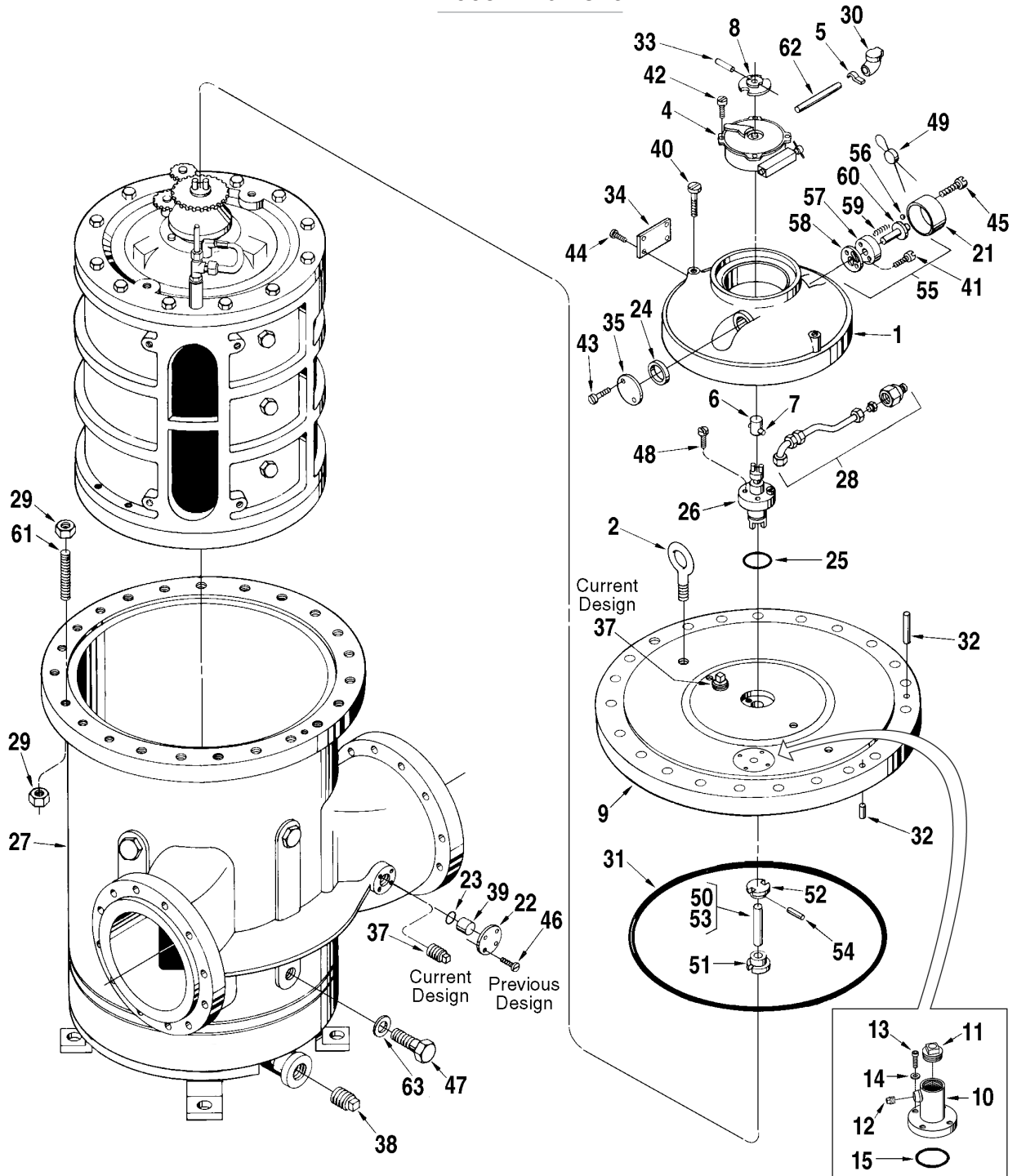
