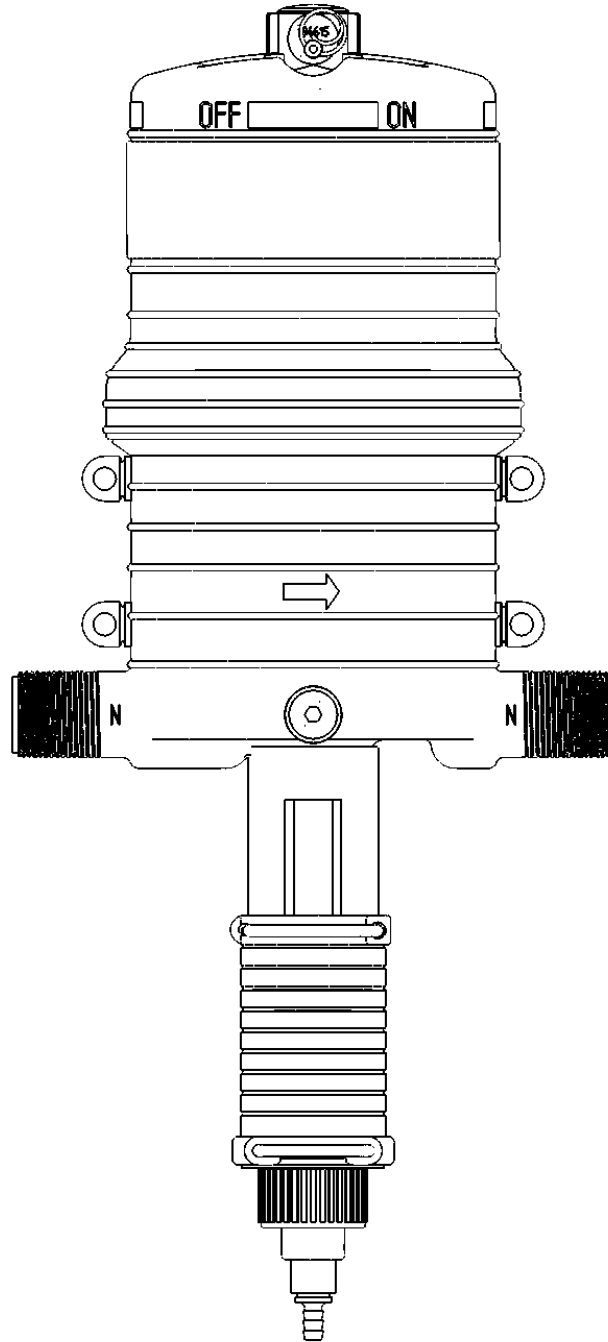


SUPERDOS 20

Installation & Operating Instructions



Model No.

SuperDos 20 - 0.4%, 2.5%, 5%, 10%

CONTENTS:

CAUTION: 

To reduce risk of injury, user must read and understand the Installation & Operation Instructions before using this product.

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START UP PROCEDURES

SLOWLY turn on main water pressure until water flows between 5 & 12 gpm (11-45 lpm) or 30 psi (2 bar) maximum to fully prime the suction hose.

SLOWLY open the water supply valve and all valves downstream of injector to release entrapped air. Carefully open inlet valve allowing water to enter and pressurize the injector. Open outlet valve and close bypass valve. Water will now flow through the injector, and a continuous sound will be emitted from the injector as water passes through it. check for system leaks (see page 5) and correct if necessary. Adjust the outlet valves downstream from the injector, if necessary.

IMPORTANT:
FOR WARRANTY PURPOSES
VISIT OUR
WEBSITE
WWW.DOSMATIC.COM
TO FILL OUT PRODUCT
REGISTRATION FORM!

INTRODUCTION:

Please take the time to read this instruction manual thoroughly and follow the procedures. This will help increase the life of your injector.

Certain precautions, which are marked with this symbol need to be read carefully... 

The injector is packaged with the following items: (shown in figure 1)

- Dosmatic Injector (not shown)
- Dosage Piston
- O-ring
- Manual (not shown)
- Mounting Bracket
- Mounting clips
- Filter
- Suction Tube

