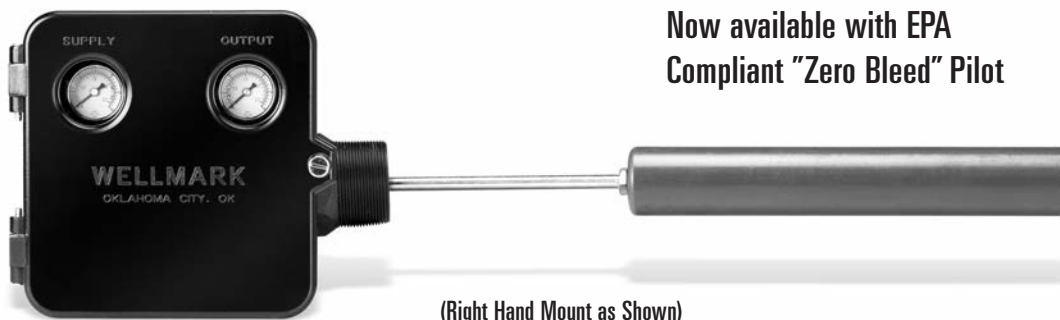


## 2001NB/2001E Pneumatic & Electric Liquid Level Control, High Pressure No-Bleed

### Application

The Series 2001NB liquid level control, designed with a Die Cast Aluminum control box and cover, provides a rugged and versatile unit that is ideal for use on compressor scrubbers, separators and any production or process units that require liquid level control. Its proportional band and spring balanced displacement element allows for a wide range of adjustability for a variety of liquid level control requirements.



(Right Hand Mount as Shown)

Now available with EPA  
Compliant "Zero Bleed" Pilot

### Features

- Non-Bleeding Pilot Designs
- Sealed and Vented Case
- Snap, Throttle, or Snap-Acting Zero Bleed Pilot
- Field Reversible: Left Hand or Right Hand, Direct or Reverse Acting
- Adjustable Level and Span
- Stainless Steel Dual Bearings: Standard for improved repeatability and sensitivity.
- Horizontal or Vertical Displacer
- Interface Control
- Carbon Steel Body
- All 316 Stainless Steel Wetted Internal Parts
- NACE Process, Standard
- Supply Gas Filter, Standard

### WARNING

If supply gas is flammable or noxious, this product **MUST** be located in a well ventilated non-hazardous area or sealed and vented to a non-hazardous area.

### Specifications

#### Connections

Process	2" NPT Std. (other available)
Pilot	1/4" NPT Female
Case Exhaust	1/8" NPT Female

#### Output

Throttle (Proportional)	3-15 psig or 6-30 psig
Snap	0 to Full Supply

#### General

Repeatability	1.0% of Full Scale
Dead Band	5.0% of Input Scale
Linearity	2.0% of Full Scale
Ambient Temp Effect	1.0% @ -40° F 3.0% @ +180° F
Specific Gravity	.4 Minimum
Temp. Limits	-20° F to +200° F (Displacer Limiting Factor)

Pressure Rating ..... 6000 psi

Pilot Operating Pressure ..... Normal: 20-35 psi

Overpressure protection: Gauges are the limiting factor.