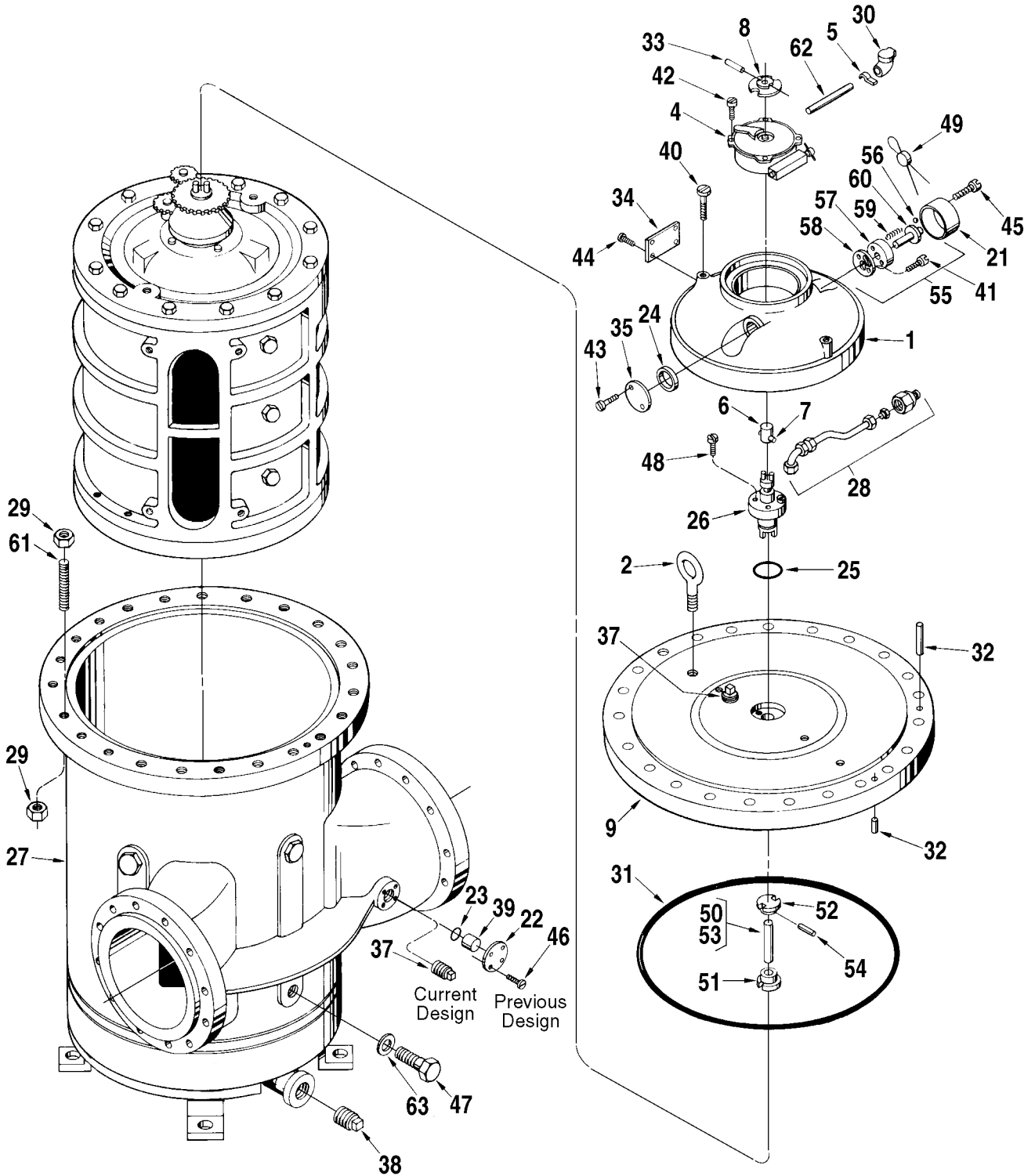