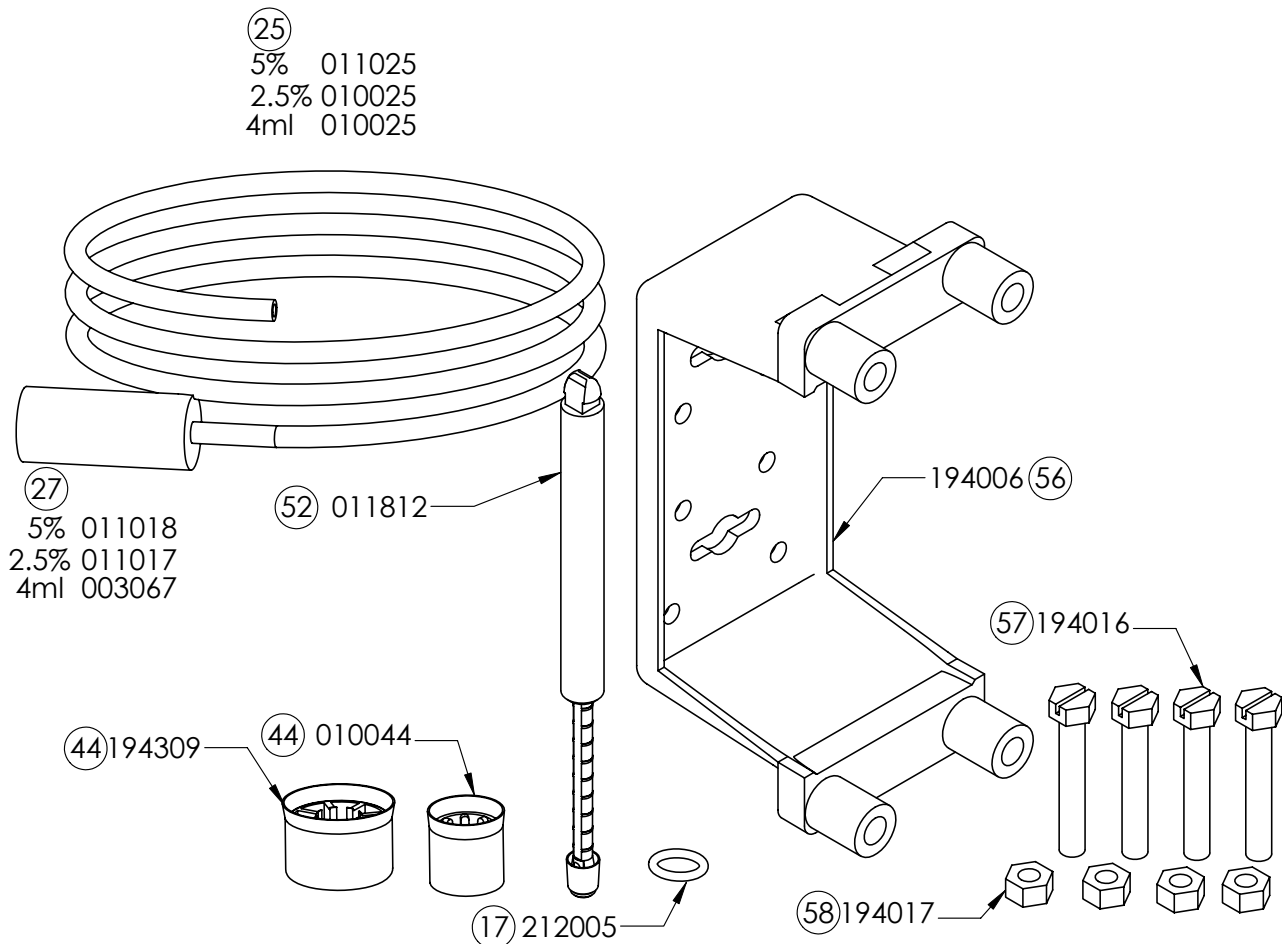


Fig.1

SAFETY:

1.SELECT A LOCATION: that is on the water line that chemical injection is desired and meets all the following requirements as well as all applicable local codes.

Remove Red Caps Prior to Installation.

NOTE: The entire water line down stream from the injector will have chemical injected into it. If the chemical injected makes the water unsafe to drink label the water lines.

 **WARNING NOT FOR HUMAN CONSUMPTION!**

2. AN APPROVED BACK FLOW PREVENTOR MUST BE INSTALLED: In the water line ahead of the unit to prevent water and chemical mixture from entering the source water supply.

3. AVOID A POTENTIALLY HAZARDOUS CHEMICAL ACCIDENT: An injector location should be selected to provide a safe, but accessible, place for the chemical solution container. It should be kept away from children and/or high usage areas.

4. AVOID SOLUTION CONTAMINATION, use only clean FILTERED water. Do not allow contaminants to enter the solution container because they will be pumped into the water line, and can cause the spread of disease and **can also cause excessive wear.**

5. WATER TEMPERATURE

Max: 100°F or 38°C

Min: 32°F or 0°C


6. MAX WATER PRESSURE

10% - 65 PSI/4,5 BAR

1% - 5% - 100 PSI/6,9 BAR

7. RELEASE WATER PRESSURE: Before working on injector

INSTALLATION:

- 1. NOTE:** Water going through injector must be free of sand, dirt and grit. Installation of 140 mesh (104 micron) or finer filter will be required.
- 2. MOUNT INJECTOR:** Securely to a solid object such as a wall. Note arrow on injector indicating water flow. See fig. 3.
- 3. BACKFLOW PREVENTOR:** Install one adequately sized that meets your local code requirements.
- 4. BYPASS VALVE:** To bypass injector when not in service or to service injector pipe in the three valve bypass arrangement as shown in Fig. 4
- 5. CHECK SYSTEM FOR LEAKS:** Open the bypass valve (A), close valves (B) and (C) so that the water will not flow into injector  **SLOWLY** turn on the main water line so that water will run through the plumbing system. Turn on all of the valves located downstream from your injector to release trapped air. Slowly turn on the inlet valve (B). Open the outlet valve (C) at injector outlet. Close (A). As water travels freely through your injector, you will hear a soft “clicking” sound.
- 6. SOLUTION CONTAINER:** Refer to figure 4. You may use any size container but we recommend using one with a lid or cover. To connect your solution container gently push the end of the suction tube (#25) onto the bottom of the fitting assembly (#11). Place the filter into the solution container at least 2 inches (5cm) from the bottom. Cover the solution filter with at least 2 inches (5cm) of chemical solution.

INSTALLATION DRAWINGS:

