

SS40

Surge Suppressor

Operation / Maintenance Manual

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1 INSTALLATION

1.1 UNPACKING

After unpacking, the surge suppressor should be checked for any damage that may have occurred during shipment. Damage should be reported to the carrier immediately.

The following items should be included within the shipping container:

<u>Qty</u>	<u>Item</u>	<u>Description</u>
1	SS40	SS40 Surge Suppressor
1	Fitting	3/8" Male Branch Tee
2'	Tubing	3/8" PE Tubing
1	**	Seal, Port

**Dependent upon type of pump option selected.

1.2 LOCATING / MOUNTING SURGE

- Remove port plug from pump.
- Install new port seal.
- Hand tighten surge suppressor into port. **Do not** over tighten.

ATTENTION: Over-tightening adapter into pump will result in pump damage.

1.2.a Mounted

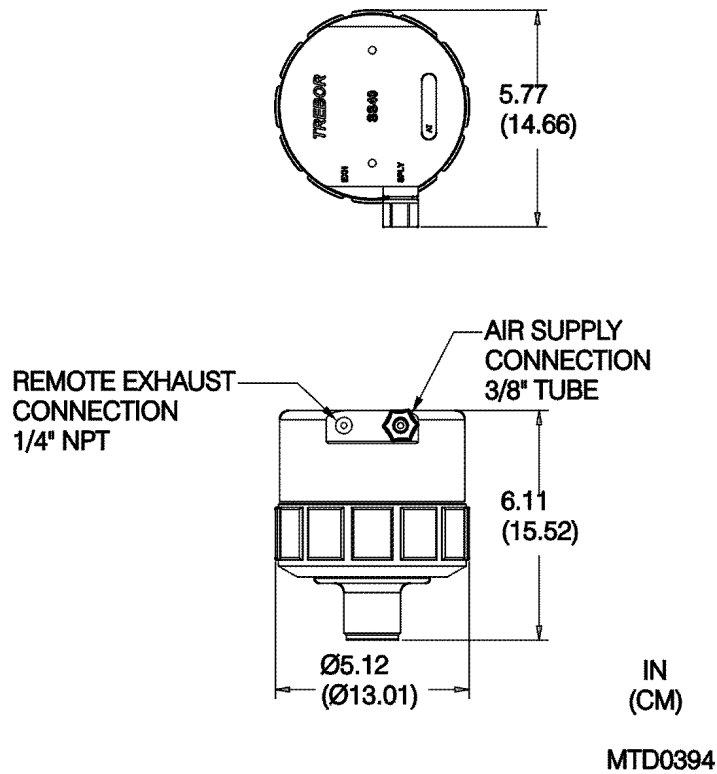


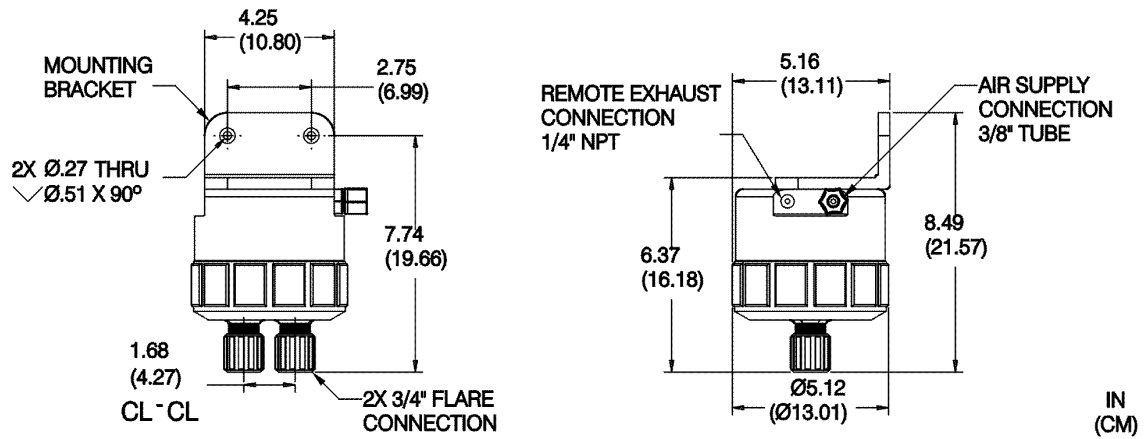
Figure 1-1

<u>Pump</u>	<u>Assembled Height: IN (CM)</u>
MODEL 110	11.03 (28.02)
MAGNUM 610	12.37 (31.43)
MAXIM 25	12.95 (32.89)
MAGNUM 620	12.63 (32.08)

NOTE: Install the branch tee in the pump air supply port to replace the pump air connector fitting and then use the supplied tubing to connect between the pump and the “SUP” port suppressor fitting.

NOTE: When mounted to a Maxim 25E/U pump, the SS40 requires it's own separate air supply line.