Meter, PD Series, JA10-S1, S3, S5

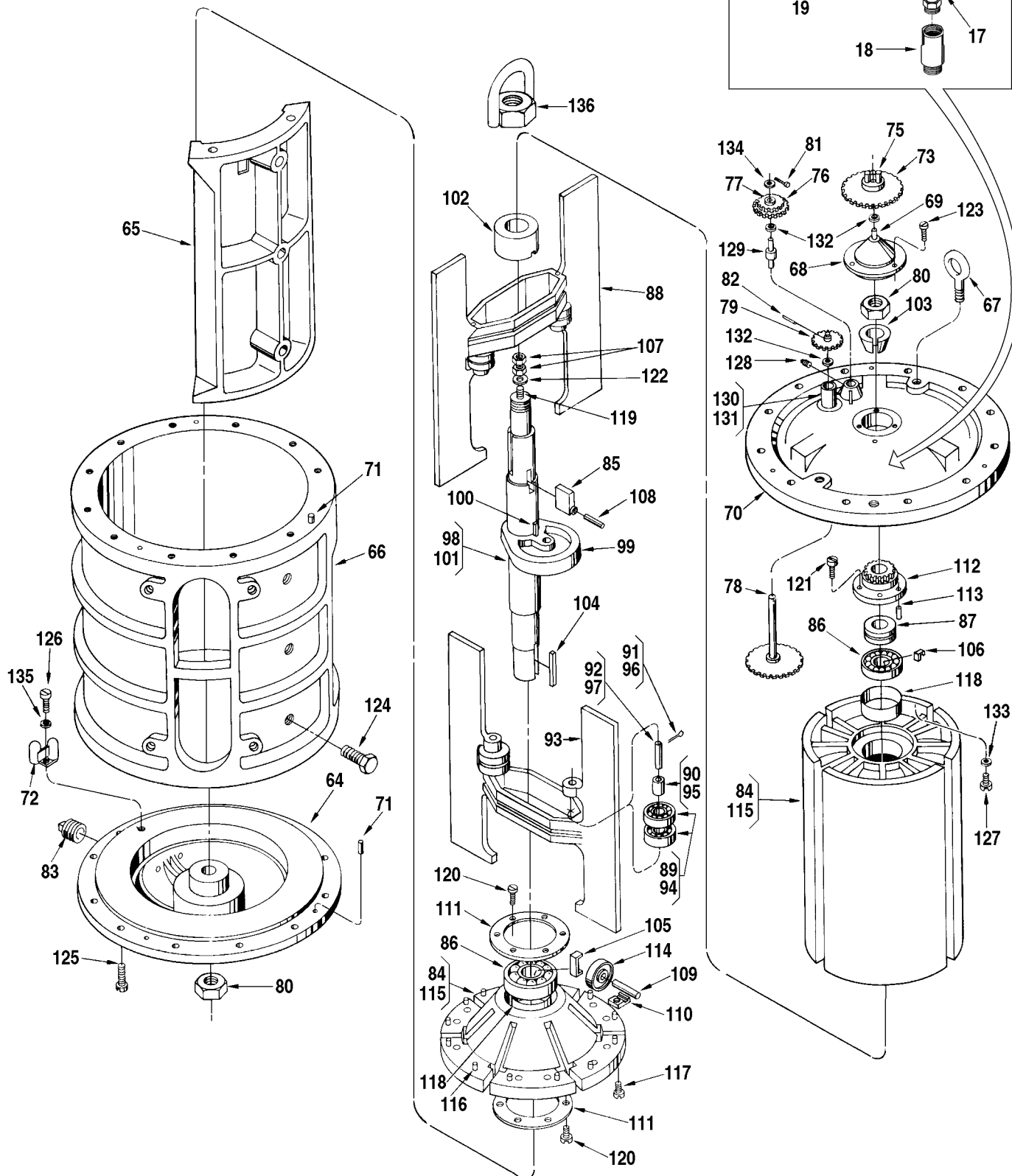
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2003 – Current