TYPICAL WALL MOUNTING

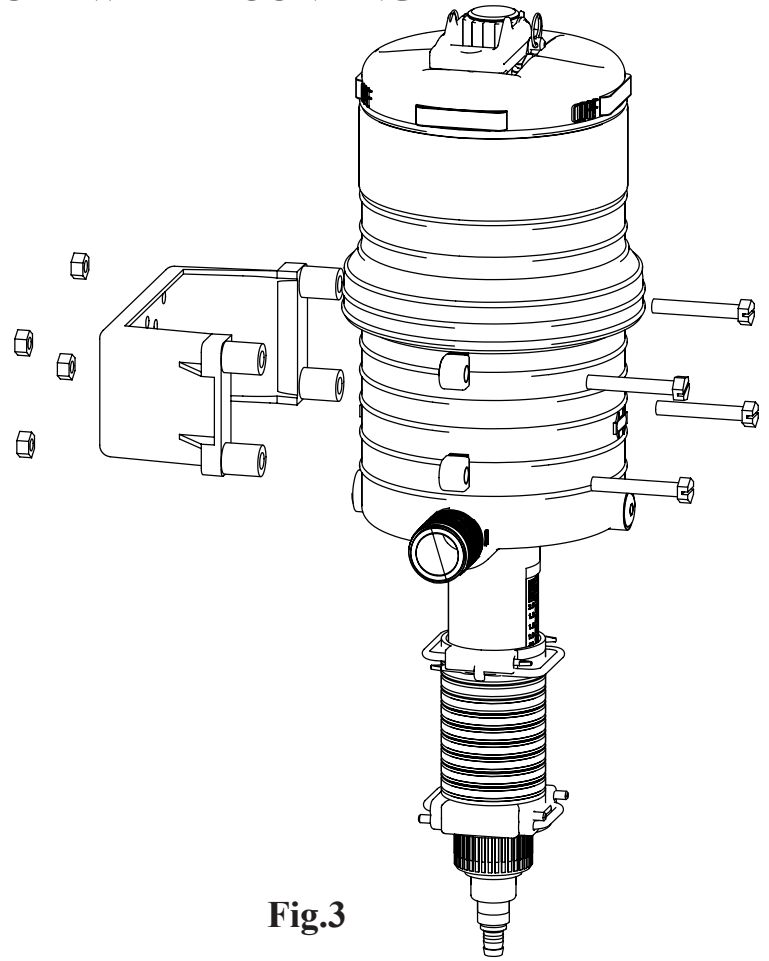


Fig.3

TYPICAL INSTALLATION

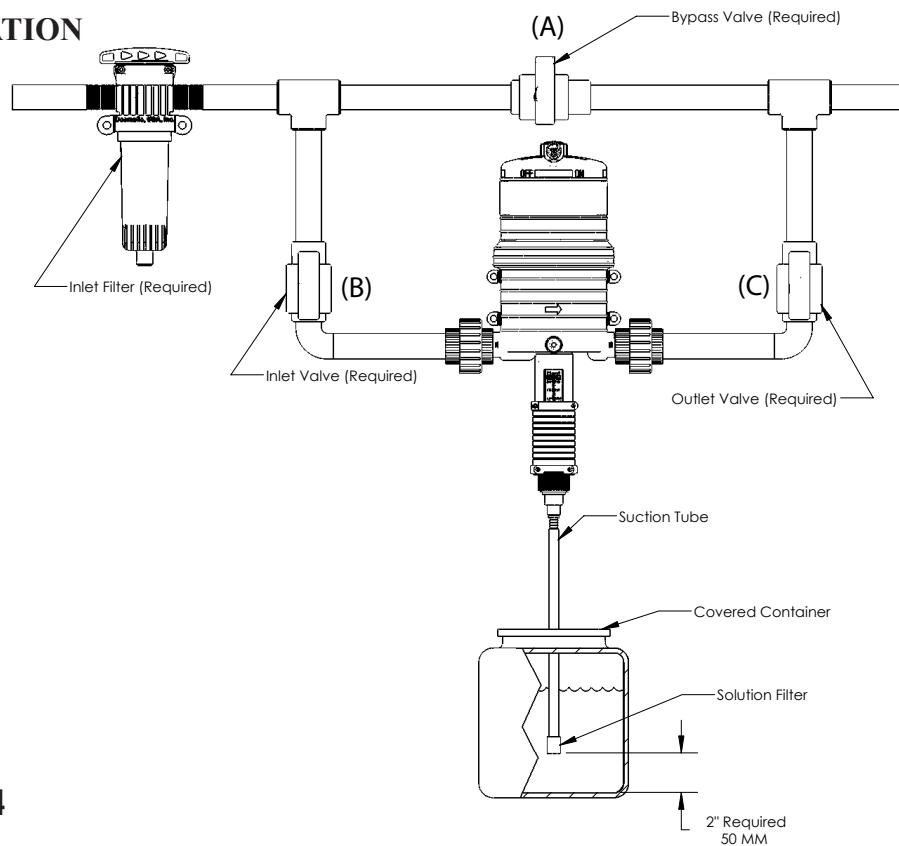


Fig.4

OPERATION:

SERVICE FLOW: Water drawn down stream from the injector will automatically cause the injector to “click” and inject the set amount of solution into the water line. The higher the flow rate the more frequent the clicking, as the injector is designed to inject solution at the same set ratio regardless of water flow.

Water flow and pressure must be within the established specifications. See the specification section on page 13 for your model.

CHANGE FEED RATE: The feed rate on the injector is adjustable EVEN WHILE OPERATING AND UNDER PRESSURE. Rotate the “Ratio Adjustment Sleeve” (61) to change the solution injection ratio. See fig. 5,. The setting indicator mark in the sleeve opening indicates the approximate ratio of injection setting. Check outlet water for chemical to assure desired feed rate is being delivered.

NOTE: Do not screw Ratio Adjuster below lowest setting line on decal. This can cause the injector to lock.

BYPASS OPERATION: Injecting solution into the water line can be TEMPORARILY stopped with the optional bypass feature. Moving the “Bypass Lever” to the “OFF” position allows service water to pass through the injector without injecting chemical. With the bypass lever set on the “ON” position the injector will operate as normal and “clicking” will be heard when water is flowing. It is recommended to use the three valve bypass valves in Fig. 2, for continued bypassing or servicing of the injector.

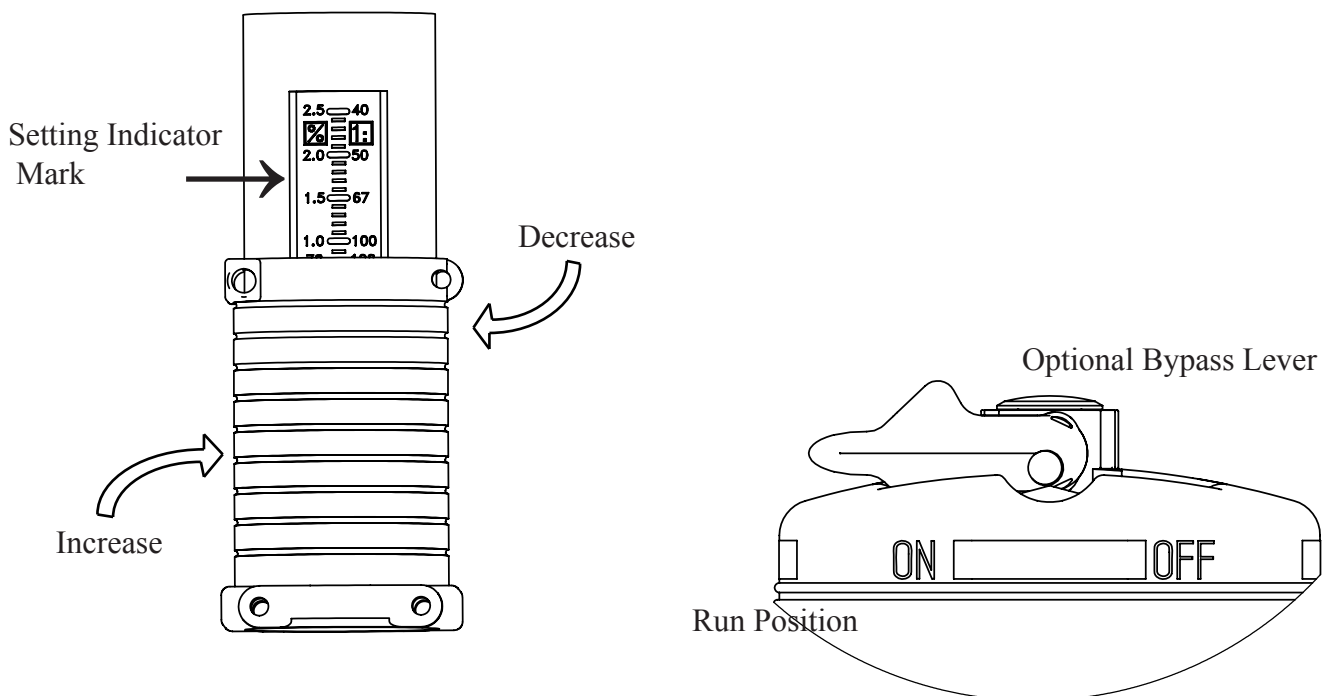


Fig.5

MAINTENANCE:

