

P-250

Rev. F

P.D. Oscillating Piston Flowmeters:

2" Type 4-MT and MTSC Petroleum

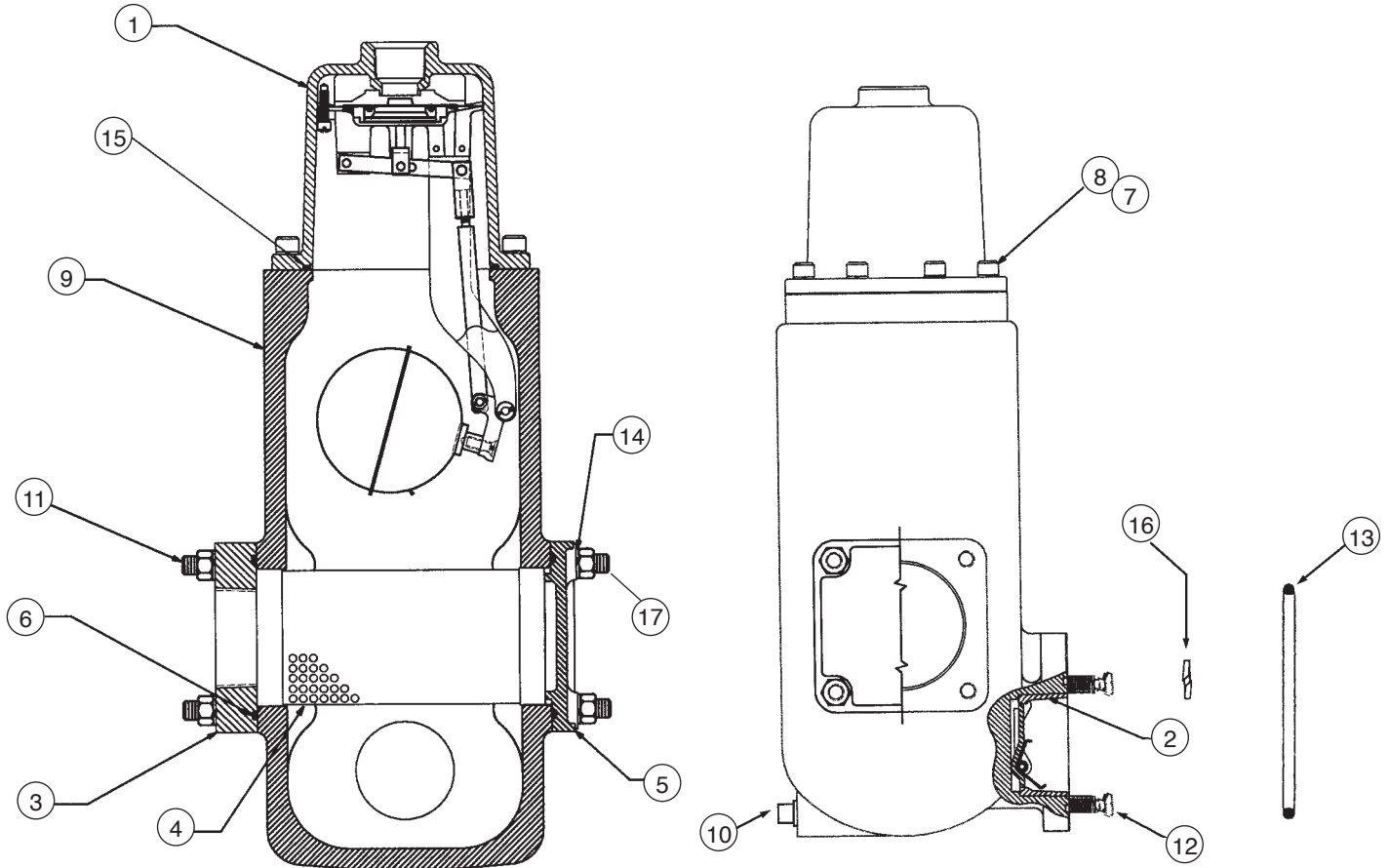
2" Type 4D-MT LP Gas

# Itron

## Parts List for **neptune** Petroleum and LPG Truck Meters



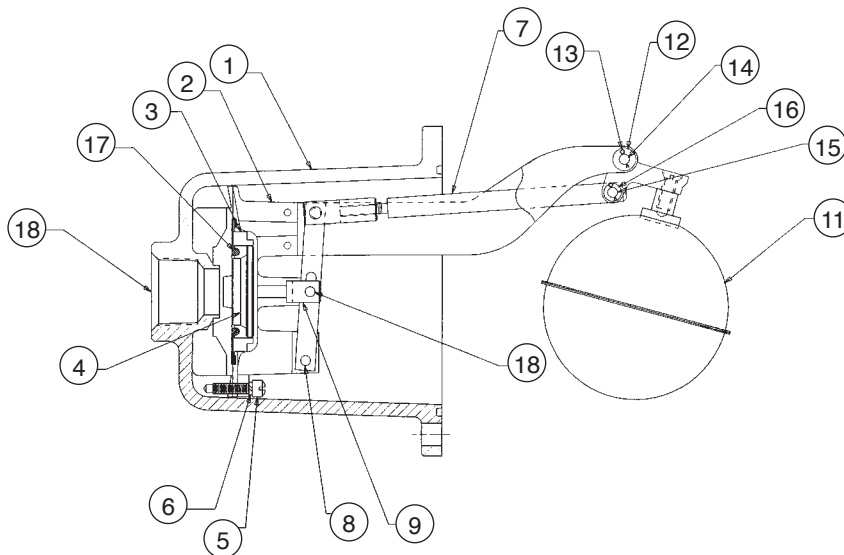
# Type 4-MT Air Release



**NOTE:**

1. TORQUE PER E.S. #10100
2. APPLY ANTI-SEIZE THREAD COMPOUND TO ITEM #8

# Type 4-MT Air Release Cover



## Part Number 40085-701

Index	Description	Part No.
1	Cover Complete 2" Type 4 Extended, Viton	400087-001
2	Valve Complete Shutoff 2" Type 4 A/R	083459-000
3	Flange, 2" Companion	086814-001
4	Strainer Complete 40 Mesh 2" Type 4-MT	101405-002
5	Cover, 2" Strainer	600103-000
6	O-Ring 1/8 Dia. x 3-3/4 ID BUNA	100139-018
7	Washer, 3/8 Lock	100440-001
8	Screw, 3/8-16 x 1 Soc. Head Cap	008325-014
9	Assembly, 2" Air Release	400086-701
10	Pipe Plug 3/8" Sq. Head	100075-010
11	Bolt, 7/16-14 x 1-3/4 Hex	600393-001
12	Bolt, 5/8-11x 1-3/4	100085-048
13	O-Ring 1/8 Dia. x 3-3/8 ID BUNA	100139-013
14	Washer, Lock 7/16 Heavy	41012-002
15	O-Ring, 1/8 Dia. x 4-1/2 ID BUNA	100139-022
16	Washer, 5/8 Lock	041395-000
17	Bolt, 7/16 - 14 x 1-3/8 HEX	000795-003