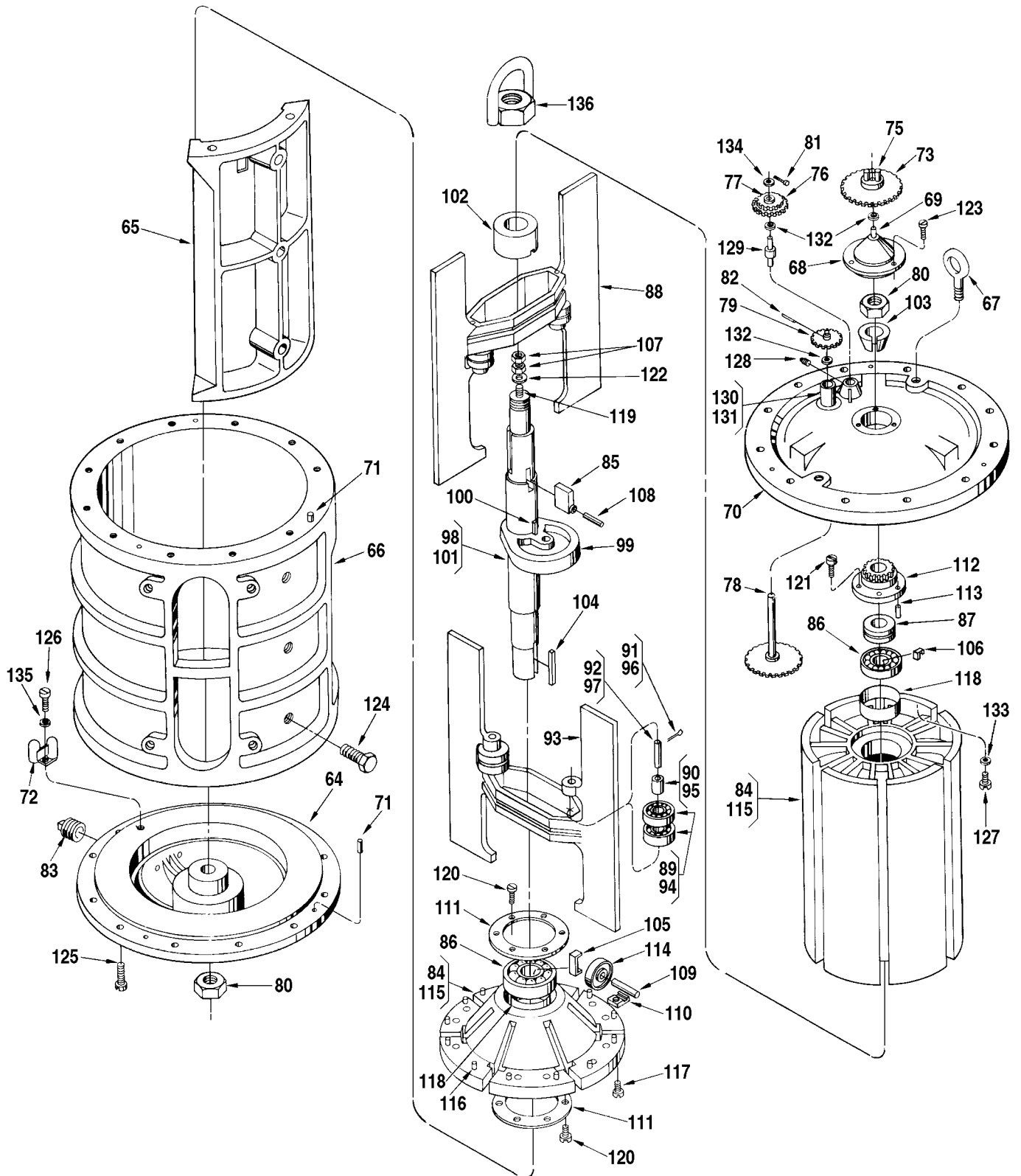




Inner Mechanism



Inner Mechanism – Pre 2003



| Item | Description | Qty. | Pre 1998 | Pre 1998 | 1998-2003 | 2003-Present |
|------|---|------|-----------------|-----------------|-----------------------------|---------------------------|
| | | | JA10-S1 | JA10-S3, S5 | w/o Vent Kit JA10-S3, S5 | w/Vent Kit JA10-S3, S5 |
| 1 | Adapter: | | | | | |
| | Standard and ATC | 1 | 518350-001 | 518350-002 | 518350-002 | 518350-002 |
| | ATG | 1 | 506123-002 | 506123-003 | 506123-003 | 506123-003 |
| 2 | Bolt, Eye..... | 2 | 643877-401 | 065433-005 | 065433-005 | 655425-408 |
| 3 | * Washer | 2 | ..... | ..... | ..... | 646638-404 |
| 4 | + Calibrator: | | | | | |
| | Manual..... | 1 | 512059-001 | 512059-001 | 512059-001 | 512059-001 |
| | With ATC (Standard)..... | 1 | 512060-001 | 512060-001 | 512060-001 | 512060-001 |
| @1 | With ATC (Special Drilled) | 1 | 516130-xxx | 516130-xxx | 516130-xxx | 516130-xxx |
| | Dummy Calibrator..... | 1 | 516105-001 | 516105-001 | 516105-001 | 516105-001 |
| 5 | Clamp, Oil Tube | 1 | 003905-001 | 003905-001 | 003905-001 | 003905-001 |
| 6 | Coupling Assembly | | | | | |
| | Standard, Used on 3/16" Shaft..... | 1 | 005969-001 | 005969-001 | 005969-001 | 005969-001 |
| | Used on Xmitters with 1/4" Shaft..... | 1 | 005969-002 | 005969-002 | 005969-002 | 005969-002 |
| 7 | Pin | 1 | 003540-001 | 003540-001 | 003540-001 | 003540-001 |
| 8 | Coupling, Drive | 1 | 072103-001 | 072103-001 | 072103-001 | 072103-001 |
| 9 | Cover | 1 | 500283-001 | 504044-001 | 554268-001 | 554268-003 |
| | Vent: | | | | | |
| 10 | Vent Housing | 1 | ..... | ..... | ..... | 554606-003 |
| 11 | Pipe Plug, 2" NPT..... | 1 | ..... | ..... | ..... | 645350-401 |
| 12 | Pipe Plug, 1/2" NPT..... | 1 | ..... | ..... | ..... | 645242-402 |
| 13 | Screw..... | 4 | ..... | ..... | ..... | 646205-402 |
| 14 | Washer | 4 | ..... | ..... | ..... | 065309-002 |
| 15 | O-Ring | 1 | ..... | ..... | ..... | 646612-401 |