RINSE INJECTOR AFTER EACH USE:

additive allowed to remain in injector can dry out and foul or damage lower end at the next start up. Put suction tube into a 1 qt. (4 liters) or more container of fresh filtered water. Pull fresh water through the injector by operating until container is empty. This procedure is not needed for continuous operation.

BYPASS INJECTOR: When not in use put the injector in bypass mode by using the three valve bypass (preferred) or the optional bypass lever on the injector.

CLEAN SUCTION TUBE FILTER SCREEN: Inspect each time new solution is added. Clean as frequently as necessary by washing in fresh water. Remove filter screen (#27) from suction tube (#25) and run water backwards through it. Replace if necessary. **Keep filter screen off bottom of solution container to prevent dirt and precipitate from contaminating solution.**

STORAGE: For extended storage, rinse injector as described above and place entire injector underwater (in 5 gal container). Monthly, apply a small amount (thimble full) of chlorine bleach to avoid algae growth.

CLEAN SOLUTION CONTAINER: Keep covered to prevent dirt, flies, feathers and other flying debris from entering container. Rinse container thoroughly and often. Do not mix chemicals together that might react and cause a precipitate. Use FILTERED WATER when filling container.

CLEAN INLET FILTER: Clean or replace inlet filter as required to increase the life of the unit as well as reduce pressure loss.

REPLACE DOSAGE PISTON AND SHAFT SEAL: The injector is shipped with a spare Dosage Piston (44) and shaft seal (17), see Fig. 1, as these are normal wear parts, replace both when solution injection is less than set amount.

TROUBLE SHOOTING:

NO CLICKING SOUND

- 1. Water flow rate exceeds rated service flow of injector:** Reduce flow rate (See Specifications Pg. 13).
- 2. Operating pressure exceeds maximum limit:** Install a pressure reducer valve (See Specifications Pg. 13).
- 3. #17 o-ring if leaking:** Replace.
- 4. Main piston assembly #9 worn:** Replace #9 and install a 104 micron filter before injector to remove abrasive particules from water.
- 5. Cover #1 or main body #40 bores worn or scored:** Lightly sand inside diameter of bores to remove scoring grooves. Install a 104 micron filter to remove abrasive particles from water.
- 6. Poppets (Upper or Lower) are off poppet arms:** Replace all poppet assemblies and reduce flow and/or pressure.

CLICKING SOUND WITHOUT SUCTION OF SOLUTION

- 1. Dosage piston #44 and o-ring retainer #15 are installed incorrectly:** Be sure #44 dosage piston is installed thin lips up.
- 2. Dosage piston #44 worn:** Replace as necessary.
- 3. O-ring seat #14 or dosage piston 344 damaged:** Replace as necessary.
- 4. #7 cylinder is worn or scored:** Replace
- 5. #17 o-ring is worn and/or loose:** Replace
- 6. Suction tube #25 or suction tube fitting #11 cracked & leaking:** Replace as necessary
- 7. Clogged suction tube filter:** Replace and/or clean as necessary.
- 8. Check valve #13 leaking:** Clean & replace as necessary.

WATER RE-FILLING SOLUTION TANK

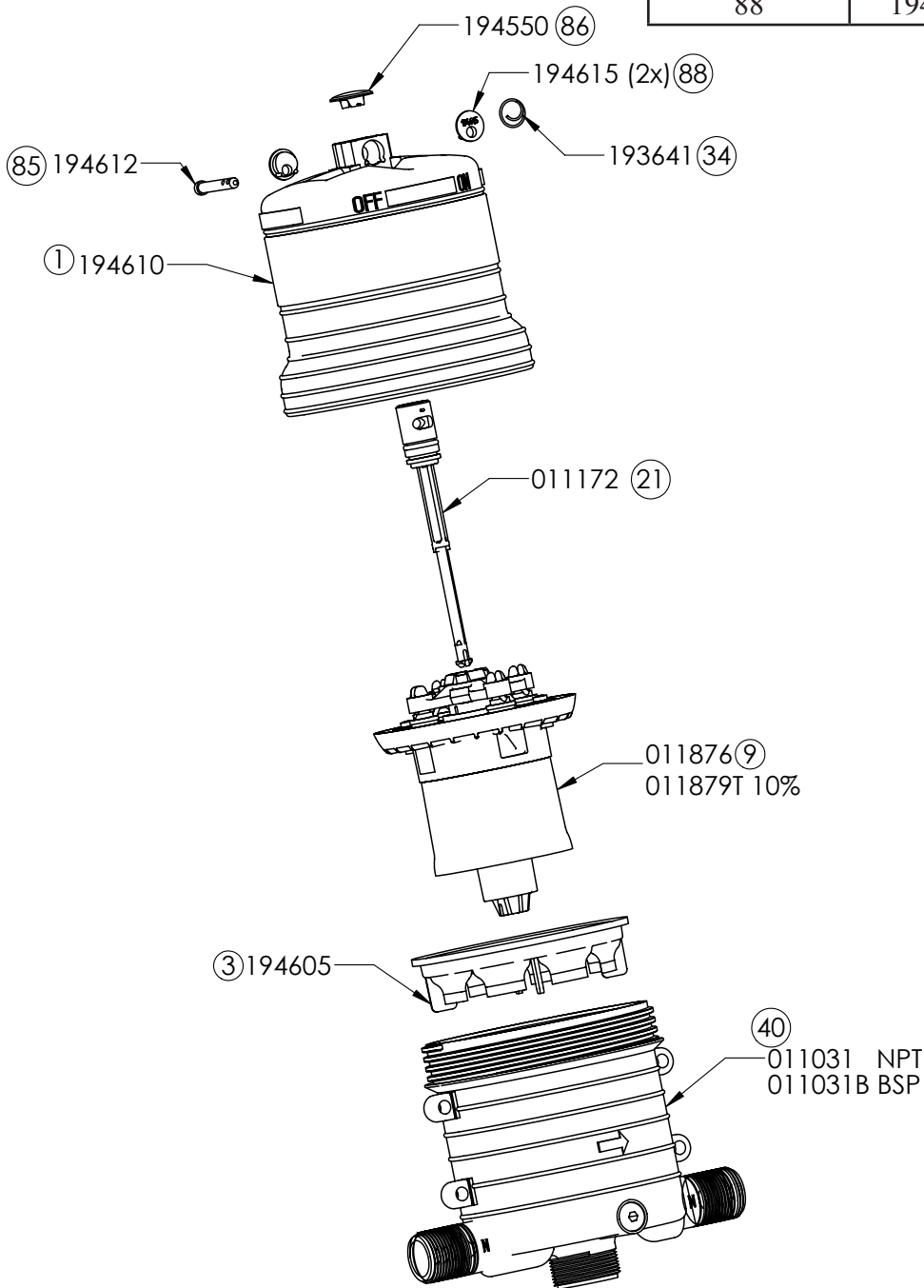
- 1. Check valve #13 leaking:** Check seat area on suction tube fitting #11. Check valve and seal must fit loose in the suction tube fitting.
- 2. Washer seal on #13 is swollen:** Replace with new check valve assembly.