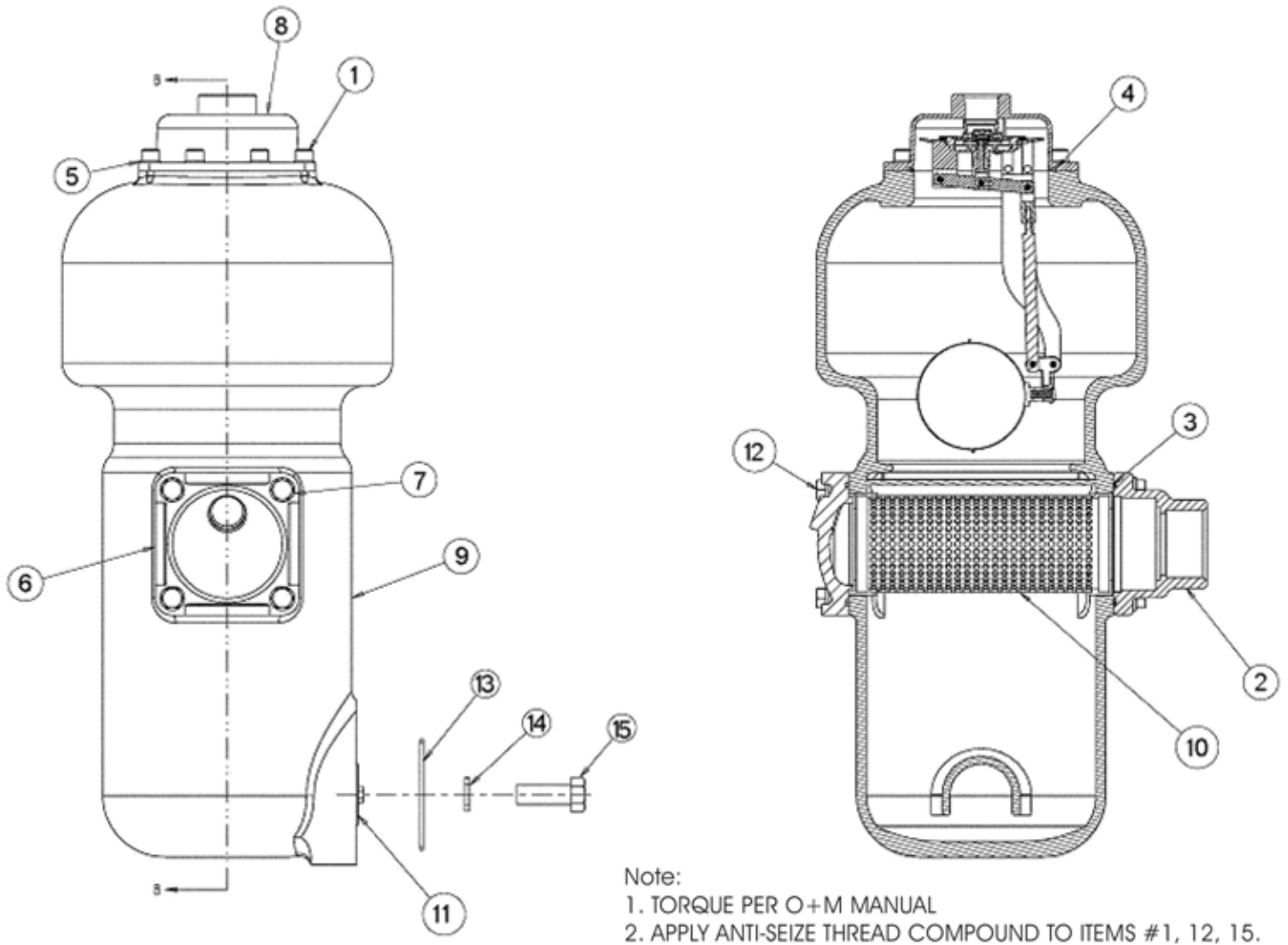
Strainer, 16 Mesh	101405-001
Strainer, 40 Mesh	101405-002
Strainer, 60 Mesh	101405-003
Strainer, 80 Mesh	101405-004
Strainer, 108 Mesh	101405-005

## Part Number 40087-701\*

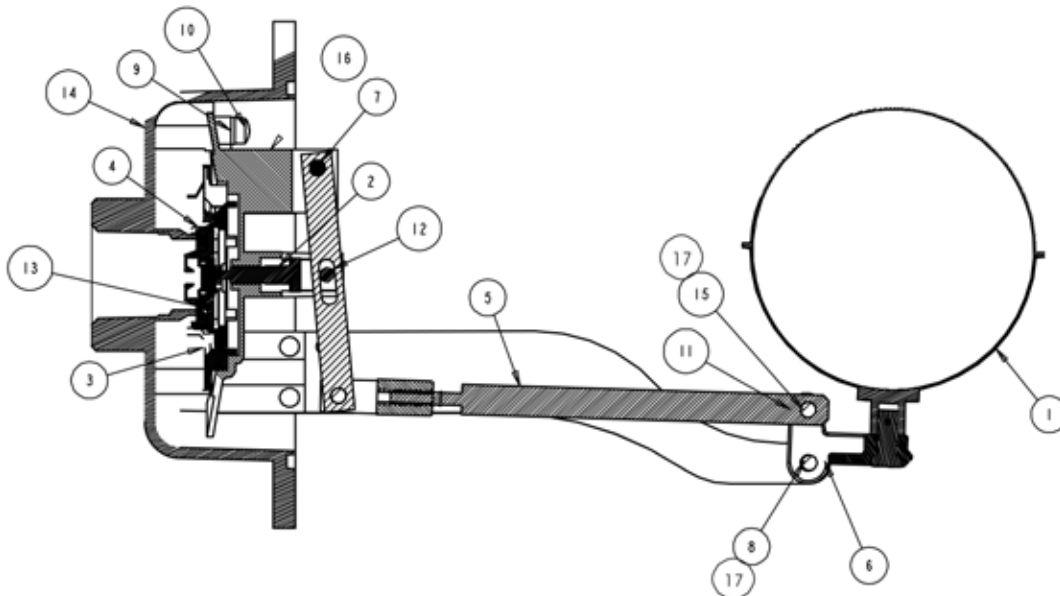
Index	Description	Part No.
1	Cover, A/R 2" Type 4 Extension	082451-008
2	Housing Assembly, 2" Type 4 Extended A/R	083457-004
3	Sleeve, Air Release, Aluminum	082446-005
4	Valve Assy., Main - Bronze - Viton	089274-010
5	Screw, 10-32 x 5/8 Fil. Hd. 303 SST	041221-002
6	Washer, Lock No. 10 Spring Steel	041211-000
7	Link Asm., Connecting Adjustable (Alum)	1001120
8	Pin, 0.187 OD 21/32 LG	040819-002
9	Stem, Valve PST Type A/Rel. BRZ	083127-001
10	Pin, Valve Lever & Stem Air Release	042941-000
11	Float Complete	082476-001
12	Spacer Drive Gear Hub VSB Reg. BRS	040491-000
13	Pin, Cotter 1/16 Dia. x 1/2 Lg.	041402-000
14	Pin, Float Lever - A/R Valve	040820-003
15	Pin, V Connection 3/16 OD x 11/16 LG., BRZ	082633-000
16	Washer No. 10 Screw	041989-000
17	Seal, Piston Viton A.	083179-002
18	Cap Lug	085257-012

