514774-001
		Dekalitres, LPG	1	514774-001	515049-001	515049-001
26		Bushing, LPG	1	504653-001	504653-001	504653-001
27		Bushing, Standard and All Iron	1	013372-001	013372-001	013372-001
28		Pin:				
		Standard	2	003325-001	003325-001	003325-001
		S1C, A1C NACE/B31.3	1	641042-401	.....	.....
29	@2	Gear, Double:				
		U.S. Gallons, All	1	072477-001	.....	.....
		Imperial Gallons, All	1	072491-001	.....	.....
		Dekalitres, All	1	072485-001	.....	.....
30		Pin	2	001126-001	.....	.....
31	@2	Gear, Intermediate Pinion:				
		U.S. Gallons	1	.....	514615-001	514615-001
		U.S. Gallons, LPG	1	.....	515044-001	515044-001

Item		Description	Qty.	E3-A1, A1C, S1, S1C	E3-A3, A3C, S3, S3C, S5, S5C	E3-S6, S7
		Imperial Gallons	1	.....	514771-001	514771-001
		Imperial Gallons, LPG	1	.....	515046-001	515046-001
		Dekalitres	1	.....	514772-001	514772-001
		Dekalitres, LPG	1	.....	515048-001	515048-001
32		Bushing, LPG Gears	1	.....	512797-001	512797-001
33	@2	Gear, Jackshaft Pinion:				
		U.S. Gallons	1	.....	514614-001	514614-001
		U.S. Gallons, LPG	1	.....	515043-001	515043-001
		Imperial Gallons	1	.....	514614-001	514614-001
		Imperial Gallons, LPG	1	.....	515043-001	515043-001
		Dekalitres	1	.....	514614-001	514614-001
		Dekalitres, LPG	1	.....	515043-001	515043-001
34		Bushing, LPG Gears	1	.....	512797-001	512797-001
35	@2	Gear, Single	1	072478-001	.....	.....
36		Pin	2	001126-001	.....	.....
37	+@3	Gland, Packing:				
		Viton	1	518630-001	.....	.....
		Buna-N	1	518630-002	513644-001	515849-001
		Teflon	1	009535-001	513644-002	515849-002
		Brass	1	008934-002	.....	.....
		NACE	1	551728-001	551178-001	551439-001
		NACE/B31.3 - S1C, A1C, S3C, A3C, S5C	1	551728-001	551178-001	.....
39		Housing, Gear:				
		LPG	1	.....	514649-002	514649-002
		Standard and All Iron	1	.....	514649-001	514649-001
40		Bushing:				
		LPG	1	.....	514835-001	514835-001
		Standard and All Iron	1	.....	519882-001	519882-001
41		Dowel	1	.....	003628-001	003628-001
42		Housing:				
		A1 and A3 Standard	1	512198-001	512198-001	.....
		S1, S3, S6 Standard	1	552778-001	552778-001	515903-001
	R	S1, S3, S6 Teflon	1	552778-099	552778-099	515903-099
		S5 and S7 Standard	1	.....	514210-001	516016-001
		S1, S3, S6 NACE	1	551618-001	551618-001	552038-001
		S5 and S7 NACE	1	.....	551707-001	551430-001
		S1C and S3C NACE/B31.3	1	551618-002	552799-001	.....
	R	A1C NACE/B31.3	1	552940-001	.....	.....
	R	A3C NACE/B31.3	1	.....	552840-001	.....
		S5C NACE/B31.3	1	.....	552807-001	.....
43		Lubrication Assembly	1	.....	514659-001	.....
44		Nipple:				
		Standard	1	.....	641111-404	.....
		NACE	1	.....	645185-401	.....
		S1C, A1C, S3C, A3C, S5C NACE/B31.3	1	641111-404	645185-401	.....
45		Nut, Eyebolt, 1/2"-13	2	006399-002	006399-002	.....
46		Nut, Hex:				
		S6 (3/4"-10)	18	.....	.....	642138-406
		S7 (1"-8)	20	.....	.....	640261-001
		S3C, A3C and S5C NACE/B31.3 (3/4"-10)	18	.....	644411-402	.....
47	+	O-Ring, Packing Gland:				
		Buna-N	1	.....	640173-023	640888-001
		Viton	1	.....	640894-403	640894-001
		EPR	1	.....	641560-408	641560-401
		Teflon	1	.....	641754-407	641754-409
48		Oiler	1	006588-001	006588-001	006588-001
49		Pin, Counter Drive Coupling	1	006028-002	006028-002	006028-002
50		Pin, Cotter, 1/16 x 3/8"	2	006303-001	.....	.....
51		Pin, Cotter, 1/16 x 3/4"	1	006132-001	.....	.....
52		Pin, Cotter, 1/16 x 1/2"	1	001095-401	.....	.....
53		Pin, Cotter, 1/16 x 3/8"	1	.....	009825-400	009825-400
54		Pin, Groove, 1/16 x 1/2"	1	.....	006054-002	006054-002
55		Pin, Groove, 5/64 x 5/8"	1	.....	009593-400	009593-400
56		Pin, Groove, 3/16 x 3/8"	2	.....	641007-401	.....