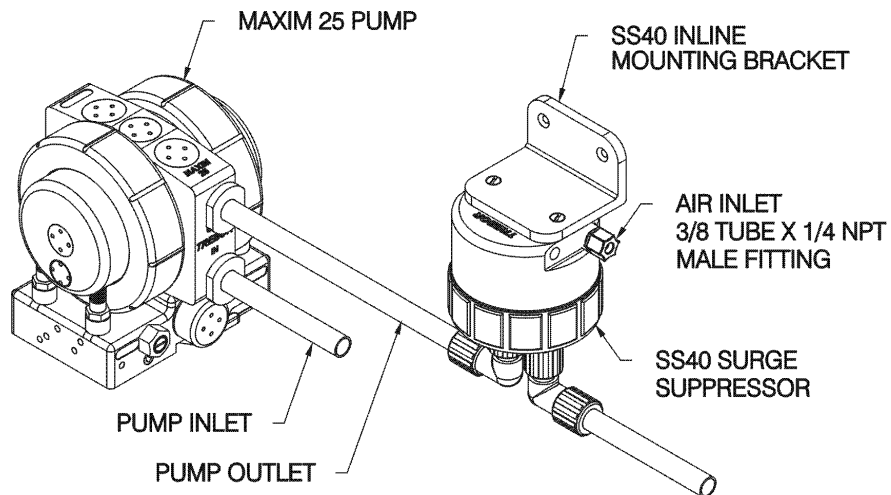
1.2.b Inline



MTD0395

Figure 1-2

The SS40 Inline must be mounted in an upright position. See Figure 1-3: Maxim 25.



MTD0235

Figure 1-3: Maxim 25

2 MAINTENANCE

2.1 RECOMMENDED SPARE PARTS

KRSS40-00-A Spares Rebuild Kit, which includes:

<u>Part No</u>	<u>Qty</u>	<u>Description</u>
AT002	1	.020 Thick PTFE Diaphragms
AT013	1	Pilot Valve Assembly

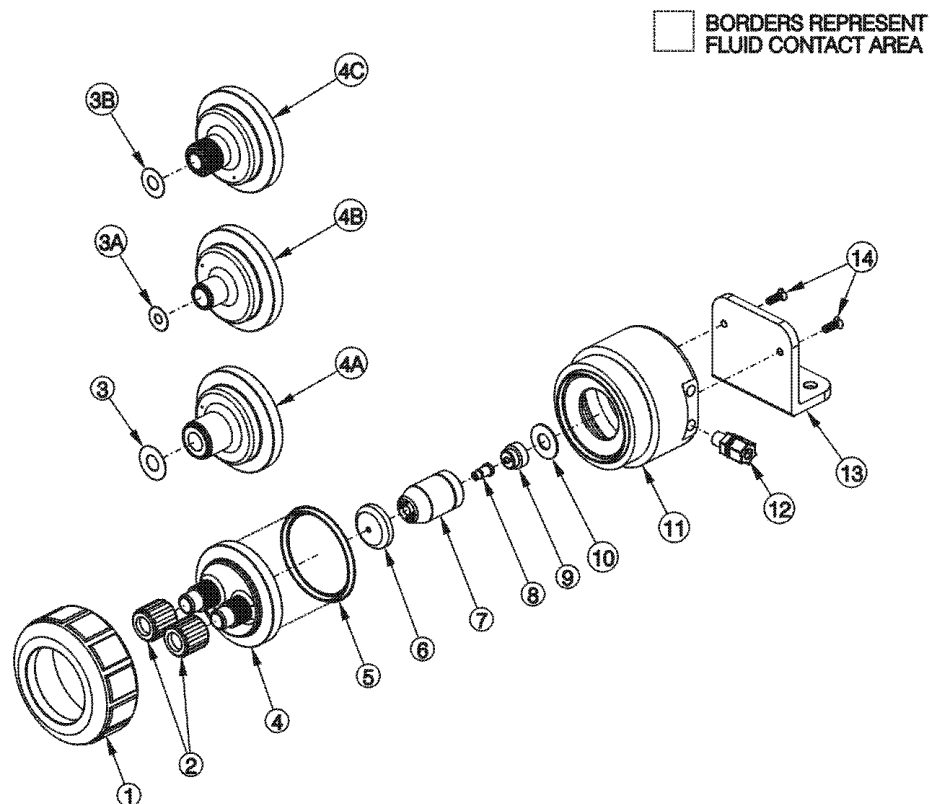
2.2 TOOLS

The following tool kit is recommended as standard service equipment.

KTSS40-00-A Tool Kit, which includes:

<u>Part No</u>	<u>Qty</u>	<u>Description</u>
98003108	1	Torque Wrench, 30-150 Ft. Lb.
98003305	1	1/4" Drive Handle
T0129	1	Strap Wrench
T0146	1	3/4" Pin Tool
T0148	1	1/2" Pin Tool