\* Note: For Field retrofit use 400087-702

# Type 4-MT SC Air Release and Strainer



# Type 4-MT SC Air Release Cover



## Part Number 600100-702 (Air Release and Strainer)

Index	Description	Part No.
1	SCR 3/8-16 X 1 S.H.C.S	008325-014
2	INLET FLANGE	084814-003
3	O-RING	100139-018
4	O-RING	100139-022
5	LOCKWASHER	100440-001
6	CVR STR 2 4D-MT SC	600103-000
7	WASHER, SRG LOCK 7/16	041012-002
8	COVER, COMP TY 4 - MT SC	600101-001
9	BODY 2 TY 4-MTSC A/R	600105-001
10	STRAINER SC	600106-00X
11	ASM BP VAL 2 TY 4 A/R SC	600110-001
12	BOLT 7/14 X 1-3/8 HEX	000795-003
13	O-RING	100139-013
14	WASHER, 5/8 LOCK	041395-000
15	SCREW, 5/8-11 X 1 3/4	100085-048

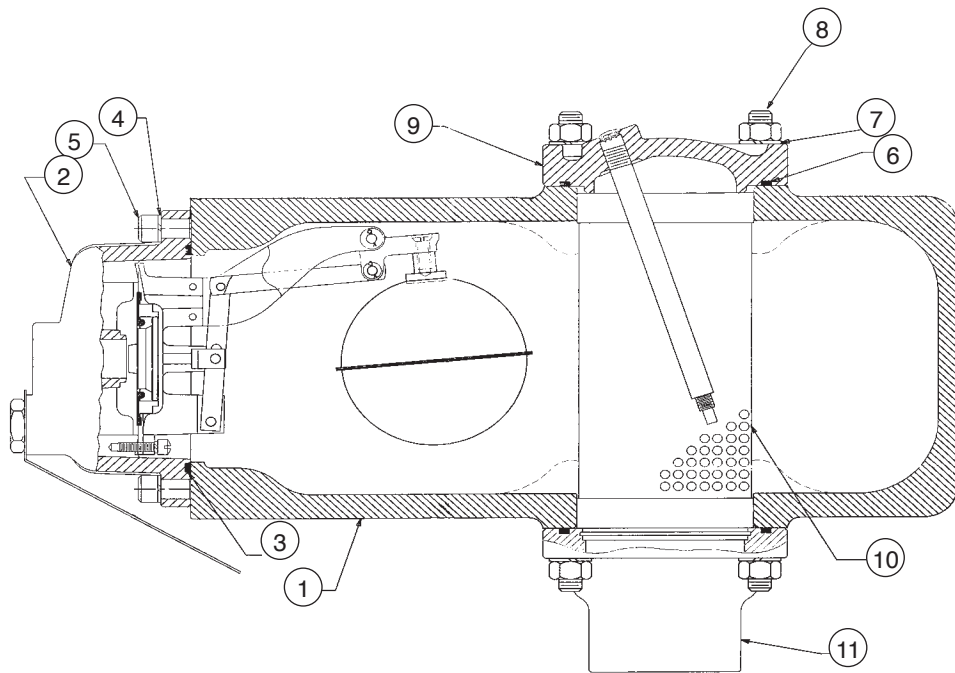
Strainer, 16 Mesh	600106-001
Strainer, 40 Mesh	600106-002

---

## Part Number 600101-701(Air Release Cover)

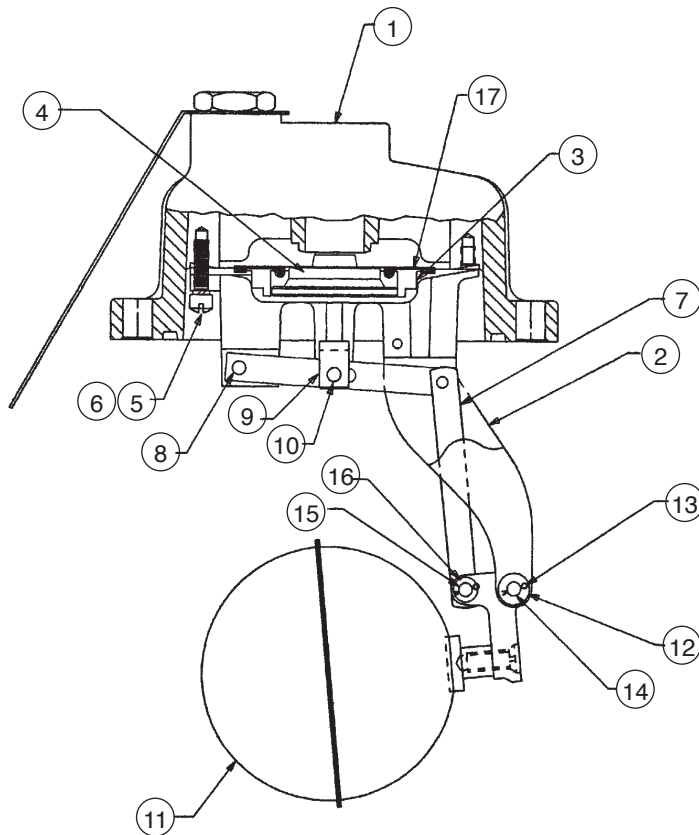
Index	Description	Part No.
1	ASM FLOAT STEEL	082476-001
2	STEM VAL PIS A/R BRZ	083127-001
3	SEAL VAL PIS A/R BRZ	083179-002
4	VALVE ASSY, MAIN BRZ-VIT	089274-010
5	ADJUSTING SCREW ASSY	1001120
6	HUB SPACER DRV GEAR	040491-000
7	PIN, 0.187 O.D 21/32 LG.	040819-002
8	PIN, FLOAT-LEVER - A/R VALVE	040820-003
9	WASHER, SRG LOCK NO. 10 MED.	041211-000
10	SCR 10-32X 5/8 FIL HD SST	041221-002
11	WASHER, No.10	041989-000
12	PIN VAL LEVER	042941-000
13	SLEEVE A/R ALUM	082446-005
14	CVR A/R 2 TYP 4	082451-004
15	PIN, 3/16 OD X 11/16 LG.	082633-000
16	HOUSING ASSM. TYPE 4 EXT. A/R	083457-004
17	PIN, COTTER 1/16 DIA. X 1/2 LG.	041402-000

