

SNO-WAY®

SNOW & ICE CONTROL EQUIPMENT

INSTALLATION & OWNER'S MANUAL

**SWS Filling Station
99101254**

FOR SWS 30

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INTRODUCTION

This manual was written for the assembly, installation and maintenance of your new Sno-Way SWS Filling Station. Most importantly, this manual provides an operating plan for safe use. Refer to the Table of Contents for an outline of this manual.

Please keep this manual with your machine at all times as reference material and so it can be passed on to the next owner if the machine is sold.

We require that you read and understand the contents of this manual COMPLETELY, especially the chapter on SAFETY, before attempting any procedure contained in this manual.



The Society of Automotive Engineers has adopted this SAFETY ALERT SYMBOL to pinpoint characteristics that, if NOT carefully followed, can create a safety hazard. When you see this symbol in this manual or on the machine itself, BE ALERT!, your personal safety and the safety of others, is involved.

• Defined in the next column, are the SAFETY ALERT messages and how they will appear in this manual.

	WARNING
FAILURE TO FOLLOW CAN RESULT IN DEATH OR INJURY.	

	CAUTION
Information, that if not carefully followed, can cause injury or damage to equipment!	

NOTE: Additional information concerning the equipment or the procedure that may or may not be contained elsewhere in this manual.

BE AWARE! It is illegal to remove, deface or otherwise alter the safety decals mounted on this equipment.

Record the Unit Serial Number in the space provided below as a handy record for quick reference. This plate contains information that your Dealer needs to answer questions or to order replacement parts, if needed, for your unit.

NAME PLATE DATA	
SWS 30 SERIAL NUMBER _____	(FILL IN)

DEALER	
NAME _____	
ADDRESS _____	
CITY _____ STATE _____ ZIP _____	
PHONE (____) - _____	(FILL IN)

ORIGINAL PURCHASER	
NAME _____	
ADDRESS _____	
CITY _____ STATE _____ ZIP _____	
PHONE (____) - _____	
DATE OF PURCHASE _____	(FILL IN)

We reserve the right to make changes or improve the design or construction of any part(s) without incurring the obligation to install such parts or make any changes on any unit previously delivered.

Graphics and illustrations may be used which may show equipment and/or options not included in every installation without incurring the obligation to install such parts or make changes on units previously delivered.

Factory contact information is available at www.snoway.com.

SAFETY

BEFORE ATTEMPTING ANY PROCEDURE IN THIS BOOK, READ AND UNDERSTAND ALL THE SAFETY INFORMATION CONTAINED IN THIS SECTION. IN ADDITION, ENSURE ALL INDIVIDUALS WORKING WITH YOU ARE ALSO FAMILIAR WITH THESE SAFETY PRECAUTIONS.

For your safety Warning and Information Decals have been placed on this product to remind the operator to take safety precautions. It is important that these decals are in place and are legible before operation begins. New decals can be obtained from Sno-Way or your local dealer.

REMEMBER The careful operator is the best operator. Most accidents are caused by human error. Certain precautions must be observed to prevent the possibility of injury to operator or bystanders and/or damage to equipment.

NEVER operate unit when under the influence of alcohol, drugs or other medications that could hamper your judgement and reactions. An accident may result in serious injury or death to other persons or yourself.

ALWAYS operate vehicle in a well-ventilated area. The carbon monoxide in exhaust gas is highly toxic and can cause injury or death.

NEVER wear wrist watches, rings or other jewelry when working on the vehicle or individual equipment. These things can catch on moving parts or cause an electrical short circuit that could result in personal injury.

ALWAYS wear safety goggles when working on the vehicle to protect your eyes from battery acid, gasoline, and dust or dirt from flying off of moving engine parts.

ALWAYS wear safety glasses with side shields when striking metal against metal! In addition, it is recommended that a softer (non-chipable) metal material be used to cushion the blow. Failure to heed could result in injury to the eye(s) or other parts of the body.

NEVER allow children or unauthorized person to operate this spreader.

ALWAYS lock the vehicle when unattended to prevent unauthorized operation.

ALWAYS check surrounding area for hazardous obstacles before operating this unit.