SPECIFICATIONS:

Model	Flow Rate		Feed Ratio		Operating Pressure	Inlet/Outlet Pipe Connection
	Minimum	Maximum	Minimum	Maximum		
SuperDos 20 - 0.4%	0.04 gpm	20 gpm	0.025%	0.40%	5.0 – 100 psi	1” npt
	0,15 lpm	75,70 lpm	1:4000	1:250	0,34 – 6,9 bar	1” bsp
SuperDos 20 - 2.5%	0.04 gpm	20 gpm	0.20%	2.50%	5.0 – 100 psi	1” npt
	0,15 lpm	75,70 lpm	1:500	1:40	0,34 – 6,9 bar	1” bsp
SuperDos 20 - 5%	0.04 gpm	20 gpm	0.40%	5.00%	5.0 – 100 psi	1” npt
	0,15 lpm	75,70 lpm	1:250	1:20	0,34 – 6,9 bar	1” bsp
SuperDos 20 - 10%	0.04 gpm	20 gpm	2.00%	10.00%	5.0 – 100 psi	1” npt
	0,15 lpm	75,70 lpm	1:50	1:10	0,34 – 6,9 bar	1” bsp

REPAIR PARTS:

Reference #	Part #	Description
1	194610	Upper Body
34	193641	Cotter Ring
3	194605	Mixing Chamber Gasket
9	011876	Piston Assembly
	011879T	Piston Assembly 10%
21	011172	Shaft Assembly
40	011031	Lower Body NPT 1"
	011031B	Lower Body BSP 1"
85	194612	Upper Shaft Pin
86	194550	Cap
88	194615	Non bypass plug



LOWER END INJECTOR & WEAR PARTS KITS 0.4%:

Kit A – Wear Parts Kit (dosage piston/shaft assy, oring)	011851PV	17, 51
Kit C – Wear Parts Kit (Kit A, inner cylinder, oring)	011854PV	17, 51, 68, 81
Kit D – Suction Tube Fitting Assy (poppet, nut, washer, oring, spring, fitting)	011463V	10, 11, 12, 13, 71, 80
Kit E – Wear Parts Kit (Kits C & D, inner cylinder (2nd inner cylinder), shaft, pin, gasket)	011834PV	7, 10, 11, 12, 13, 16, 17, 51, 64, 68, 71, 80, 81
Kit F – Lower End Cylinder Kit (inner & outer cylinder, ratio adjuster, oring, retainer clip, pin, gasket)	011960PV	7, 16, 61, 64, 65, 66, 67, 68, 79, 81
Kit G - Lower End Kit, complete (Kit E, outer cylinder, ratio adjuster, oring, retainer clip, pin, retainer, filter, solution tube)	011843MV	7, 10, 11, 12, 13, 15, 16, 17, 25, 27, 51, 61, 64, 65, 66, 67, 68, 71, 79, 80, 81
Kit H – Motor Piston Assy (upper end kit)	011863	9
Kit M – Mounting Bracket Kit (mounting bracket, 4 hex caps & nuts)	011432	56, 57, 58

Manual Reference	Part #	Description of Part
7	194404P	Cylinder, inner
10	194418H	Spring
11	194417	Fitting, suction tube, 1/4"
12	212120 *Must specify material	O-ring
13	011453A	Poppet, check w/washer
15	194004	Seal retainer, o-ring
16	010016 *Must specify material	Gasket, inlet/outlet and cylinder
17	212005 *Must specify material	O-ring