# Type 4D-MT Vapor Release and Strainer



---

# Type 4D-MT Vapor Release Cover



## Part Number 400076-701

Index	Description	Part No.
1	Main Body Assembly - 4D-MT Vapor Release Bolt, 5/8 11x1 3/4 <b>(Not Shown)</b> Washer Pipe Plug 3/8" Square Head	400086-701 100085-048 041395-000 100075-010
2	Cover Complete - 2" 4D-MT Vapor Release	400078-001
3	O-Ring 1/8 Dia. x 4-1/2 ID BUNA	100139-022
4	Washer, 3/8 Lock - Hel Spring Hi-Collar	100440-001
5	Screw, 3/8-16 x 1 Soc. Head Cap	008325-014
6	O-Ring 1/8 Dia. x 3-3/4 ID BUNA	100139-018
7	Washer, Lock 7/16 Bolt St. Stl.	041012-002
8	Bolt, 7/16-14 x1 3/8 HRX	000795-003
9	Cover Complete - 2" Type 4D-MT Strainer	400074-001
10	Strainer Complete 80 Mesh 2" Type 4D	101405-004
11	Valve, ASM Inlet Check 2" Type 4D	084813-702
12	O-Ring Outlet Flange <b>(Not Shown)</b>	100139-013

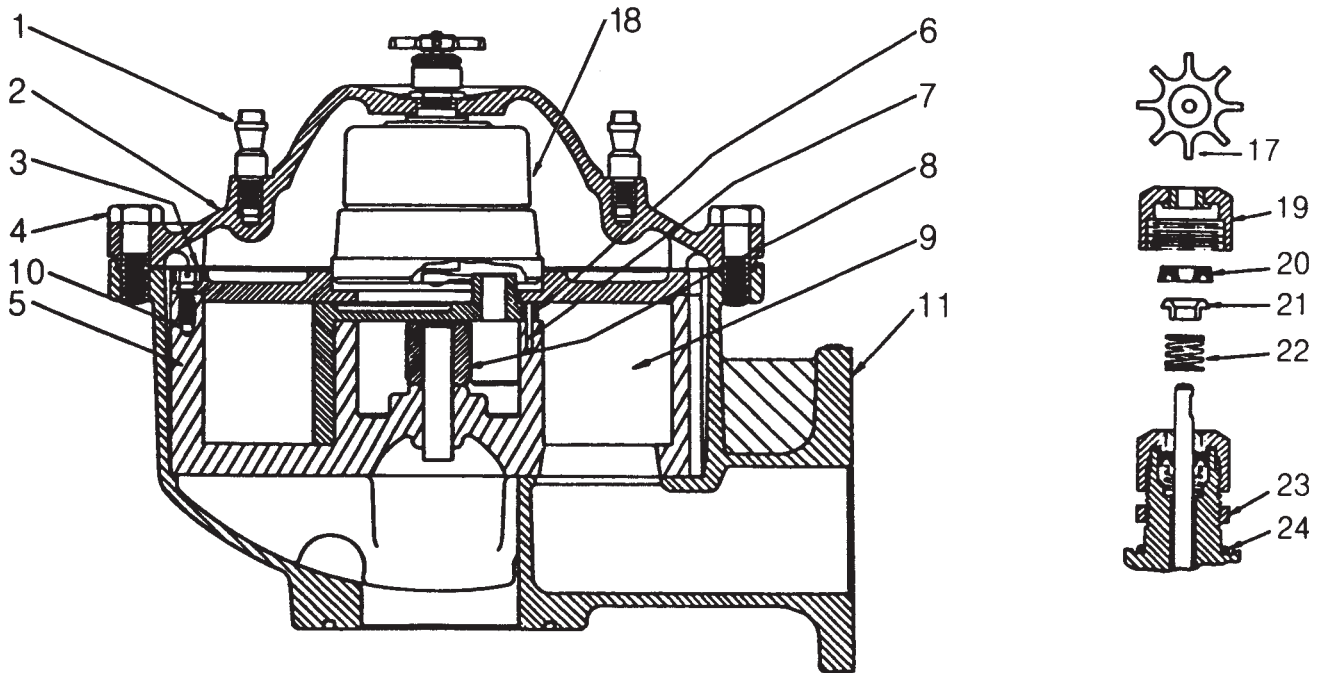
---

## Part Number 400078-001

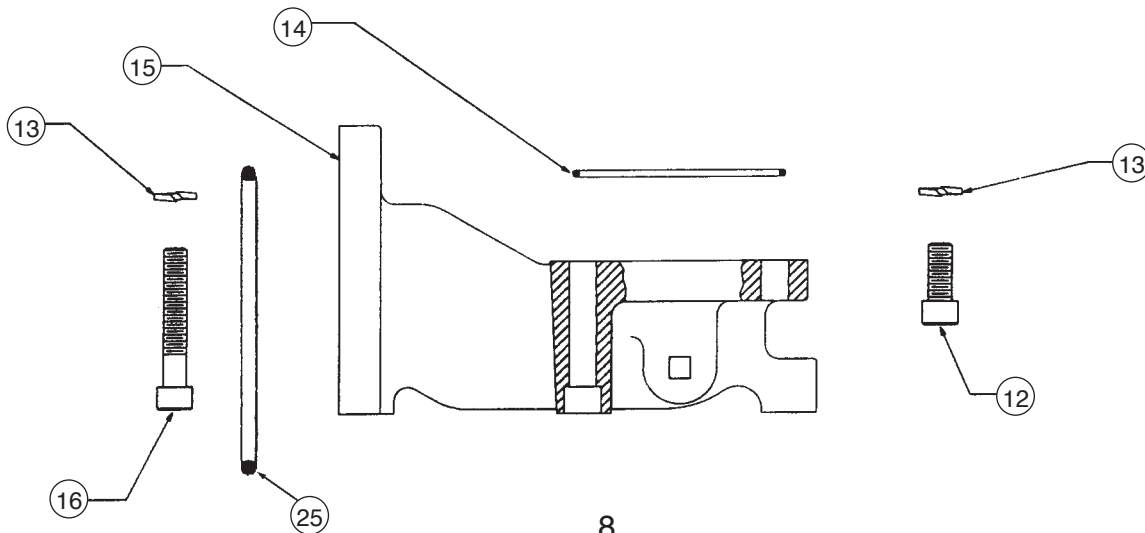
Index	Description	Part No.
1	2" 4D-MT Vapor Release Cover Assembly: Screw, 5/8 - 18 Hex Hd. Retainer Spring, Compression O-Ring, 1/16 Sect. x 11/16 ID BUNA N Valve Assembly, Bypass Aluminum with BUNA N Seat Tag, Precaution	400077-701 004853-008 100024-003 100138-006 100237-001 100322-001
2	Housing, ASM Low Volume & Extended	083457-000
3	Sleeve, Air Release, Aluminum	082446-005
4	Valve Assembly, Main A/R (BRZ-BUNA N)	089274-006
5	Screw, 10-32 x 5/8 Fil. Hd. 303 SST	041221-002
6	Washer, Lock No. 10 Spring Steel	041211-000
7	Link Assy., Connect. Stl.	080002-002
8	Pin, 0.187 ODS 21/32 LG	040819-002
9	Stem, Valve PST Type A/Rel. BRZ	083127-001
10	Pin, Valve Lever & Stem Air Release	042941-000
11	Float Complete	082476-001
12	Spacer Drive Gear Hub VSB Reg. Brass	040491-000
13	Pin, Cotter 1/16 Dia. x 1/2 Lg.	041402-000
14	Pin, Float Lever - A/R Valve	040820-003
15	Pin, V Connection 3/16 OD x 11/16 LG., BRZ	082633-000
16	Washer No. 10 Screw	041989-000
17	Seal, Piston Air Release Units	083179-000