| 16 | Spacer | 1 | ..... | ..... | ..... | 554059-003 |
| 17 | Fitting..... | 1 | ..... | ..... | ..... | 646200-401 |
| 18 | Adapter..... | 1 | ..... | ..... | ..... | 554336-001 |
| 19 | Elbow..... | 1 | ..... | ..... | ..... | 643386-405 |
| 20 | 3/8" Tubing | 1 | ..... | ..... | ..... | 644759-402 |
| 21 | Cover, Knob | 1 | 003553-001 | 003553-001 | 003553-001 | 003553-001 |
| 22 | Flange, Temperature Well (Previous Design) | 1 | 012026-001 | 012026-001 | ..... | ..... |
| 23 | Gasket, Temperature Well (Previous Design) | 1 | 060341-001 | 060341-001 | ..... | ..... |
| 24 | Gasket, Cover Plate..... | 1 | 003834-001 | 003834-001 | 003834-001 | 003834-001 |
| 25 | + Gasket, Packing Gland | 1 | 011337-001 | 011337-001 | 011337-001 | 011337-001 |
| 26 | +@2 Gland, Packing | | | | | |
| | Buna-N | 1 | 500351-001 | 009652-001 | 009652-001 | 009652-001 |
| | PTFE ¹ | 1 | 500351-008 | 009652-002 | 009652-002 | 009652-002 |
| 27 | Housing, Outer: | | | | | |
| | S1 | 1 | Consult Factory | ..... | ..... | ..... |
| | S3 | 1 | ..... | Consult Factory | 554265-001 | 554265-001 |
| | S5 | 1 | ..... | Consult Factory | 554279-001 | 554279-001 |
| 28 | Lubrication Assembly..... | 1 | ..... | 503554-001 | 503554-001 | 503554-001 |
| 29 | Nut, Hex Heavy, Meter Cover | 48 | 006258-400 | 006385-400 | 646057-402 | 646057-402 |
| 30 | Oiler | 1 | 006588-001 | 006588-001 | 006588-001 | 006588-001 |
| 31 | + O-Ring, Cover: | | | | | |
| | Buna-N | 1 | 511874-001 | 504001-001 | 504001-001 | 504001-001 |
| | Viton | 1 | 511874-002 | 504001-002 | 504001-002 | 504001-002 |
| 32 | Pin, Locating Dowel | 2 | 003348-001 | 003348-001 | 003348-001 | 003348-001 |
| 33 | Pin, Groove, 5/64 x 1/2" | 1 | 006053-002 | 006053-002 | 006053-002 | 006053-002 |
| 34 | Plate, Caution | 1 | 006571-001 | 006571-001 | 006571-001 | 006571-001 |
| 35 | Plate, Cover | 1 | 003440-001 | 003440-001 | 003440-001 | 003440-001 |
| 36 | * Plate, Lubrication | 1 | ..... | 517715-002 | 517715-002 | 517715-002 |