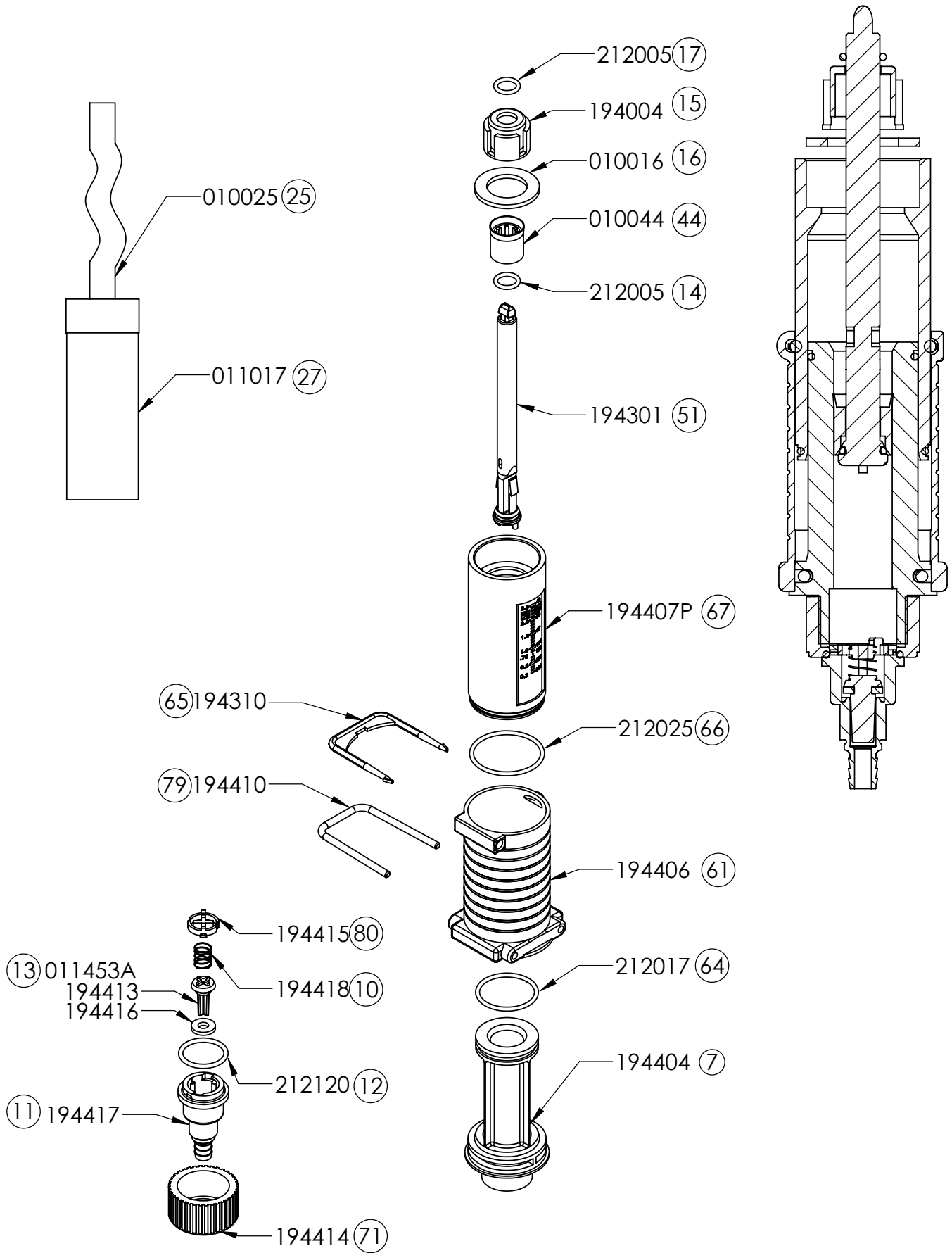
25	010025	Suction tube, 1/4" x 5'
27	003067	Filter and foot valve, suction tube, 1/4" ID
51	011812 *Must specify material	Shaft, Assy with dosage piston
61	194406P	Ratio adjustment sleeve
64	212017 *Must specify material	O-ring, inner cylinder, lower end
65	194310D	Pin, upper interlock
66	212025 *Must specify material	O-ring, outer cylinder, lower end
67	011919P	Cylinder, outer
68	011458	Cylinder, inner for #7
71	194414	Nut, suction tube fitting
79	194410SS	Pin, narrow interlock
80	194415	Twistlock
81	212516 *Must specify material	O-ring, inner cylinder (#68)

LOWER END INJECTOR & WEAR PARTS KITS 2.5%:

Description of Kit	Part #	Manual Reference
Kit A – Wear Parts Kit (dosage piston and oring)	011850V	17, 44
Kit B – Wear Parts Kit (Kit A, & shaft)	011945V	17, 44, 51
Kit C – Wear Parts Kit (Kit A, inner cylinder and o-ring)	011850CV	7, 17, 44, 64
Kit D – Suction Tube Fitting Assy (poppet, nut, washer, o-ring, spring, fitting)	011463V	10, 11, 12, 13, 71, 80
Kit E – Wear Parts Kit (Kits C & D, shaft, pin, gasket)	011833PV	7, 10, 11, 12, 13, 16, 17, 44, 51, 64, 71, 80
Kit F – Lower End Cylinder Kit (inner & outer cylinder, ratio adjuster, o-rings, retainer clip, pin, gasket)	011961V	7, 16, 61, 64, 65, 66, 67, 79
Kit G - Lower End Kit, complete (Kit E, outer cylinder, ratio adjuster, o-rings, retainer clips, pins, retainer, filter, solution tube)	011843PV	7, 10, 11, 12, 13, 14, 15, 16, 17, 25, 27, 44, 51, 61, 64, 65, 66, 67, 71, 79, 80
Kit H – Motor Piston Assy (upper end kit)	011863	9
Kit M – Mounting Bracket Kit (mounting bracket, 4 hex caps & nuts)	011432	56, 57, 58

Manual Reference	Part #	Description of Part
7	194404P	Cylinder, inner
10	194418H	Spring
11	194417	Fitting, suction tube, 1/4"
12	212120 *Must specify material	O-ring
13	011453A	Poppet, check w/washer
14	212005 *Must specify material	O-ring
15	194004	Seal retainer, o-ring
16	010016 *Must specify material	Gasket, inlet/outlet and cylinder
17	212005 *Must specify material	O-ring
25	010025	Suction tube, 1/4" x 5'
27	011017	Filter, for suction tube, 1/4" ID
44	010044P	Dosage Piston
51	194301F	Shaft, with ears
61	194406P	Ratio adjustment sleeve
64	212017 *Must specify material	O-ring, inner cylinder, lower end
65	194310D	Pin, upper interlock
66	212025 *Must specify material	O-ring, outer cylinder, lower end
67	194407P	Cylinder, outer
71	194414	Nut, suction tube fitting
79	194410SS	Pin, narrow interlock
80	194415	Twistlock