Maximum Pressure Without Gauges ..... 100 psig

#### Available Options:

- Outside Cages
- Domes For Top Mount
- Marine Package

## 2001NB/2001E Pneumatic & Electric Liquid Level Control, High Pressure No-Bleed

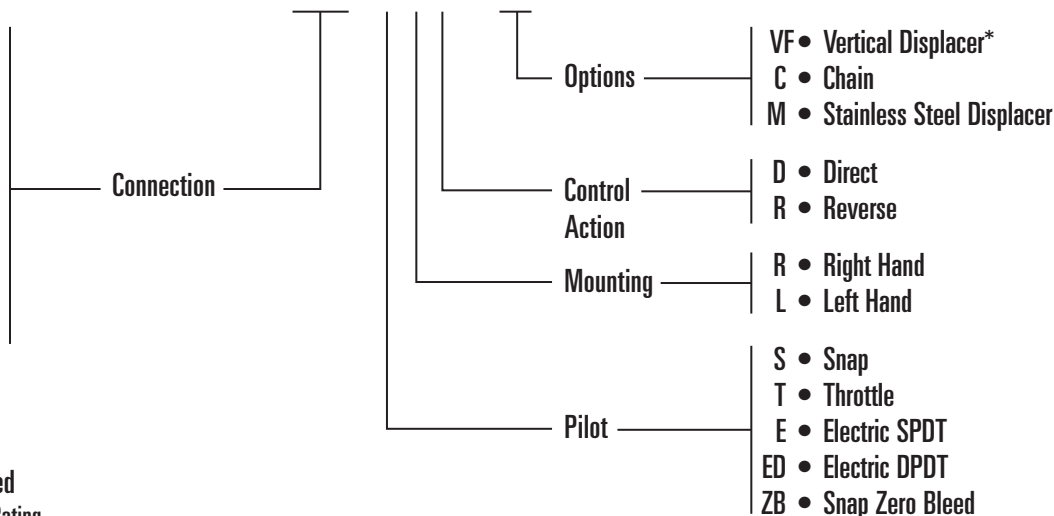
### Determining the Model Number

Example given: Standard Model 2AS-S R D—Series 2001NB, 2" Screwed Body, Snap Pilot, Right Hand Mounting, with Direct Acting Control.

### MODEL 2AS - S R D-A-VF

- 15AS • 1 1/2" Screwed
- 2AS • 2" Screwed
- 2AF • 2" Flanged
- 3AF • 3" Flanged
- 4AF • 4" Flanged
- 4AG • 4" Grooved
- 4AU • 4" Union
- 4AUS • 4" Union w/S.G.

Note: Consult factory for other options.

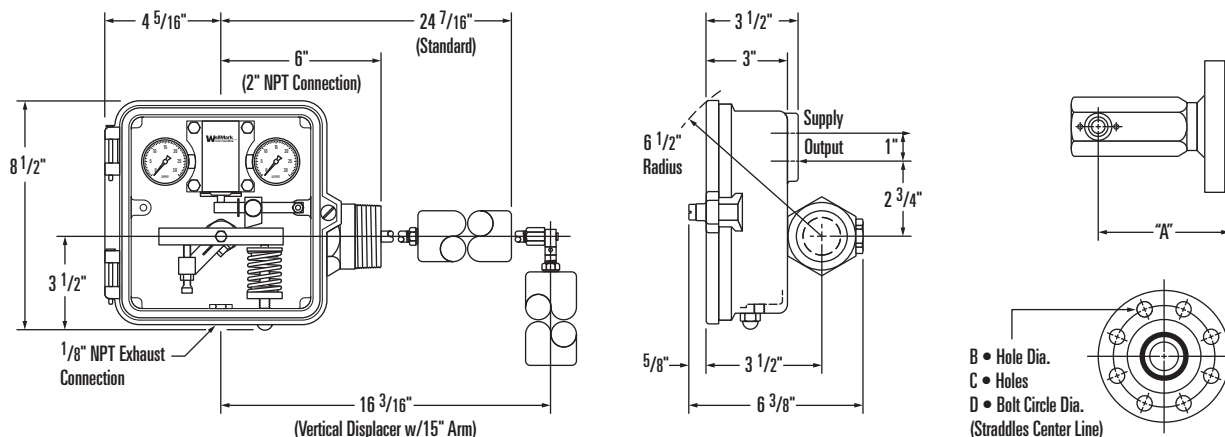


### Additional Information Required

- Body Connection Type: Size and Rating
- Fluid Media
- Fluid Temperatures: Maximum and Minimum
- Displacer Size and Material: Standard is 17/8" X 12" PVC; 17/8" X 12" Acrylic or Stainless Steel optional.