1 Polytetrafluoroethylene (PTFE).

| Item | Description | Qty. | Pre 1998 | Pre 1998 | 1998-2003 | 2003-Present |
|------|--|------|-------------|-------------|-----------------------------|---------------------------|
| | | | JA10-S1 | JA10-S3, S5 | w/o Vent Kit JA10-S3, S5 | w/Vent Kit JA10-S3, S5 |
| 37 | Plug, Pipe, 1/2" NPT: | | | | | |
| | Standard..... | 2 | 006505-002 | 006505-002 | 006505-002 | 006505-002 |
| | NACE..... | 2 | ..... | 645242-402 | 645242-402 | 645242-402 |
| 38 | Plug, Pipe, 2" NPT: | | | | | |
| | Standard..... | 1 | 006759-002 | 006759-002 | 006759-002 | 006759-002 |
| | NACE, S3 Only..... | 1 | ..... | 645242-408 | 645242-408 | 645242-408 |
| 39 | Plug, Temperature Well (Previous Design) | 1 | 012025-001 | 012025-001 | ..... | ..... |
| 40 | Screw, Adapter Cover..... | 2 | 642043-432 | 642043-432 | 642043-432 | 642043-432 |
| 41 | Screw, Base Plate, #10-32 x 7/8" | 2 | 640835-001 | 640835-001 | 640835-001 | 640835-001 |
| 42 | Screw, Calibrator Mount #6-32 x 5/16" | 2 | 006048-002 | 006048-002 | 006048-002 | 006048-002 |
| 43 | Screw, Cover Plate, #10-32 x 3/8" | 2 | 006045-002 | 006045-002 | 006045-002 | 006045-002 |
| 44 | Screw, Drive, Caution Plate | 8 | 009880-400 | 009880-400 | 009880-400 | 009880-400 |
| 45 | Screw, Knob Cover, #10-24 x 3/4" | 2 | 006481-003 | 006481-003 | 006481-003 | 006481-003 |
| 46 | Screw Cap, 5/16-18 x 3/4" (Previous Design) | 38 | 006409-002 | 006409-002 | ..... | ..... |
| 47 | R Screw, Nozzle to Inner Mech: | | | | | |
| | 5/8-11 x 3-1/2" | 4 | P8000017724 | P8000017724 | P8000017724 | P8000017724 |
| | NACE..... | 4 | ..... | P8000017724 | P8000017724 | P8000017724 |
| 48 | Screw, Packing Gland: | | | | | |
| | 5/16-18 x 1-1/4" | 3 | 006511-002 | 006511-002 | 006511-002 | 006511-002 |
| 49 | + Seal, Lead and Wire | 2 | 001627-400 | 001627-400 | 001627-400 | 001627-400 |
| 50 | Shaft Assembly, Calibrator..... | 1 | ..... | 501972-001 | 501972-001 | 501972-001 |
| 51 | Coupling, Lower Drive | 1 | ..... | 503408-001 | 503408-001 | 503408-001 |
| 52 | Coupling, Upper Drive | 1 | ..... | 501970-001 | 501970-001 | 501970-001 |
| 53 | Shaft..... | 1 | ..... | 501971-001 | 501971-001 | 501971-001 |
| 54 | Pin, Groove, 5/64 x 1/2" | 2 | ..... | 006053-002 | 006053-002 | 006053-002 |
| 55 | Stem Assembly, Adjusting..... | 1 | 009838-001 | 009838-001 | 009838-001 | 009838-001 |
| 56 | Ball..... | 2 | 006427-001 | 006427-001 | 006427-001 | 006427-001 |
| 57 | Plate, Base | 1 | 003552-001 | 003552-001 | 003552-001 | 003552-001 |
| 58 | Plate, Retainer..... | 1 | 003556-001 | 003556-001 | 003556-001 | 003556-001 |
| 59 | Spring, Knob..... | 2 | 003557-001 | 003557-001 | 003557-001 | 003557-001 |
| 60 | Stem, Adjusting..... | 1 | 003551-001 | 003551-001 | 003551-001 | 003551-001 |
| 61 | Stud, Meter Cover..... | 24 | 065357-001 | 640446-001 | 655422-401 | 655422-401 |
| 62 | Tube, Oil | 1 | 514658-001 | 514658-001 | 514658-001 | 514658-001 |
| 63 | Washer, Cinch Bolt | 4 | 514584-001 | 514584-001 | 514584-001 | 514584-001 |

| INNER MECHANISM | | | |
|-----------------|--|------|-------------|
| Item | Description | Qty. | Part Number |
| 64 | Base..... | 1 | 500186-002 |
| 65 | Block: | | |
| | Standard (Up to 1,000 SSU) | 1 | 536590-001 |
| | Hi-Viscosity 1 - For 1,000 SSU to 3,000 SSU | 1 | 536590-201 |
| | Hi-Viscosity 2 - For 3,000 SSU to 5,000 SSU | 1 | 536590-202 |
| | Hi-Viscosity 3 - For 5,000 SSU to 10,000 SSU | 1 | 536590-203 |
| 66 | Body..... | 1 | 515174-001 |
| 67 | Bolt, Eye..... | 2 | 643877-401 |
| 68 | Cap, Adjusting Screw..... | 1 | 536276-001 |
| 69 | Shaft, Drive Gear..... | 1 | 003569-001 |
| 70 | Cover: | | |
| | With Vent..... | 1 | 536277-004 |
| | Without Vent..... | 1 | 536277-001 |
| 71 | Dowel, Cover and Base | 2 | 501205-001 |
| 72 | Fitting, Pitot..... | 1 | 072186-001 |