# Flowmeter without Temperature Compensator

## Type 4-MT and Type 4D-MT



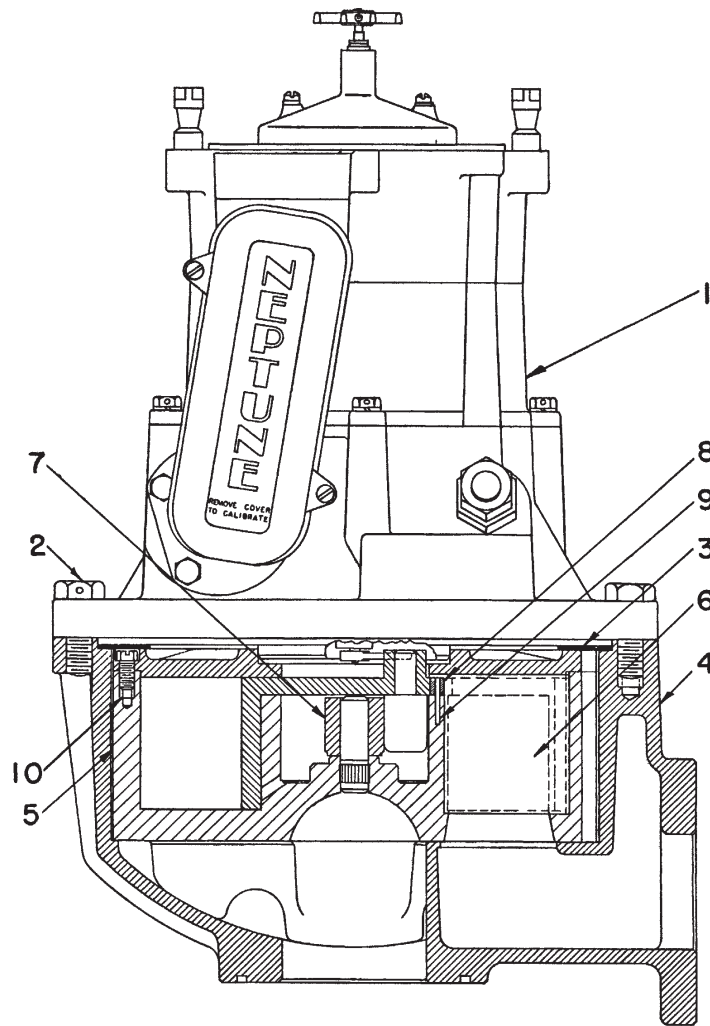
Index	Description	Part No.	Index	Description	Part No.
1	Stud Register Mounting	84435-000	14	Gasket, Connector	100139-018
2	Cover, Main Case	400071-001	15	Connector with plug, Meter-to-Vapor Release	400079-001
3	Gasket, Main Case	84806-000	16	Screw, Cap Skt Hd. 7/16-14x3"	8325-040
4	Screw Cap, Main Case	795-003	17	Star Connection with Setscrew	82976-001
	Screw Cap, Main Case (with Seal Hole)	795-011	18	Gear Train Complete	
5	Measuring Chamber Complete	C45806-101		3.75 Reduction US Gal	83502-000
6	Pin Seal	42546-000		9.93 Reduction Litres	80862-055
7	Dowel Stud, Seal Pin	5211-001	19	Stuffing Box Nut with Bushing	83536-000
8	Roller Control	42316-001	20	Seal, U-Cup Shaft	100025-002
9	Diaphragm	42312-001	21	Expander Seal	83539-000
10	Screw, Measuring Chamber	88638-000	22	Spring, Stuffing Box	83540-000
11	Main Case with Locating Pin	400072-701	23	Nut Clamp	34-000
12	Screw, 7/16-14 x 1 1/2" Cap Skt Hd	8325-041	24	Gasket, O-ring, Gear Train	100138-003
13	Lockwasher, 7/16 steel	41012-002	25	O-Ring, 1/8 Dia. x 3-3/8 ID BUNA	100139-013