Item	Description	Qty.	E3-A1, A1C, S1, S1C	E3-A3, A3C, S3, S3C, S5, S5C	E3-S6, S7
57	Pin, Groove, Outer Cover:				
	S7 Only	2	.....	.....	641719-406
	All Others	2	640985-401	640985-401	641719-404
58	Pin, Input Coupling	1	006053-002	006317-002	006053-002
59	Plate, Caution:				
	S1C, A1C, S3C, A3C, S5C, NACE/B31.3	1	006571-001	006571-001	.....
	All Others	1	006571-001	006571-001	006571-001
60	Plate, Cover	1	003440-001	003440-001	003440-001
61	Plate, Gland Lubrication	1	.....	.....	515873-001
62	+ Plate, Thrust Bearing	2	001111-001	.....	.....
63	Plug, Pipe:				
	Standard	1	006073-002	.....	.....
	NACE	1	645242-405	.....	.....
64	Plug, Pipe:				
	Standard	1	006505-002	006505-002	006505-002
	NACE	1	645242-402	645242-402	645242-402
65	Plug, Pipe	1	.....	003497-402	006393-002
66	Plug, Pipe:				
	Standard	1	006878-002	006878-002	006878-002
	NACE	1	645242-403	645242-403	645242-403
	S1C, A1C, S3C, A3C, S5C NACE/B31.3	1	645242-403	645242-403	.....
68	Plug, Temperature Well	1	012025-001	012025-001	012025-001
69	Ring, Snap	1	512066-001	512066-001	512066-001
70	+ R Retainer, Ball:				
	R Standard	1	070360-002	.....	.....
	R All Iron	1	070360-001	.....	.....
71	Screw, #10-32 x 1/2"	2	006764-002	.....	.....
72	Screw, #6-32 x 5/16"	2	006048-002	006048-002	006048-002
73	Screw, #10-24 x 3/4", Drilled	2	006481-003	006481-003	006481-003
74	Screw, #10-32 x 3/8"	2	006045-002	006045-002	006045-002
75	Screw, #10-32 x 7/8"	2	640835-001	640835-001	640835-001
76	Screw, Adapter to Cover:				
	S7 Only	2	.....	.....	642019-413
	S6 Only	2	.....	.....	642019-414
	All Others	1	009563-400	065075-003	.....
76A	* R Screw, Adapter to Cover, Drilled Security Function	1	009563-401	.....	.....
77	Screw, Gear Housing, 5/16-18 x 5/8"	2	.....	009813-400	009813-400
78	Screw, Cap, Packing Gland:				
	5/16-18 x 1-1/4"	2	.....	006511-002	.....
	7/16-14 x 1-1/2"	4	.....	.....	006410-002
79	Screw, Cap, Innermech:				
	Standard, 1/2-13 x 2-1/4"	2	.....	.....	640580-001
	Standard, 1/2-13 x 2"	2	646134-401	646134-401	.....
	NACE	2	645182-401	645182-401	645182-402
80	Screw, Cap, Outer Cover:				
	A1, S1 (9/16-12 x 1")	20	640975-406	.....	.....
	A3, S3, S5 (9/16-12 x 1-1/2")	20	.....	640975-407	.....
	S6 (3/4-10 x 4-1/4")	18	.....	.....	641068-405
	S7 (1-13 x 2-1/4")	20	.....	.....	642226-405
	S1C NACE/B31.3 (9/16-12 x 1-3/4")	20	640975-403	.....	.....
	R A1C NACE/B31.3 (9/16-12 x 2")	20	640975-404	.....	.....
	S3C, A3C S5C NACE/B31.3 (3/4-10 UNC-2A) ...	18	.....	645846-401	.....
81	Screw, Drive, #2 x 1/8"	8	009880-400	009880-400	009880-400
82	Screw, Set, Gear Housing	1	.....	009469-400	009469-400
83	Screw, Temperature Well Flange:				
	5/16-18 x 1"	2	060133-002	060133-002	.....
	5/16-18 x 3/4"	4	.....	.....	006409-001
84	+ Seal, Lead, and Wire	3	001627-400	001627-400	001627-400
85	+ Shaft, Calibrator Drive Gear	1	.....	515341-001	515341-001
86	+ Shaft, Jack (Upper)	1	512116-001	514634-002	514634-002
87	+ Shaft, Link Assembly	1	512069-001	515346-001	515866-001
88	Shaft	1	512068-002	.....	.....
89	Pin	2	065217-402	065217-402	065217-402
90	Stem, Adjusting Assembly	1	009838-001	009838-001	009838-001
91	Ball	2	006427-001	006427-001	006427-001
92	Plate, Base	1	003552-001	003552-001	003552-001