NEVER work on the vehicle without having a fully serviced fire extinguisher available. A 5 lb or larger CO² or dry chemical unit specified for gasoline, chemical or electrical fires, is recommended.

ALWAYS wait for all movement to stop before servicing or adjusting the Salt Wetting System.

ALWAYS reassemble any parts or hardware removed for cleaning or adjusting before operating the spreader.

ALWAYS remove any tools and other materials from the spreader before operating the spreader

NEVER allow hands, hair or clothing to get near any moving part of the spreader. Never wear neckties or loose clothing when working on the spreader or the vehicle.

ALWAYS be aware of and avoid contact with hot surfaces such as engine and exhaust.

ALWAYS inspect the unit periodically for defects. Parts that are broken, missing or plainly worn must be replaced immediately. Never operate the unit when in need of maintenance.

REMEMBER it is the owner's responsibility for communicating information on the safe use and proper maintenance of this machine.

INSTALLATION INSTRUCTIONS

Locating Filling Station

You are going to want to determine a prime location to place your vehicle while filling the SWS 30. The kit supplies a total of 25 feet of hose for filling the tank. The pump is self-priming up to 14 feet; in other words, the input hose cannot exceed 14 feet. The shorter the input hose is on the filling station, the less restriction there is for the solution to get to the pump. This means the pump can work more efficiently. In the end, the closer you are to the solution you are pumping into the tank the better.

There are four screws included with the kit that can be used to place the pump where you best see fit. Whether you want to permanently mount it to a wall or mount it on a custom bracket that you can hang nearby while in use and store it away later.

The pump will require a 115 volt AC outlet for power. Keep that in mind when you want to park and fill your tank.

1. Determine how many feet of hose you need from the pump to the solution you are pumping. Do not exceed 14 feet. Measure and cut the hose.

2. Mount the pump. Four Stainless Steel Screws have been provided, but depending on where and how you decide to mount the pump, different hardware might be needed.

3. Place the Elbow Fittings into the pump. Lift up on the sliding lock, push the O-ring end of the fitting into the pump, and slide the lock back down. (See Figure 1-2)

Assembly

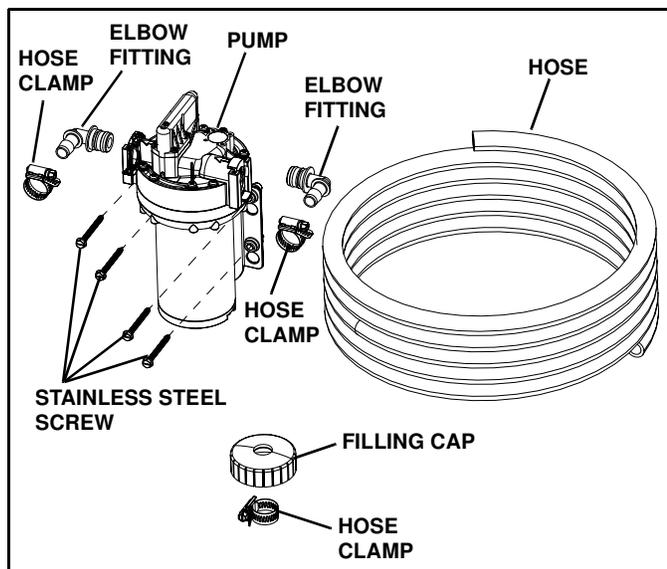


Figure 1-1

Description

- Pump
- Elbow Fitting
- Hose, 1/2" ID
- Hose Clamp
- Filling Cap
- Stainless Steel Screw