# Flowmeter with Temperature Compensator

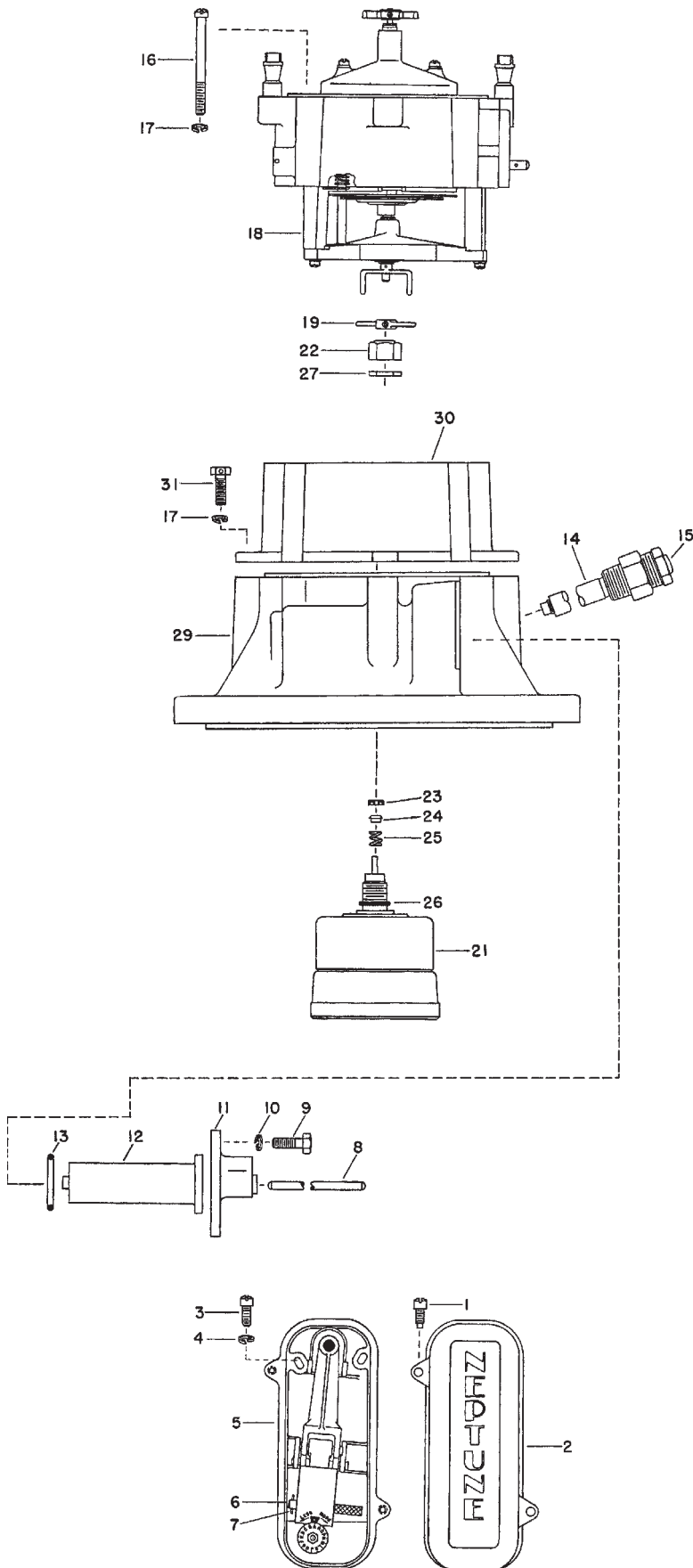
## Type 4-MT and Type 4D-MT



Index	Description	Part No.
1	LP-Gas Temperature Compensator	See Note
2	Cap Screw, Main Case	795-003
	Cap Screw, Main Case (with seal hole)	795-011
3	Gasket	84806-000
4	Main Casing with Locating Pin	400072-001
5	Measuring Chamber Complete	C45806-101
6	Diaphragm	42312-001
7	Roller, Control	42316-001
8	Pin Seal	42546-000
9	Dowel Stud Seal Pin	5211-001
10	Screw, Measuring Chamber	88638-000

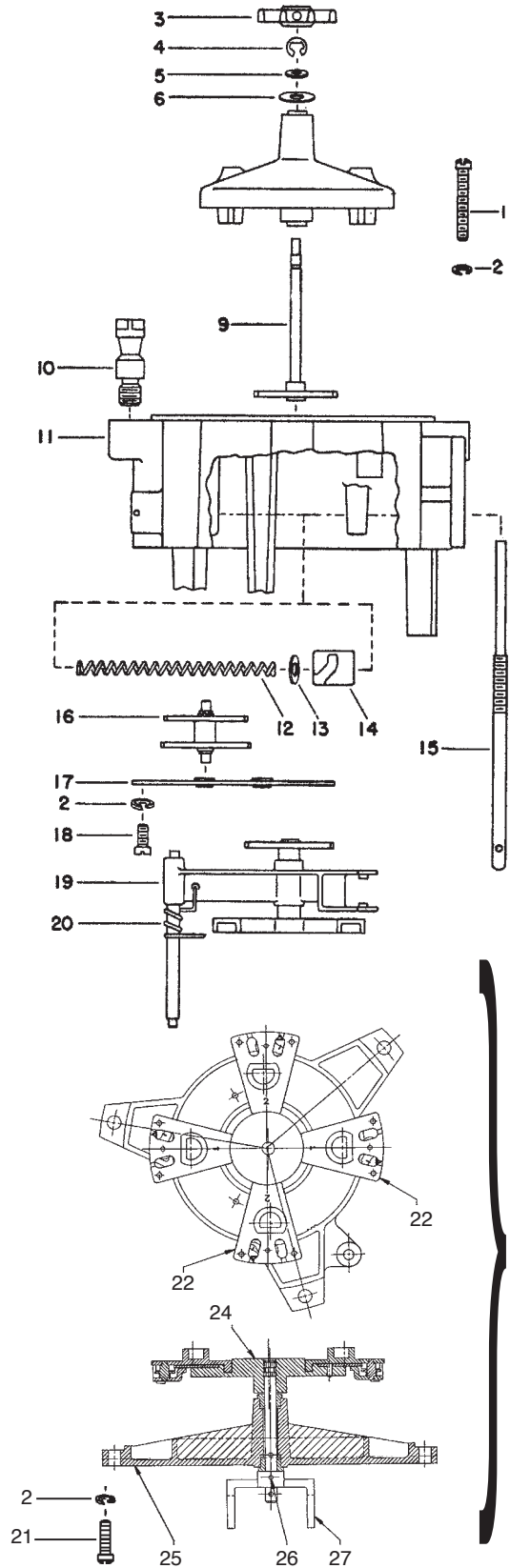
Note: Temperature Compensator parts are shown on pages 8 & 9.

# Temperature Compensator, Type 1 Style 2



# Temperature Compensator Adapter Unit Complete

Part No. 86602-705



Drive Bracket Assy. complete with Ratchet and Arms.  
Part No. 84913-002

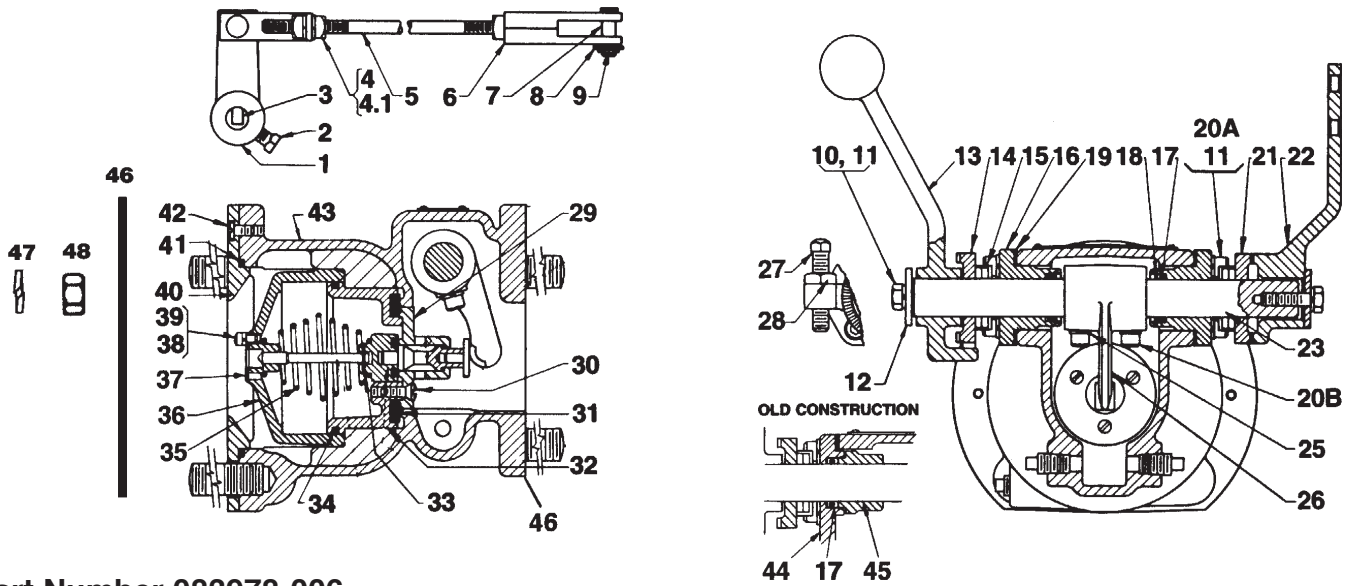
## Temperature Compensator, Type 1 Style 2