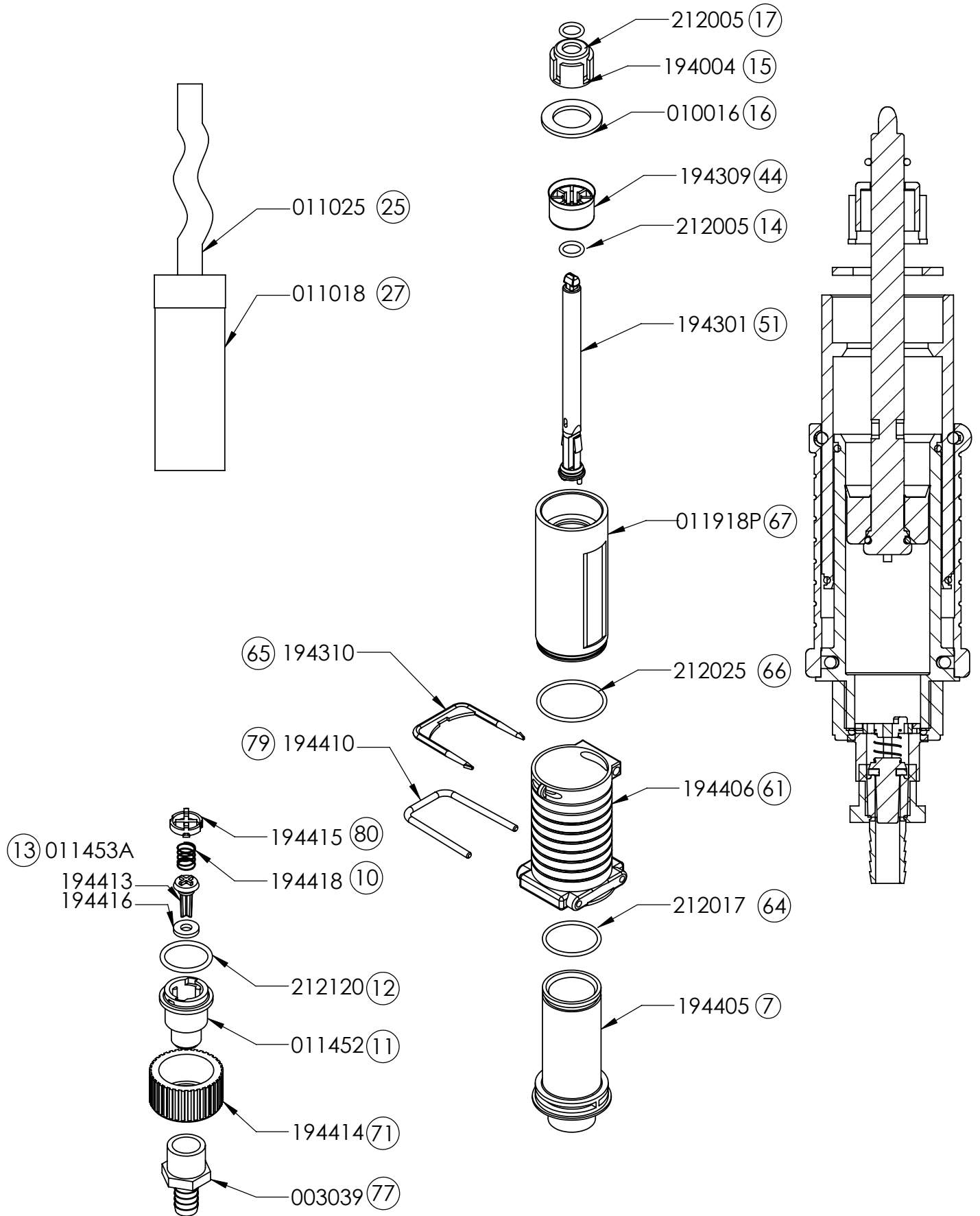
LOWER END INJECTOR PARTS 2.5%:



LOWER END INJECTOR & WEAR PARTS KITS 5%:

Description of Kit	Part #	Manual Reference
Kit A – Wear Parts Kit (dosage piston and oring)	011852PV	17, 44
Kit B – Wear Parts Kit (Kit A, & shaft)	011950V	17, 44, 51
Kit C – Wear Parts Kit (Kit A, inner cylinder and o-ring)	011856PV	7, 17, 44, 64
Kit D – Suction Tube Fitting Assy (poppet, nut, washer, o-ring, spring, fitting)	011462V	10, 11, 12, 13, 71, 77, 80
Kit E – Wear Parts Kit (Kits C & D, shaft, pin, gasket)	011836PV	7, 10, 11, 12, 13, 14, 16, 17, 44, 51, 64, 71, 77, 80
Kit F – Lower End Cylinder Kit (inner & outer cylinder, ratio adjuster, o-rings, retainer clip, pin, gasket)	011963PV	7, 16, 61, 64, 65, 66, 67, 79
Kit G - Lower End Kit, complete (Kit E, outer cylinder, ratio adjuster, o-rings, retainer clips, pins, retainer, filter, solution tube)	011846PV	7, 10, 11, 12, 13, 14, 15, 16, 17, 25, 27, 44, 51, 61, 64, 65, 66, 67, 71, 77, 79, 80
Kit H – Motor Piston Assy (upper end kit)	011863	9
Kit M – Mounting Bracket Kit (mounting bracket, 4 hex caps & nuts)	011432	56, 57, 58
Manual Reference	Part #	Description of Part
7	194405P	Cylinder, inner
10	194418H	Spring
11	011452	Fitting, suction tube, 1/2”
12	212120 *Must specify material	O-ring
13	011453A	Poppet, check w/washer
14	212005 *Must specify material	o-ring
15	194004	Seal retainer, o-ring
16	010016 *Must specify material	Gasket, inlet/outlet and cylinder
17	212005 *Must specify material	O-ring
25	011025	Suction tube, 1/2” x 5’
27	011018	Filter, for suction tube, 1/2” ID
44	194309	Dosage Piston
51	194301F	Shaft, with ears
61	194406P	Ratio adjustment sleeve
64	212017 *Must specify material	O-ring, inner cylinder, lower end
65	194310D	Pin, upper interlock
66	212025 *Must specify material	O-ring, outer cylinder, lower end
67	011918P	Cylinder, outer
71	194414	Nut, suction tube fitting
77	003039	Hose Barb 1/2” x 3/8”
79	194410SS	Pin, narrow interlock
80	194415	Twistlock