\*Displacer Arm Length: Arm length is figured from center line of control box. 15" Standard on vertical displacer, 12 1/2" Standard on horizontal displacer. (Other lengths available upon application)

### Dimensional Data

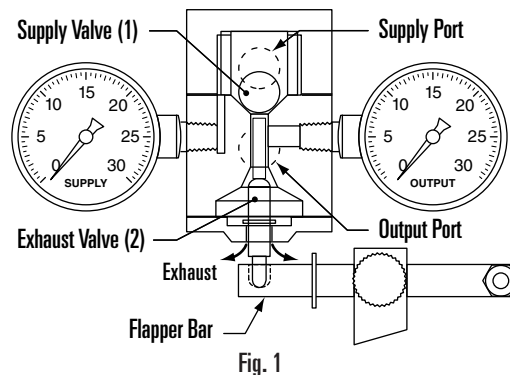


### 2" Flange Connections

ANSI	A	B	C	D
150	6 1/2	3/4	4	4 3/4
300	6 1/2	3/4	8	5
400-600	6 1/2	3/4	8	5
900-1500	7 1/4	1	8	6 1/2

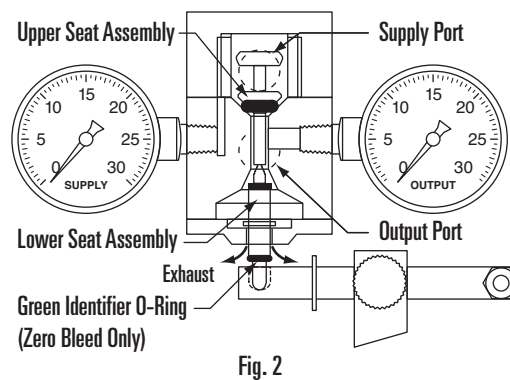
### Snap-Acting Pilot • Standard Metal-to-Metal Seats On/Off Flow Action

The Snap-Acting Pilot is comprised of two inner valves. Valve (1) admits system supply gas to output. Valve (2) controls system exhaust from output. Valve (1), as shown in the closed position (Fig. 1), is held closed by force exerted from supply gas. When upward flapper bar force transferred to Valve (2) is sufficient enough to overcome supply force, the ball snaps upward, allowing supply pressure to output port, which operates the diaphragm motor valve (not shown nor included with the control). The spherical end of valve (2) closes the exhaust port the instant the ball snaps upward and remains seated against supply pressure until force on the valve diminishes. As force is removed from valve (2), causing it to unseat, a simultaneous action occurs, causing valve (1) to seat instantly, closing the supply port to output and opening output to exhaust, allowing the diaphragm motor valve to reverse it's action.



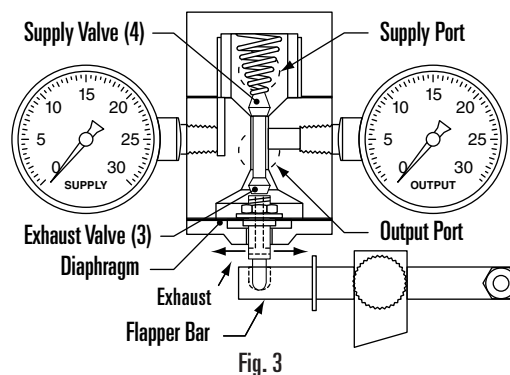
### Snap-Acting Zero Bleed Pilot

The new WellMark Zero Bleed Pilot (Fig. 2) is now an option for the Snap 2001NB liquid level controller. The new ZB Pilot uses 2 soft seats instead of 2 metal seats; this ensures positive shut-off when the controller is not venting the control signal. The ZB Pilot soft seats have been designed so that it functions identical to the standard pilot in every way except that when either the upper or lower seats are closed there is zero emission from the pilot. The ZB Pilot can be retrofitted into any existing 2001NB snap level control and other manufacturers snap level controllers as well. To retrofit an existing controller only the pilot needs to be replaced, little or no adjustment is typically needed. This new Zero Bleed Pilot will meet or exceed all U.S. emissions standards for 2013.