INNER MECHANISM

| Item | Description | Qty. | Part Number |
|------|---|------|-------------|
| 73 | @3 Gear, Calibrator Drive: | | |
| | Barrels, Standard and All Iron | 1 | 500236-001 |
| | Barrels, LPG..... | 1 | 512792-001 |
| | Hectoliters, Standard and All Iron..... | 1 | 512339-001 |
| | Hectoliters, LPG | 1 | 515337-001 |
| 74 | * Bushing: | | |
| | Standard and All Iron..... | 1 | 065311-001 |
| | LPG | 1 | 512797-001 |
| 75 | Pin..... | 2 | 500418-001 |
| 76 | @3 Gear, Idler: | | |
| | Barrels, Standard and All Iron | 1 | 500705-001 |
| | Barrels, LPG..... | 1 | 512793-001 |
| | Hectoliters, Standard and All Iron..... | 1 | 505002-001 |
| | Hectoliters, LPG | 1 | 515336-001 |
| 77 | Bushing, LPG..... | 1 | 512798-001 |
| 78 | Gear, Jackshaft..... | 1 | 500225-001 |
| 79 | @3 Gear, Jackshaft Pinion: | | |
| | Barrels and Hectoliters | 1 | 500704-001 |
| 80 | Nut, Rotor Shaft | 2 | 641997-402 |
| 81 | Pin, Cotter, 1/16 x 1/2" | 1 | 001095-401 |
| 82 | Pin, Groove, 3/32 x 1/2" | 1 | 006136-002 |
| 83 | Plug, Pipe, 1/2" NPT | 1 | 006505-002 |
| 84 | Rotor and Blade Assembly: | | |
| | Standard..... | 1 | 537690-001 |
| | All Iron | 1 | 537690-002 |
| | LPG | 1 | 537690-003 |
| 85 | Bar, Adjusting..... | 1 | 536440-001 |
| 86 | + Bearing, Rotor: | | |
| | Standard and All Iron..... | 2 | 511369-002 |
| | LPG | 2 | 511369-003 |
| 87 | + Bearing, Thrust: | | |
| | Standard and All Iron..... | 1 | 643999-401 |
| | LPG | 1 | 644010-401 |
| 88 | + Blade Assembly, Upper: | | |
| | Standard and LPG (Up to 1,000 SSU)..... | 1 | 536265-001 |
| | All Iron (Up to 1,000 SSU)..... | 1 | 537517-016 |
| | Std. - Modified for 1,000 SSU to 3,000 SSU..... | 1 | 536265-101 |
| | Std. - Modified for 3,000 SSU to 5,000 SSU..... | 1 | 536265-102 |
| | Std. - Modified for 5,000 SSU to 10,000 SSU..... | 1 | 536265-103 |
| | Std. - Modified for 200°F Max. | 1 | 536265-104 |
| | Std. - Modified for 1,000 SSU to 3,000 SSU and 200°F | 1 | 536265-105 |
| | Std. - Modified for 3,000 SSU to 5,000 SSU and 200°F | 1 | 536265-106 |
| | Std. - Modified for 5,000 SSU to 10,000 SSU and 200°F | 1 | 536265-107 |
| 89 | + Bearing, Blade..... | 4 | 644412-405 |
| 90 | Bushing, Blade | 2 | 512353-001 |
| 91 | Pin, Cotter, 3/32 x 1-1/4" | 2 | 006373-001 |
| 92 | Shaft, Blade Bearing..... | 2 | 551361-001 |