Quantity

- 1
- 2
- 1
- 3
- 1
- 4

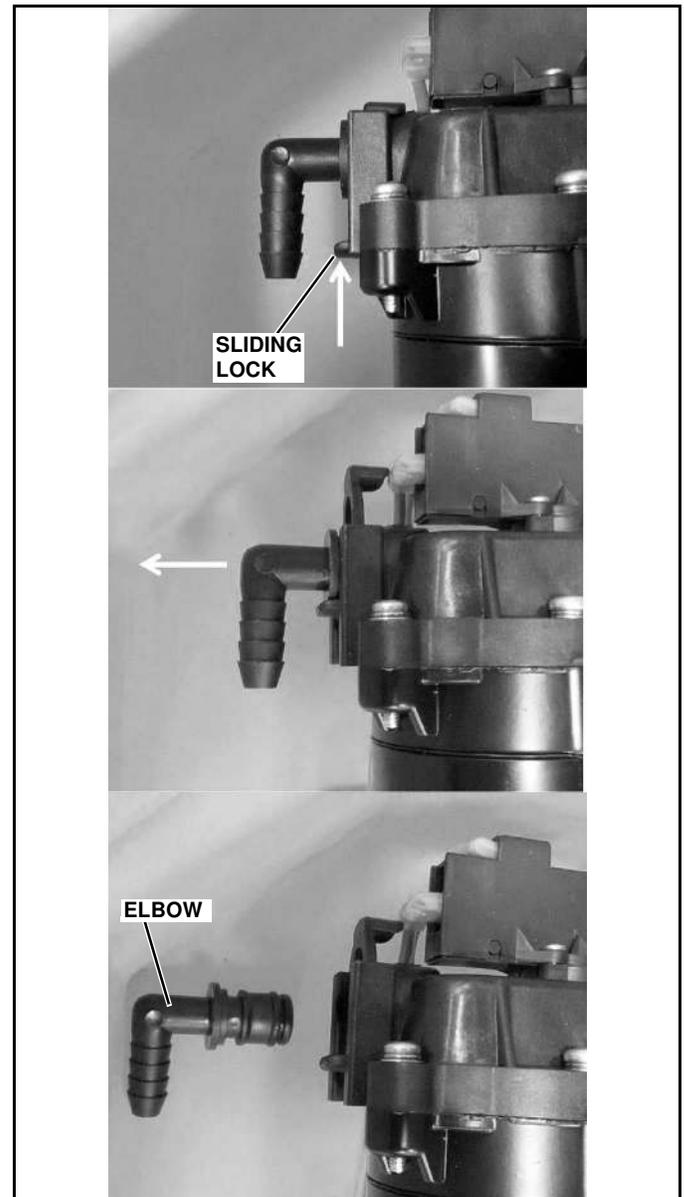


Figure 1-2

4. Push one end of the hose that was cut from step 1 onto the elbow fitting on the input side of the pump. Then fasten with a hose clamp. (See Figure 1-3)