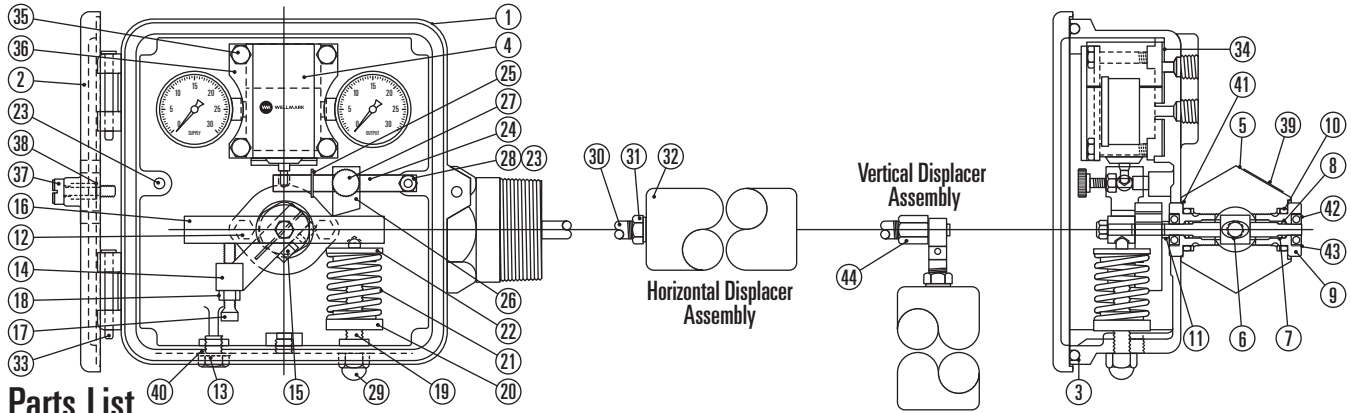


### Throttle Pilot • No-Bleed Modulating Flow Action

The Throttle Pilot utilizes a diaphragm, which creates a forced balance pilot (Fig 3). Output pressure acts upon the diaphragm causing it to push back at the same force being applied to the lower seat. More force on the seat produces a proportionate increase in pilot pressure. When the flapper bar of the control exerts upward force on the lower valve seat (3), it forces the lower seat closed against valve body and opens the supply valve (4). (Supply pressure enters the system, increasing until the control and diaphragm motor valve pressure equals the flapper bar force and produces a forced system balance.) The control will stay in this position until a decrease in the tank level reduces the force allowing exhaust, or an increase in the level produces an action as described. System supply gas does not flow while the pilot is in balance.



## 2001NB Pneumatic Liquid Level Control, High Pressure No-Bleed



### Parts List

Item	Description	Qty.	Part No.
1	CONTROL BOX, DIE CAST ALUMINUM	1	05012-4841
2	COVER, DIE CAST ALUMINUM	1	05012-4834
*3	BOX SEAL, NEOPRENE	1	06000-5097
*4	SNAP PILOT ASSY., ALUMINUM & 316 S.S.	1	06500-5304
	THROTTLE PILOT ASSY., ALUMINUM & 316 S.S.	1	06500-5387
	ZERO BLEED PILOT ASSY., ALUMINUM & 316 S.S.	1	06500-5308
5	BODY, ASTM A-108GR. 1018	1	05011-4560
6	PIVOT SHAFT, ASTM A-276 TY.316	1	05011-4511
*7	O-RING, VITON®	2	05000-0769
*8	BACK UP RING, TEFLON®	2	06000-1179
9	SHAFT RETAINER, ASTM A-276 TY.316	2	05012-9389
*10	O-RING, VITON®	2	05000-1155
11	SPACER, ASTM A-276 TY. 316	1	05011-4495
12	CAP SCREW, 18-8 S.S.	2	05000-5578
13	CAP SCREW, 18-8 S.S.	1	05000-5453
14	ADJUSTING BAR, ALUMINUM	1	05011-4438
15	CAP SCREW, 18-8 S.S.	2	05000-2526
16	TORQUE BAR, ALUMINUM	1	05011-4545
17	ADJ. SCREW, ASTM A-276 TY.316	1	05011-4537
18	JAM NUT, 18-8 S.S.	1	05000-2559
19	STUD, 18-8 S.S.	1	05011-4552
20	LOWER SPRING GUIDE, ALUMINUM	1	05011-4529
21	SPRING, ASTM A-313, STANDARD (YELLOW)	1	06000-4157
	SPRING, ASTM A-313, LIGHT (GREEN)	1	06000-3985
	SPRING, ASTM A-313, HEAVY (RED)	1	06000-9008
22	UPPER SPRING GUIDE, ALUMINUM	1	05011-4479
23	STUD, FLAPPER BAR, ASTM A-276 TY.316	2	05012-9371