Item	Description	Qty.	E3-A1, A1C, S1, S1C	E3-A3, A3C, S3, S3C, S5, S5C	E3-S6, S7
93	Plate, Retainer	1	003556-001	003556-001	003556-001
94	Spring, Knob	2	003557-001	003557-001	003557-001
95	Stem, Adjusting	1	003551-001	003551-001	003551-001
96	Stud, Gear Shaft	1	.....	514370-001	514370-001
97	Tube, Oil	1	514658-001	514658-001	514658-001
98	Washer, Jackshaft:				
	1/16"	1	001125-002	.....	.....
	3/16"	1	001125-001	.....	.....
99	Washer, Idler Pinion Shaft	1	003599-001	.....	.....
100	Washer, Inner Mechanism	2	065309-002	065309-002	533103-001
101	Washer, Gear:				
	A3, S3, S5	2	.....	641985-402	.....
	S6 and S7	3	.....	.....	641985-402
	S3C and S5C NACE/B31.3	2	.....	641985-401	.....

Inner Mechanism

Item	Description	Qty.	Part Number
102	@1 Block:		
	Current Style	1	538361-001
	Previous Style	1	512725-001
103	Body	1	512071-001
104	+ Bushing, Jackshaft:		
	Standard and All Iron	2	519882-001
	LPG	2	512796-001
	Sandy Crude	2	535920-001
105	+ Coupling, Drive	1	512064-002
106	Cover, Inner (Includes Item 104):		
	Standard and All Iron	1	516455-001
	LPG	1	516455-002
	Sandy Crude	1	536101-001
	R Sandy Crude With All Iron	1	512054-004
107	Dowel, Locating Arm	1	512115-001
108	Lug, Lift	2	512002-001
109	Nut, 5/16"-18, Hex, Shakeproof	1	009552-400
110	Pin, Groove, 3/16 x 3/4"	1	007900-400
111	Pin, Groove, 5/64 x 5/8"	1	009593-400
112	Pitot Tube	1	072186-001
113	Plate	1	512714-001
114	Ring, Retaining	1	064150-001
115	@4 Rotor and Blade Assembly (Current Style):		
	Standard	1	515705-001
	All Iron	1	515705-002
	LPG	1	515705-003
	R Sandy Crude	1	553615-001
	R Sandy Crude With All Iron Trim	1	553615-002
116	Arm, Locating	1	523293-002
117	+ Bearing, Rotor:		
	Standard and All Iron	2	516108-001
	LPG	2	516108-002
	Sealed Carbon Steel	2	516108-003
	@6 R Sandy Crude (Inner Sleeve Bearing)	2	553529-001
118	+ Bearing, Thrust (Not Used on Sandy Crude):		
	Standard and All Iron	1	009589-001
	LPG	1	504819-001
119	+ Blade, Upper:		
	Standard	1	008898-001
	All Iron	1	009453-054
	LPG	1	504806-001
	R Sandy Crude	1	008898-004
	R Sandy Crude With All Iron Trim	1	009453-003
120	+ Blade, Lower:		
	Standard	1	008899-001
	All Iron	1	009453-054