2.3 PARTS ILLUSTRATION



MTD0341

2.4 PARTS LIST

ILL NO	PART NO	QTY	DESCRIPTION	MATERIAL
1	AT021	1	Union Nut	PP
2	98002915 or 98003335	2	3/4" Flare Nut (Inline Only) (PVDF) or NUT;PFA;FLRLK;3/4T (PFA)	PP
3	AM084	1	Seal, 1.380x.63x.02	PTFE
3a	J0100	1	Seal, .97x.38x.02	PTFE
3b	AW017	1	Seal, 1.180x.55x.02	PTFE
4	AT004	1	Fluid Chamber, Inline	PTFE
4a	AT017	1	Fluid Chamber, 610/Maxim	PTFE
4b	AT012	1	Fluid Chamber, 110	PTFE
4c	AT015	1	Fluid Chamber, 620	PTFE
5	AT002	1	Diaphragm	PTFE
6	AT006	1	Push Plate	PTFE
7	AT005	1	Pilot Boss	PP
8	AT007	1	Shaft	PFA
9	AT013	1	Pilot Valve Assembly	PTFE / PFA
10	C0082	1	Seal	PTFE
11	AT003	1	Air Chamber	PP
12	98003396	1	3/8" Male Connector	PP
13	AT019	1	Mounting Bracket	PP
14	98003207	2	Screw	PP

2.5 CLEAN-UP

The SS40 Surge Suppressor may be flushed clean with either DI water or a rinse tank for 10 to 15 minutes.

2.6 DISASSEMBLY

During the life of the Surge Suppressor it may be necessary to perform certain preventative maintenance procedures to ensure its continued high performance. This Section and Section 2.7 Assembly are provided for the user's convenience in disassembling and re-assembling the surge suppressor.

- Thoroughly clean and flush the suppressor and pump before disassembly if possible using DI water.
- Disconnect suppressor air supply line from suppressor.
- Rotate suppressor CCW (counter-clockwise) to remove suppressor from pump and place in containment bag.
- Decontaminate both exterior and fluid chamber of suppressor using DI water.
- Remove any air fittings from supply and exhaust ports of the suppressor body.
- Clamp suppressor in vise to hold body with fluid connection pointing up.
- Using strap wrench and 1/2" torque wrench driver, remove union nut turning it CCW to loosen.
- Remove union nut carefully. Watch threads for possible entrapment of spilled chemical.
- Remove suppressor head noting clocked position of 1/16" diameter locating mark on head for reassembly.
- Remove diaphragms for inspection.

- Flush body with DI water and dry to remove any possible contamination.
- Connect suppressor supply port to 20-psig air supply and test pilot valve for leakage and actuation. Replace if escaping air can be heard or valve will not discharge when depressed.
- Insert small flat blade screwdriver in center hole of push plate to prevent shaft from turning. Remove push plate by rotating it CCW.
- Remove pilot valve boss using 3/4" pin tool to rotate boss CCW.
- Disassemble pilot boss assembly and replace pilot assembly or other worn parts.
- Check .020 diameter air bleed port in back wall of suppressor for possible blockage.

NOTE: All polypropylene and PTFE parts, when disassembled, should be thoroughly washed and free from acid residue for handling purposes.
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2.7 ASSEMBLY

- Check that all parts are clean and dry.
- Use a new pair of protective gloves to prevent carry over contamination.
- Reverse disassembly procedure starting with reassembling pilot boss assembly.
- Before reinstalling diaphragms, check diaphragms for white colored creases or other signs of wear or damage. Replace if necessary.
- Complete reassembly by re-clocking 1/16" diameter mark in head to the original position. (Failure to do so will result in air fitting misalignment after mounting suppressor.)
- Using Strap Wrench T0129 and Torque Wrench 98003108, set the torque wrench to 50 ft·lbs (acceptable range: 43–56 ft·lbs). This achieves an applied union nut torque of 57 ft·lbs (acceptable range: 50–65 ft·lbs).
- Reinstall suppressor on pump to hand tight plus 1/4 turn. If connection leaks, increase an additional 1/8 turn only. If leaking cannot be stopped, remove suppressor, replace disk seal and check mating surfaces for scratches or depressions.

3 WARRANTY



SS40 SURGE SUPPRESSOR

TREBOR International, Inc. warrants to the purchaser of new equipment manufactured by TREBOR to be free from defects in material and workmanship when used for its intended purpose under normal operating conditions, and maintained according to the Operation/Maintenance Manual.

TREBOR's obligation under this warranty is limited to repairing or replacing, at TREBOR's option and at the TREBOR factory, any part or parts thereof which shall, within 1 year after delivery thereof to the original purchaser, be demonstrated to TREBOR's satisfaction to have been defective. This warranty may be transferred to subsequent owners. The warranty period is based on the original ship date from the factory. All warranty related freight costs shall be borne by the customer.

Excessive wear to pump components caused by pumping abrasive solutions or chemicals, as well as damage caused by ingesting foreign objects shall not be covered by this warranty.

This warranty shall not apply to any equipment which, in the judgment of TREBOR, shall have been repaired or altered outside TREBOR's factory in any way, so as to affect its performance or reliability; subjected to misuse, negligence or accident; or used other than in accordance with TREBOR's printed instructions.

There are no terms, conditions or warranties, expressed, implied or statutory, of merchantability, fitness, capacity, or otherwise, of the goods ordered, other than, or different from, the warranty set forth above. This warranty takes precedence over any other warranty, expressed or implied.

TREBOR neither assumes, nor authorizes any other party to assume for it, any liability in connection with said equipment except as set forth above.