Item	Description	Qty.	Part No.
24	FLAPPER BAR, ASTM A-276 TY.316	1	05011-4404
25	TRU-ARC RING, PH 15-7 MO	1	06000-1385
26	FULCRUM, ALUMINUM	1	05011-4412
27	THUMB SCREW, S.S./PLASTIC	1	06500-5429
28	NY-LOC NUT, STAINLESS STEEL	2	05000-2567
29	ACORN NUT, STAINLESS STEEL	1	05000-2575
30	DISPLACER ARM, STD., ASTM A-276 TY.316	1	06000-1534
	DISPLACER ARM, VF, ASTM A-276 TY.316	1	05011-9296
31	DISPLACER BUSHING, ASTM A-276 TY.316	1	06000-5105
32	DISPLACER, PVC	1	05012-3561
33	HINGE PIN, STEEL PLATED	2	06000-7537
*34	GASKET, NEOPRENE	1	06000-4819
35	CAP SCREW, 18-8 S.S.	4	05000-5313
36	PILOT CLAMP, 304 S.S.	1	05012-6325
37	PANEL SCREW, STAINLESS STEEL	1	06000-1153
38	RETAINER, STAINLESS STEEL	1	06000-2672
39	SERIAL TAG, ALUMINUM	1	06000-1922
*40	THREAD SEAL, STEEL/BUNA N	1	06000-0395
*41	GASKET, VITON®	1	10016
42	BEARING, STAINLESS STEEL	2	06000-7552
43	TOLERANCE RING, STAINLESS STEEL	2	06000-7560
44	ADAPTER V.D. ASSY., ASTM A-276 TY.316	1	06500-4350
45	COVER GLASS, LEXAN (NOT SHOWN)	2	10916
46	COVER GLASS PLATE, S.S. (NOT SHOWN)	2	10915
47	COVER GLASS GASKET, NEOPRENE (NOT SHOWN)	2	10917
48	SCREW, PLATED STEEL (NOT SHOWN)	8	001501P

\*Recommended Spare Part

### Repair Kits

BAR FLAPPER KIT	1	03500-1882
NUT	1	05000-2567
RETAINER RING	1	06000-1385
FLAPPER BAR	1	05011-4404
CLAMP KIT	1	03500-1890
CAP SCREW	4	05000-5313
CLAMP	1	05012-6325
SHAFT RETAINER KIT	1	06500-5601
SHAFT RETAINER	1	05012-9389
BEARING	1	06000-7552
TOLERANCE RING	1	06000-7560
STD. FULCRUM KIT	1	03500-1898
FULCRUM	1	05011-4412
THUMB SCREW	1	06500-5429
BAR ADJUSTING LEVEL KIT	1	03500-1906
BAR ADJUSTING LEVEL	1	05011-4438
JAM NUT	1	05000-2559
CAP SCREW	2	05000-2526
ADJUSTING SCREW	1	05011-4537

TORQUE BAR KIT	1	03500-1914
STD. TORQUE BAR	1	05011-4545
LOCK NUT	1	05000-2567
SENSITIVITY SCALE	1	10739
SNAP PILOT KIT	1	03500-1114
FILTER	1	06000-1526
GASKET	1	06000-1484
PIN W/RETAINER RING	1	05011-4503
BALL	1	06000-1393
THROTTLE PILOT KIT	1	03500-1163
FILTER	1	06000-1526
GASKET	1	06000-1484
DIAPHRAGM	1	06000-1559
SEAT	1	05011-4594
FLAT WASHER-NYLON	1	05011-4602
JAM NUT	1	05000-2559
PEANUT	1	05011-4586
SPRING	1	06000-1567