## Temperature Compensator Adapter

Index	Description	Part No.
1	Screw, Cover (10-32 special)	9287-003
2	Cover, Lever Arm Mounting Plate	86665-000
3	Screw, 10-32 x 5/8, fil hd steel	41221-002
4	Lockwasher, No. 10 steel	41211-000
5	Mounting Plate & Lever Arm Assy. (4D-MT)	86649-003
	Mounting Plate & Lever Arm Assy. (4-MT)	87650-001
6	Pin, Lever Arm Lock	86661-001
7	Cotter Pin, 1/16 dia. x 3/8, brass	86973-000
8	Pin, Thermostat	86648-000
9	Screw, 1/4 dia. x 3/8, brass	83784-000
10	Lockwasher, 1/4 steel	88721-000
11	Cover, Thermostat	400010-701
12	Thermostat (Bellows)	86646-000
13	Gasket, O-ring, Thermostat Cover	100139-005
14	Thermometer Well complete	1001906
15	Cover, Thermometer Well	600443-001
16	Screw, 1/4-20- x 2-1/2, fil hd steel	8302-107
17	Lockwasher, 1/4 steel, small	88721-000
18	Adapter Unit Complete	86602-705
19	Driving Arm with Setscrew	82976-001
21	Gear Train Complete	
	3.75 Reduction US Gal	83502-000
	9.93 Reduction Litres	80862-055
22	Nut and Bushing Assy., Stuffing Box	83536-000
23	Seal U-cup Shaft	100025-002
24	Expander, Seal	83539-000
25	Spring, Stuffing Box	83540-000
26	Gasket, O-ring	100138-003
27	Nut, Clamp	34-000
29	Main Case Cover with Locking Pin	400081-002
30	Spacer	1002043
31	Screw, 1/4-20x1-1/8 socket hex hd steel	1002044

Index	Description	Part No.
1	Screw, 10-32 x 1-1/4, fil hd steel	89073-000
2	Lockwasher, No. 10 steel	41211-000
	Register Drive Bracket Complete	84890-004
3	Star Connection w/Setscrew	82976-001
	Setscrew, 8-32 x 3/16 hollow hd	8538-027
4	Ring, Retaining (Truarc, Type E)	88462-000
5	Washer, Drive Shaft	8571-014
6	Shim, Drive Shaft	46652-001
9	Gear Complete, Intermediate (41 tooth)	86554-001
10	Stud, Register Mounting	84435-000
11	Adapter with Plug and Bushing	84921-003
12	Spring, Push Rod	84888-000
13	Washer, Spring Retaining	88286-003
14	Swivel Block Assembled	86612-000
15	Push Rod	86611-001
16	Gears & Shaft Assembly (41 and 35 teeth)	84907-001
17	Plate and Bushing Assembly, Idler Gear	
	Retaining	86609-000
18	Screw, 10-32 x 3/8, fil hd steel	88524-000
19	Arm Complete, Offset Spider	
	(with 31-tooth gear)	84910-003
20	Spring, Offset Spider Arm	86645-000
21	Screw, 10-32 x 5/8, fil hd steel	41221-002
22	Arm Assembly, No. 1, 2 reg.	100922-001
22	Arm Assembly, No. 2, 2 reg.	100922-002
23	Spring, Ratchet Pawl ( <b>not shown</b> )	86063-000
24	Ratchet and Shaft, Assembly	100914-002
25	Drive Bracket Assembled	
	(with Bushings)	84914-000
26	Rollpin, 1/16 dia x 3/8, steel	100370-003
27	Drive Fork	84192-006
	Kit - Replacement, Metal w/Plastic	101732-001
	Conversion Kit - Metal to Plastic	101732-001