Item		Description	Qty.	Part Number
		LPG	1	504807-001
	R	Sandy Crude	1	008899-004
	R	Sandy Crude With All Iron Trim	1	009454-003
121	@7	Pin, Blade Roller	2	003449-001
122		Pin, Cotter:		
	@7@8R	Sandy Crude	2	640780-001
		All Others	2	006308-001
123		Roller, Blade:		
		Standard and All Iron	2	065109-001
		LPG	2	644412-402
		Sealed Carbon Steel	2	643597-401
	@7	Sandy Crude Versions	2	553530-001
124		Clamp, Rotor Cover Roller	8	011226-001
125		Collar, Thrust Bearing	1	512047-001
126		Key	1	512722-001
127		Nut, Adjusting Screw	1	006835-002
128		Pin, Adjusting Screw Extension	1	512279-001
129		Pin, Rotor Cover Roller	4	002034-001
130		Pin, Thrust Bearing Collar	1	008166-001
131	R	Pin, Bearing (Sandy Crude Trim Only):		
	@9 R	Previous Style	2	551795-001
	R	Current Style	2	553528-001
132		Plate, Rotor Gear:		
		Sandy Crude Versions	1	551801-001
		All Others	1	512049-001
133	@5	Bearing, Sleeve (Sandy Crude Trim Only)	1	551789-001
134		Rotor, Sub-Assembly:		
		Sandy Crude Versions	1	552706-001
	R	High Temperature or LPG	1	008096-042
		All Others	1	008096-002
135	@5	Bearing, Sleeve (Sandy Crude Trim Only)	1	551793-001
136		Dowel	9	001636-001
137		Screw, 1/4-20 x 7/8"	8	006100-002
138		Screw, #10-32 x 3/8" (Sandy Crude Trim Only)	4	006045-002
139		Washer (Sandy Crude Trim Only)	4	006929-001
140		Roller, Rotor Cover:		
		LPG Trim	4	514750-001
	R	Sandy Crude	4	553531-001
		All Others	4	011227-001
141		Screw, Adjusting	1	002351-001
142		Screw, Locating Arm, 5/16-18 x 1-1/4":		
		Sandy Crude Trim	1	643668-403
		All Others	1	006511-002
143		Screw, Rotor Gear Plate, 1/4-20 x 1-1/8"	4	640992-401
144	@4	Shaft and Cam Assembly:		
		Sandy Crude Trim	1	538426-002
		All Others (Current Style)	1	538426-001
		All Others (Previous Style)	1	512285-001
145	@4	Cam:		
		Sandy Crude Trim	1	538360-003
		All Others (Current Style)	1	538360-001
		All Others (Previous Style)	1	003524-001
146		Key	1	005535-800
147		Shaft	1	512042-001
148		Spacer, Bearing (Not Used on Sandy Crude Trim)	1	512144-001
149		Spring	1	003525-002
150		Washer (Sandy Crude Trim Only)	1	643127-407
151		Screw, #10-32 x 1-3/8"	2	008312-401
152		Screw, 5/16-18 x 1-1/4"	1	006325-002
153		Screw, Cap, 1/2-13 x 1"	2	010525-400
154		Screw, Inner Cover to Body, 5/16-18 x 1"	8	006140-002
155		Screw (Nylock)	1	641044-401
156		Shaft, Jack, and Gear:		
		Sandy Crude Trim	1	512282-003
		All Others	1	512282-001