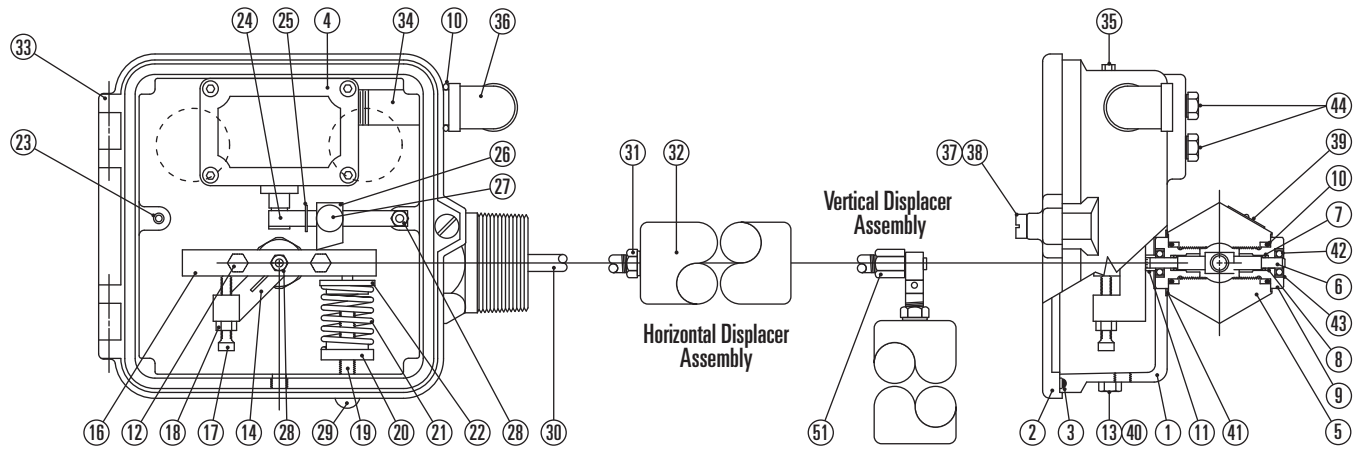
ZERO BLEED KIT	1	06500-1118
FILTER	1	06000-1526
GASKET	1	06000-1484
UPPER O-RING	1	05000-0769
LOWER SEAT	1	21537

### Model and Part Numbers

Model No.	Displacer Orientation	Part No.
2AS-SLD-A	HORIZONTAL-STANDARD	03051-0850
2AS-SRD-A	HORIZONTAL-STANDARD	03051-0800
2AS-TLD	HORIZONTAL-STANDARD	03051-0892
2AS-TRD	HORIZONTAL-STANDARD	03051-0918
2AS-SLD-VF	VERTICAL DISPLACER	03051-0868
2AS-SRD-VF	VERTICAL DISPLACER	03051-0876
2AS-TLD-VF	VERTICAL DISPLACER	03051-0900
2AS-TRD-VF	VERTICAL DISPLACER	03051-0926

Charts indicate the Kit and Part Descriptions, the Quantities required and the Part Number for ordering.

## 2001E Electric Liquid Level Control, High Pressure No-Bleed



### Parts List

Item	Description	Qty.	Part No.
1	CONTROL BOX, DIE CAST ALUMINUM	1	05012-4843
2	COVER, DIE CAST ALUMINUM	1	05012-4834
*3	BOX SEAL, NEOPRENE	1	06000-5097
4	SWITCH	1	10006
5	BODY, ASTM A-108GR. 1018	1	05011-4560
6	PIVOT SHAFT, ASTM A-276 TY.316	1	05011-4511
*7	O-RING, VITON®	2	05000-0769
*8	BACK UP RING, TEFLON®	2	11087
9	SHAFT RETAINER, ASTM A-276 TY.316	2	05012-9389
*10	O-RING, VITON®	3	05000-1155
11	SPACER, ASTM A-276 TY. 316	1	05011-4495
12	CAP SCREW, 18-8 S.S.	2	05000-5578
13	CAP SCREW, 18-8 S.S.	1	05000-5453
14	ADJUSTING BAR, ALUMINUM	1	05011-4438
15	CAP SCREW, 18-8 S.S. (NOT SHOWN)	2	05000-2526
16	TORQUE BAR, ALUMINUM	1	05011-4545
17	ADJ. SCREW, ASTM A-276 TY.316	1	05011-4537
18	JAM NUT, 18-8 S.S.	1	05000-2559
19	STUD, 18-8 S.S.	1	05011-4552
20	LOWER SPRING GUIDE, ALUMINUM	1	05011-4529
21	SPRING, ASTM A-313, STANDARD (YELLOW)	1	06000-4157
	SPRING, ASTM A-313, LIGHT (GREEN)	1	06000-3985
	SPRING, ASTM A-313, HEAVY (RED)	1	06000-9008
22	UPPER SPRING GUIDE, ALUMINUM	1	05011-4479
23	STUD, FLAPPER BAR, ASTM A-276 TY.316	2	05012-9371
24	FLAPPER BAR, ASTM A-276 TY.316	1	06500-7233