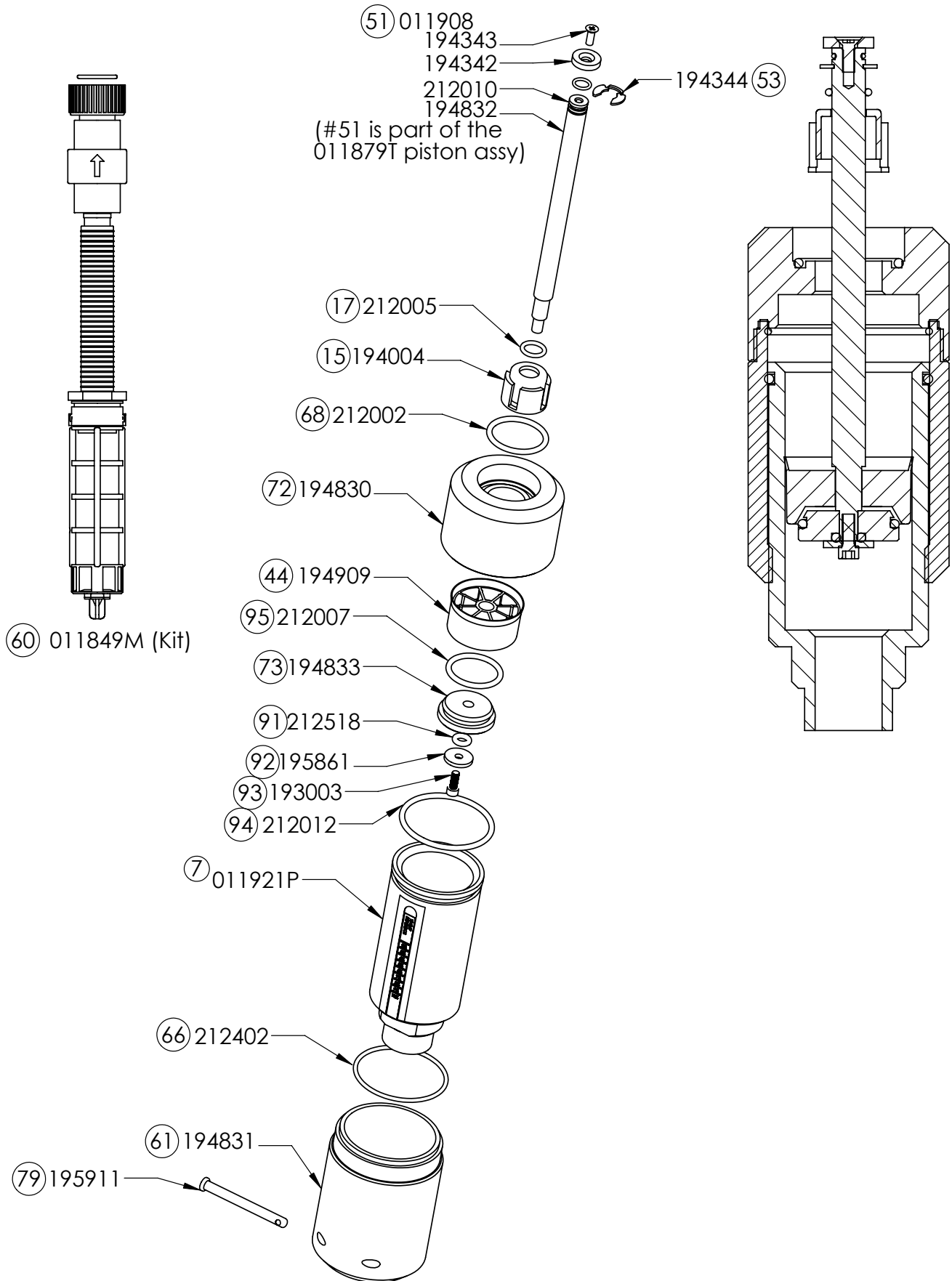
LOWER END INJECTOR PARTS 5%:



LOWER END INJECTOR & WEAR PARTS KITS 10%:

Description of Kit	Part #	Manual Reference
Kit B – Wear Parts Kit (Hose Kit)	011849M	60
Kit H – Motor Piston Assy	011879T	9
Kit M – Mounting Bracket Kit (mounting bracket, 4 hex caps & nuts)	011432	56, 57, 58
Manual Reference	Part #	Description of Part
7	011921P	Cylinder, inner
15	194004	Seal retainer, o-ring
17	212005 *Must specify material	O-ring
44	194909	Dosage Piston
51	011908	Shaft, stainless steel
61	194831	Cylinder, outer
66	212402 *Must specify material	O-ring, outer cylinder, lower end
68	212002 *Must specify material	O-ring, cylinder adapter, lower end
72	194830	Adapter
73	194833	Dosage piston guide
93	193003	Capscrew 10-32 x 1/2" SS hex
92	195861	Shaft Cap
79	195911	Ratio Locking Pin
94	212012 *Must specify material	O-ring, outer cylinder
91	212518 *Must specify material	O-ring, dosage piston guide
53	194344	Klipring
95	212007 *Must specify material	O-ring, dosage piston guide
60	011849M	Hose kit

LOWER END INJECTOR PARTS 10%:



WARRANTY:

The Dosmatic Warranty

We believe that we make the best and most reliable water-driven injectors available. Therefore, our warranty reflects our confidence; we will back our units with the best guarantee available.

1. Dosmatic will provide for replacement of all parts proven to be defective in material or workmanship from the date of purchase for the following time periods:

In the United States and Canada

All Other

3 years – The cover and body

1 year – Cover, body, motor piston, lower end*

2 years – The motor piston

1 year – The lower end*

*NOTE: (Your only responsibility is ordinary maintenance – filtering incoming water and solution and replacing the o-ring and dosage piston when worn)

2. Return the unit to the distributor or to Dosmatic's manufacturing facility, freight prepaid. Upon inspection, if found to be defective in material or workmanship, the unit will be repaired or replaced, at Dosmatic's option, free of charge, and will be returned freight prepaid.

3. This warranty is invalid if the defects are found to be due to the product's misuse, lack of maintenance, defective installation, freezing, water hammer, misuse or abuse or unwanted side effects due to the chemicals you choose to inject. The dosage piston, seals and o-rings are not covered under warranty nor is damage caused by water impurities, including but not limited to, sand or iron. A filter no coarser than 140 mesh or 104 micron must be used in front of the unit for the warranty to be valid. Dosmatic will not be responsible if the unit is used under conditions outside of its operating tolerances listed in this manual.

4. Dosmatic shall not be liable for incidental or consequential damage, such as any economic loss, resulting from breach of this written warranty or any implied warranty.

5. To return a unit for repair:

1. Thoroughly rinse all chemical solution from the lower end of the unit.

2. Drain the water from the upper end of the injector, leaving a small amount so that the seals do not dry out.

3. If possible, identify the chemical solution injected and include a copy of the chemical manufacturer's Material Safety Data Sheet for each chemical injected.

4. All claims for warranty repair must include a copy of the original invoice listing the serial number of the injector to be repaired.

5. With each injector returned, please fill out the return form in this manual.

6. If returning to Dosmatic, ship to:

Dosmatic U.S.A.
1230 Crowley Circle
Carrollton, TX 75006

7. For the name of your nearest Service Center, call us toll free at (800) 344-6767 or at (972) 245-9765.

6. There are no warranties which extend beyond those described above.

Part#013825 Rev A

Dosmatic U.S.A./International, Inc.

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