Item	Description	Qty.	Part Number
157	Washer:		
R	Sandy Crude (Standard and All Iron)	1	553623-001
	All Others	1	643249-001
158	Washer, Special	1	642495-406
159	Cover, Pitot	1	512723-001
160	Lockwasher	2	642482-406
161	Nut, #10-32	2	001723-400

Inner Mechanism General Assembly Numbers

	Standard	538476-091
	All Iron	538476-092
	LPG	538476-093
R	Sandy Crude Trim (Tungsten Carbide)	553533-091
R	Sandy Crude, All Iron Trim	553533-092

+ Recommended stock.

R Indicates change since last revision.

@1 When ordering, include temperature range, specific or API gravity, API table used, and meter gearing.

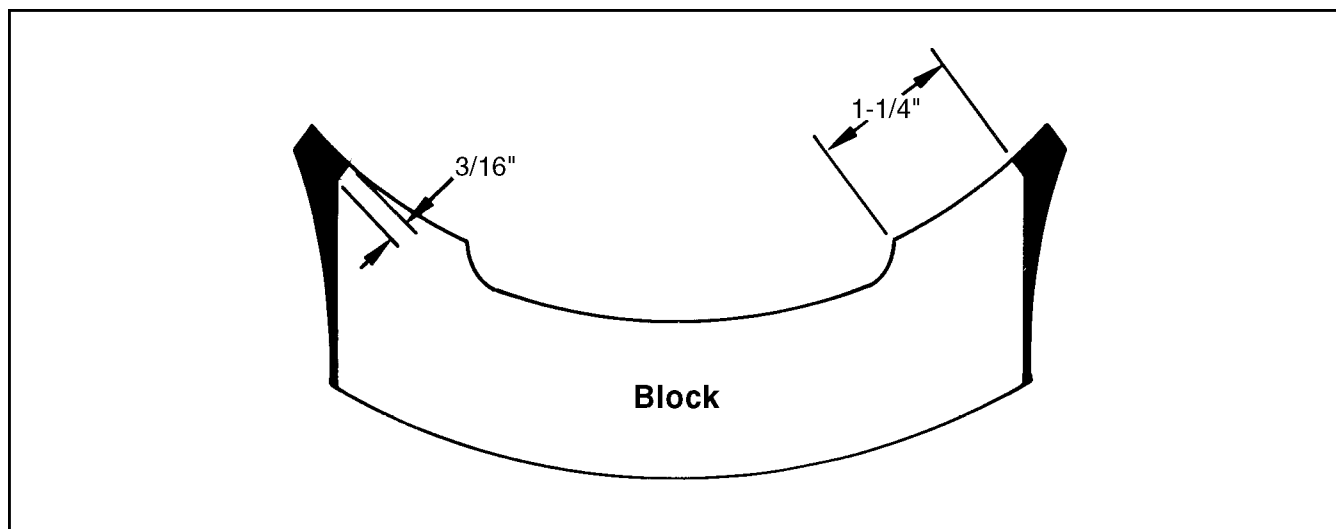
@2 Only standard gearing is listed. For additional gearing combinations, see Gear Train Bulletin AB01023.

@3 See Form No. P0605.* for component parts.

@4 In 1976, a change in design was made to the block and cam of the 3" 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 the previous style cam. The shaded area below represents the dimensions of the previous style.

@5 Contact Smith Parts Operation for proper installation instructions as bearing must be bonded in place.

R@6 If replacing old style (without counterbore) Inner Bearing Sleeve Item #131 (553528-001) must also be ordered.



R@7 Not recommended for old style Sandy Crude blades. Item #119 and #120 should also be replaced.

R@8 Use P/N: 035002-501 (wire) as required to retain roll pin.

R@9 To be used with old style Inner Bearing Sleeve (without counterbore opposite of retainer hole).

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

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.

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