INNER MECHANISM

| Item | Description | Qty. | Part Number |
|------|---|------|-------------|
| 93 | + Blade Assembly, Lower: | | |
| | Standard and LPG (Up to 1,000 SSU)..... | 1 | 536266-001 |
| | All Iron (Up to 1,000 SSU)..... | 1 | 537517-016 |
| | Std. - Modified for 1,000 SSU to 3,000 SSU..... | 1 | 536266-101 |
| | Std. - Modified for 3,000 SSU to 5,000 SSU..... | 1 | 536266-102 |
| | Std. - Modified for 5,000 SSU to 10,000 SSU..... | 1 | 536266-103 |
| | Std. - Modified for 200°F Max. | 1 | 536266-104 |
| | Std. - Modified for 1,000 SSU to 3,000 SSU and 200°F..... | 1 | 536266-105 |
| | Std. - Modified for 3,000 SSU to 5,000 SSU and 200°F..... | 1 | 536266-106 |
| | Std. - Modified for 5,000 SSU to 10,000 SSU and 200°F..... | 1 | 536266-107 |
| 94 | + Bearing, Blade..... | 4 | 644412-405 |
| 95 | Bushing, Blade..... | 2 | 512353-001 |
| 96 | Pin, Cotter, 3/32 x 1-1/4"..... | 2 | 006373-001 |
| 97 | Shaft, Blade Bearing..... | 2 | 551361-001 |
| 98 | + Cam and Shaft Assembly..... | 1 | 536254-002 |
| 99 | Cam..... | 1 | 537215-001 |
| 100 | Key..... | 1 | 536255-001 |
| 101 | Shaft..... | 1 | 536253-001 |
| 102 | Collar..... | 1 | 536269-002 |
| 103 | Cone, Shaft..... | 1 | 536273-001 |
| 104 | Key..... | 1 | 500192-001 |
| 105 | Lock, Lower Rotor Bearing..... | 1 | 511374-001 |
| 106 | Lock, Upper Rotor Bearing..... | 1 | 537068-001 |
| 107 | Nut, Adjusting Screw..... | 2 | 640671-001 |
| 108 | Pin, Roll, 5/32 x 1"..... | 1 | 010527-400 |
| 109 | Pin, Rotor Cover Roller..... | 4 | 500197-001 |
| 110 | Plate, Rotor Cover Roller..... | 8 | 500414-001 |
| 111 | Plate, Lock..... | 2 | 511372-001 |
| 112 | Plate, Rotor Gear..... | 1 | 536268-002 |
| 113 | Pin, Dowel..... | 1 | 000004-001 |
| 114 | + Roller, Rotor Cover..... | 4 | 500196-001 |
| 115 | Rotor, Sub Assembly: | | |
| | Standard (Up to 1,000 SSU)..... | 1 | 511364-001 |
| | Std. - Modified for 1,000 SSU to 3,000 SSU..... | 1 | 511364-101 |
| | Std. - Modified for 3,000 SSU to 5,000 SSU..... | 1 | 511364-102 |
| | Std. - Modified for 5,000 SSU to 10,000 SSU..... | 1 | 511364-103 |
| | Std. - Modified for 1,000 SSU to 3,000 SSU and 200°F..... | 1 | 511364-105 |
| | Std. - Modified for 3,000 SSU to 5,000 SSU and 200°F..... | 1 | 511364-106 |
| | Std. - Modified for 5,000 SSU to 10,000 SSU and 200°F..... | 1 | 511364-107 |
| 116 | Dowel..... | 9 | 500415-001 |
| 117 | Screw, Cap, 3/8"-16 UNC-2A, Drilled..... | 8 | 642048-419 |
| 118 | @4 Sleeve, Rotor: | | |
| | Current Style (Not sold as a separate component - included with item 115) | 2 | ----- |
| | Previous Style..... | 2 | 511375-001 |
| 119 | Screw, Adjusting..... | 1 | 536274-001 |
| 120 | Screw, Cap, 1/4-20 x 3/4"..... | 12 | 005061-400 |
| 121 | Screw, Cap, 3/8-16 x 1-1/4"..... | 6 | 640367-001 |
| 122 | Washer, Flat..... | 1 | 646636-401 |
| 123 | Screw, Cap, 5/16-18 x 1-1/4"..... | 4 | 006151-002 |
| 124 | Screw, Cap, Body and Block, 1/2-13 x 2"..... | 3 | 646134-401 |
| 125 | Screw, 5/8-11 x 1-3/4"..... | 24 | 006156-002 |
| 126 | Screw, #10-32 x 1/4"..... | 2 | 006110-002 |
| 127 | Screw, 3/8-16 x 1/2"..... | 1 | 065159-002 |
| 128 | Screw, Set, 1/4-20 x 1/4"..... | 1 | 006538-001 |
| 129 | Shaft, Idler..... | 1 | 500233-001 |

| INNER MECHANISM | | | |
|-----------------|-----------------------------------|------|-------------|
| Item | Description | Qty. | Part Number |
| 130 | Sleeve, Assembly: | | |
| | Standard and All Iron..... | 1 | 500412-001 |
| | LPG | 1 | 512791-001 |
| 131 | Bushing: | | |
| | Standard and All Iron..... | 2 | 519882-002 |
| | LPG | 2 | 512796-001 |
| 132 | Washer..... | 3 | 014012-200 |
| 133 | Washer..... | 2 | 641838-401 |
| 134 | Washer: | | |
| | Standard and All Iron..... | 1 | 009615-400 |
| | LPG | 1 | 060554-001 |
| 135 | Washer, Lock | 2 | 642482-406 |
| 136 | Lug, Rotor Assembly Lifting | 1 | 552125-001 |

Inner Mechanism General Assembly Numbers

| | |
|----------------------------------|------------|
| Barrel Geared, Standard | 536280-091 |
| Barrel Geared, All Iron Trim | 536280-092 |
| Barrel Geared, LPG Trim | 536280-093 |
| Hectoliter Geared, Standard | 536280-291 |
| Hectoliter Geared, All Iron Trim | 536280-292 |
| Hectoliter Geared, LPG Trim | 536280-293 |

- * Not illustrated.
- + Recommended stock.
- R Indicates change since last revision.
- @1 Note 1: When ordering, include product temperature range, specific or API gravity, API table used, and meter and gearing calibrator is to be used in conjunction with.
- @2 Note 2: See Form No. [PO01042](#) for component parts.
- @3 Note 3: Only standard gearing is listed. For additional gearing combinations, see Gear Train Bulletin [AB01023](#).
- @4 Note 4: Apply a small amount of Loctite (Part No. 645001-401) to sleeve before installing in rotor.

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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