Item	Description	Qty.	Part No.
25	TRU-ARC RING, PH 15-7 MO	1	06000-1385
26	FULCRUM, ALUMINUM	1	05011-4412
27	THUMB SCREW, S.S./PLASTIC	1	06500-5429
28	NY-LOC NUT, STAINLESS STEEL	2	05000-2567
29	ACORN NUT, STAINLESS STEEL	1	05000-2575
30	FLOAT ARM, ASTM A-276 TY.316	1	06000-1534
31	FLOAT BUSHING, ASTM A-276 TY.316	1	06000-5105
32	DISPLACER, PVC	1	05012-3561
33	HINGE PIN, STEEL PLATED	2	06000-7537
*34	PIPE NIPPLE	1	06000-8386
35	CAP SCREW, 18-8 S.S.	2	05000-1586
36	ELBOW	1	06000-8394
37	PANEL SCREW, STAINLESS STEEL	1	06000-1153
38	PANEL SCREW RETAINER, STAINLESS STEEL	1	06000-2672
39	SERIAL TAG, ALUMINUM	1	06000-1922
*40	THREAD SEAL, STEEL/BUNA N	1	06000-0395
*41	GASKET	1	10016
42	BEARING, STAINLESS STEEL	2	06000-7552
43	TOLERANCE RING, STAINLESS STEEL	2	06000-7560
44	PLUG	2	10149
45	COVER GLASS, LEXAN (NOT SHOWN)	2	10916
46	COVER GLASS PLATE, S.S. (NOT SHOWN)	2	10915
47	COVER GLASS GASKET, NEOPRENE (NOT SHOWN)	2	10917
48	COVER SCREW, PLATED STEEL (NOT SHOWN)	8	001501-P
51	ADAPTER V.D. ASSY., ASTM A-276 TY.316	1	06500-4350

\*Recommended Spare Part

### Repair Kits

BAR FLAPPER KIT	1	03500-1882
NUT	1	05000-2567
RETAINER RING	1	06000-1385
FLAPPER BAR	1	05011-4404
CLAMP KIT	1	03500-1890
CAP SCREW	4	05000-5313
CLAMP	1	05012-6325
SHAFT RETAINER KIT	1	06500-5601
SHAFT RETAINER	1	05012-9389
BEARING	1	06000-7552
TOLERANCE RING	1	06000-7560

TORQUE BAR KIT	1	03500-1914
STD. TORQUE BAR	1	05011-4545
LOCK NUT	1	05000-2567
SENSITIVITY SCALE	1	10739
STD. FULCRUM KIT	1	03500-1898
FULCRUM	1	05011-4412
THUMB SCREW	1	06500-5429
BAR ADJUSTING LEVEL KIT	1	03500-1906
BAR ADJUSTING LEVEL	1	05011-4438
JAM NUT	1	05000-2559
CAP SCREW	2	05000-2526
ADJUSTING SCREW	1	05011-4537

Charts indicate the Kit and Part Descriptions, the Quantities required and the Part Number for ordering.

### Switch Specifications

Electric Switch ..... Explosion Proof  
 Electric Switch, Single Pole / Double Throw, UL and CSA listed:  
 "L96" 15 amps, 125, 250, or 480 VAC; 1/8 HP-125 VAC,  
 1/4 HP-250 VAC, 1/2 amp-125 VDC, 1/4 amp-250 VDC

### Model and Part Number

Model No.	Displacer Orientation	Part No.
2AS-ERD	HORIZONTAL-STANDARD	03051-9000