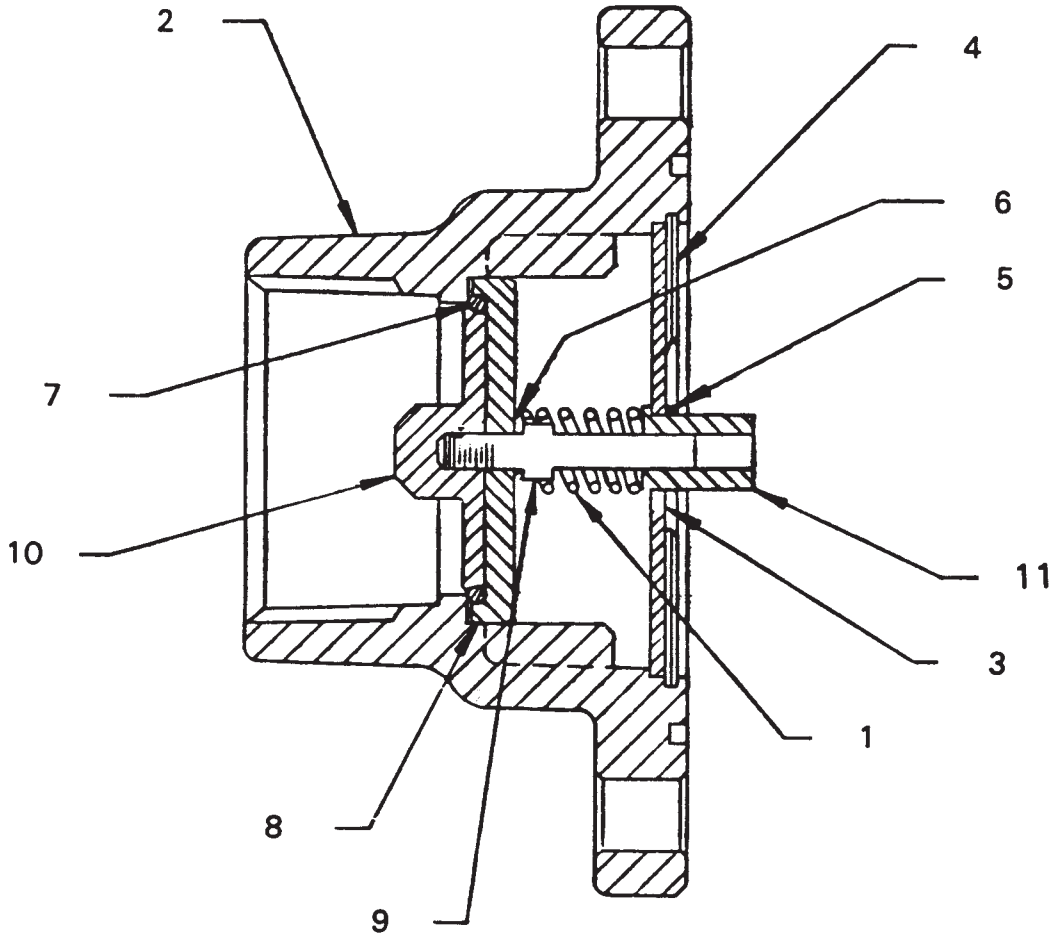
# Double Trip Aluminum Valve Type 4-MT



## Part Number 083978-006

Index	Description	Part No.	Index	Description	Part No.
1	Arm Complete, Connecting Link	84603-000	28	Nut, Stop, 5/16-18 sq steel	41545-000
2	Setscrew, 5/16-18 x 5/8 sq hd st	41546-000	-	Piston & Throttling Ring Assem. - Petroleum	83981-002
3	Bushing, Connecting Link Arm (knurled)	48858-001	29	Throttling Ring Assem. with Rod	83984-000
4	Nut, 5/16 - 18 sq steel	41476-000	30	Screw, Piston Assembling 10-32 (special)	600434-001
4.1	Lockwasher, 5/16 steel	100121-010	31	Disc, Valve	
5	Rod, Connecting - 12"	83435-012	-	Viton A (Standard for Petroleum)	83983-002
	Rod, Connecting - 14"	83435-014	32	Piston	83982-000
6	Clevis, Connecting Rod	83433-000	-	Pilot Valve Assembling with Rod Petroleum (Standard) Buna-N Petroleum - Viton	85012-000 85012-003
7	Clevis Pin	83434-000	33	Rollpin, 1/16 dia x 1/2	100370-004
8	Washer, 5/16" steel	41477-000	34	Ring, Piston	83989-000
9	Cotter Pin, 3/32 dia x 11/16 brass	41640-000	35	Spring, Valve	85007-001
10	Screw, 1/4-20 x 3/4 hex hd steel	83784-000	36	Cylinder Assembled with Plate	85014-000
11	Lockwasher, 1/4 steel	41117-000	37	Plate, Orifice	85015-000
12	Washer	40508-000	38	Washer, No. 8 stainless	41982-002
13	Handle, Operating	83776-000	39	Screw, 8-32 x 5/16 fil hd	50351-002
14	Stop Plate, Handle (left-hand)	83779-000	40	Ring, Cylinder Retaining	83992-000
15	Pin, Operating shaft, 1/4 dia x 1-1/4 (Rollpin)	100370-017	41	Gasket, Retaining Ring Buna-N O-ring	100139-016
16	Bracket Assy with Buna-N O-ring	84089-001	42	Screw, 10-32 x 3/8 fil hd	733-001
17	O-ring, Buna-N	100139-001	43	Body Assembled w/studs	084452-009
18	Retainer, Truarc	8579-108	44	Note: Parts 44 & 45 have been replaced by Part 16.	
19	Gasket, Bearing Bracket, Buna-N	83422-001	45		
20A	Screw, 1/4-20 x 3/4 Allen hd st st	83784-000	46	Flange Gasket Buna-N	42948-009
20B	Screw, 1/4-20 x 1" Allen hd st st	83784-000	47	Lockwasher	41395-000
21	Stop Plate, handle (right hand)	83778-000	48	Nut 5/8-11	41224-000
22	Arm, Connecting Rod	83997-000			
23	Shaft, Operating	83993-001			
25	Lockwasher, 1/4	41117-000			
26	Cam, Operating	83994-000			
27	Screw, Stop, 5/16-18 x 1-1/2 sq hd oval pt	83785-000			

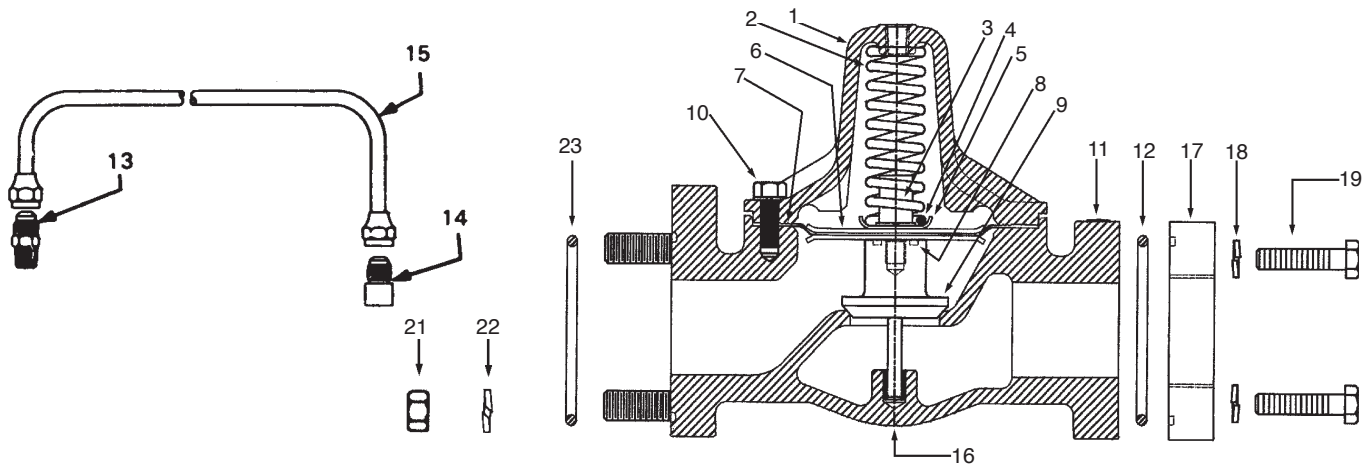
# “Soft Seat” Inlet Check Valve Type 4D-MT



## Part Number 084813-702

Index	Description	Part No.
1	Spring	83492-000
2	Flange, Inlet	84814-003
3	Strap, Inlet	84816-001
4	Ring, Retaining	84817-000
5	Ring, Retaining, Truarc	86071-000
6	Washer, Lock	041117-000
7	“O” Ring	100139-032
8	Holder	100374-002
9	Shaft	100896-001
10	Retainer	100898-001
11	Bearing	100899-001

# Differential Valve - Type 4D-MT



Part Number: 400070-701 w/2" Companion Flange  
 400070-702 w/1-1/2" Companion Flange

Index	Description	Part No.
1	Cover	400000-001
2	Spring, Valve	83775-000
	Diaphragm Complete	1001569
3	Screw, Diaphragm	83774-002
4	Lockwasher, 7/16 steel	41012-002
5	Retainer, Spring	83773-000
6	Retainer, Diaphragm	83772-002
7	Diaphragm	1000624
8	Gasket, O-ring	100139-001
9	Valve Stem Assembled	83927-002
10	Screw, 3/8 - 16 x 1-1/4, hex hd steel	100067-051
	Screw, 3/8 - 16 x 1-1/4, hex hd steel (with seal hole)	100068-050
10A	Lockwasher, 3/8 steel (not shown)	45828-001
11	Body	400013-703
	(stud)	1931-000
12	Gasket, O-Ring 1/8 x 3-3/4	100139-018
13	Fitting, Straight, 3/8 flared tube (male half)	84826-000
14	Fitting, Elbow, 3/8 flared tube (male half)	84825-001
15	Tube, Connecting, with Nuts	84823-000
	Tube, Connecting, with Nuts (Angle configuration)	84821-000
16	Bushing	8343-001
17	Flange, 2" NPT	86814-001
	Flange, 1-1/2" NPT	86814-002
18	Lockwasher	41012-002
19	Screw	100071-101
20	Ventline Check Valve (not shown)	84828-000
21	Nut 5/8-11	41224-000
22	Lockwasher	41395-000
23	Gasket, O-Ring	100139-013



**U.S.A./International**

1310 Emerald Road  
Greenwood, SC 29646-9558  
Tel.: Toll-Free (800) 833-3357  
(864) 223-1212  
Fax: (864) 223-0341

© 2010 Itron, Inc. 800 1/10

Specifications subject to change without prior notification.

***Itron!***