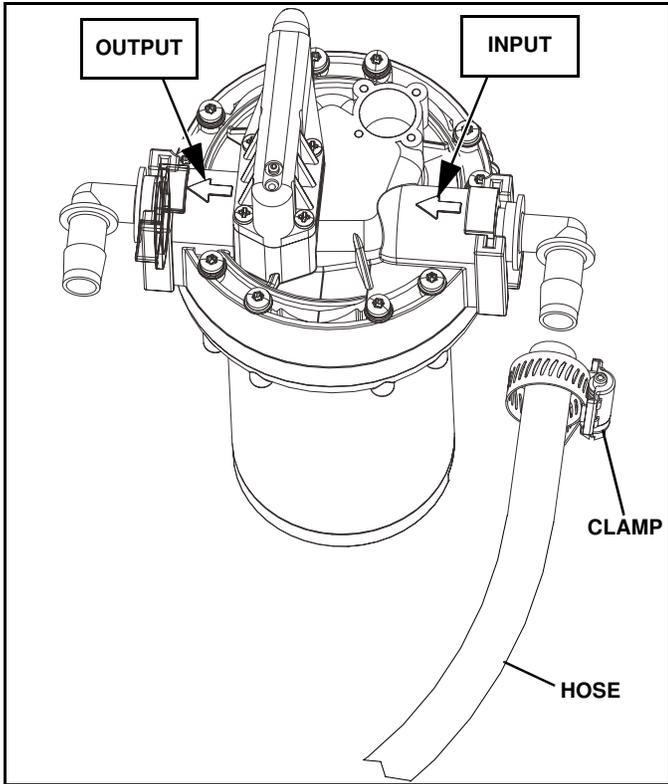


Figure 1-3

5. Insert one end of the remaining length of hose through the filling cap. (See Figure 1-4)

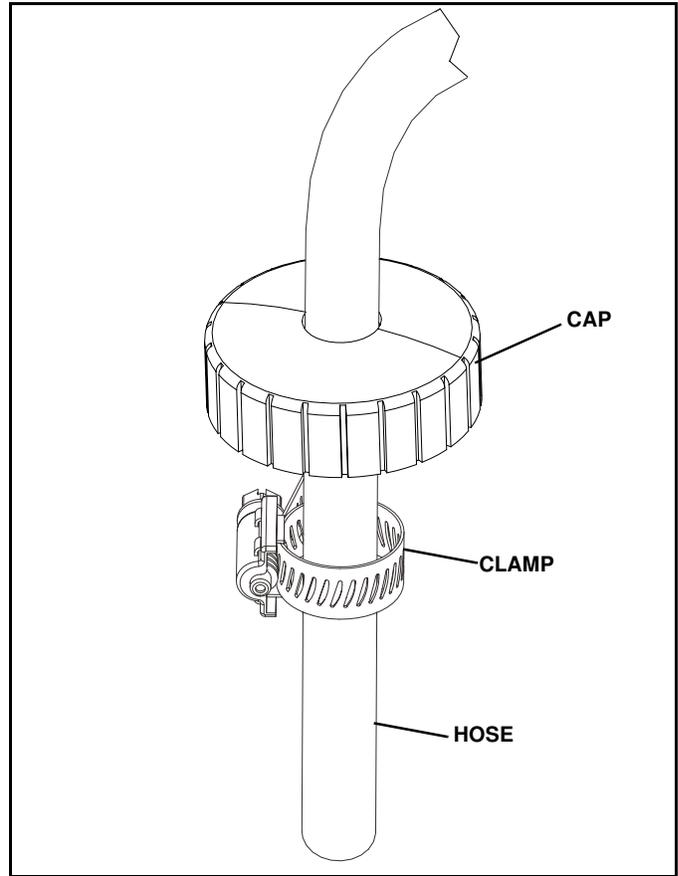


Figure 1-4

6. On the threaded side of the cap, fasten a hose clamp. Tighten only enough so it does not slide off the hose. (See Figure 1-4) This will prevent the hose from sliding out from the tank during filling.

7. Determine how much length is required for the output hose. If you can use less hose, cut off the excess and mount it to the pump with a hose clamp.

FILLING OPERATION

Filling Operation

The tank provides a cap to fill with on either side.
(See Figure 1-5) The fill necks are located differently on each side, so the straps holding down the spreader will not interfere with filling the tank. No matter which side of the tank is being used to fill from, the opposite side cap must be dismounted. The caps have a very small breather hole to allow in air when the unit is used. When the tank is filling, not enough air can pass through to exit. If the cap is not removed, one side of the tank will fill faster than the other.

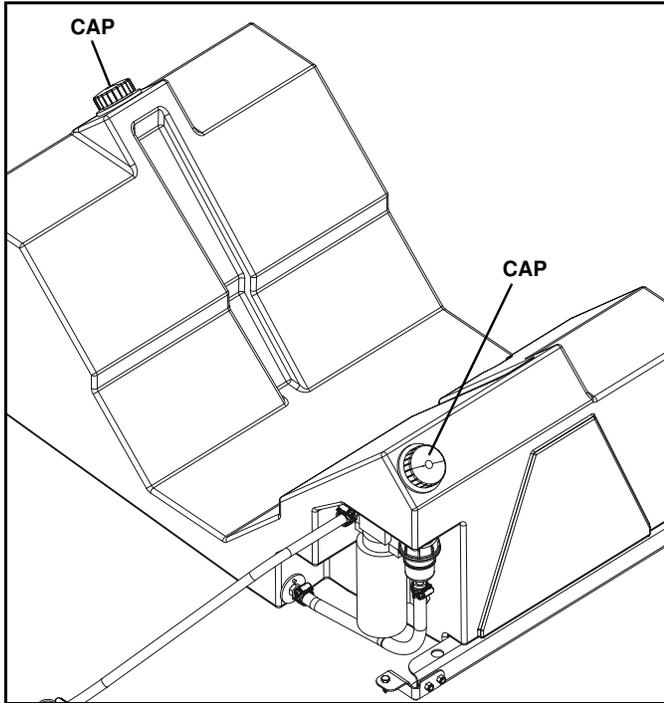
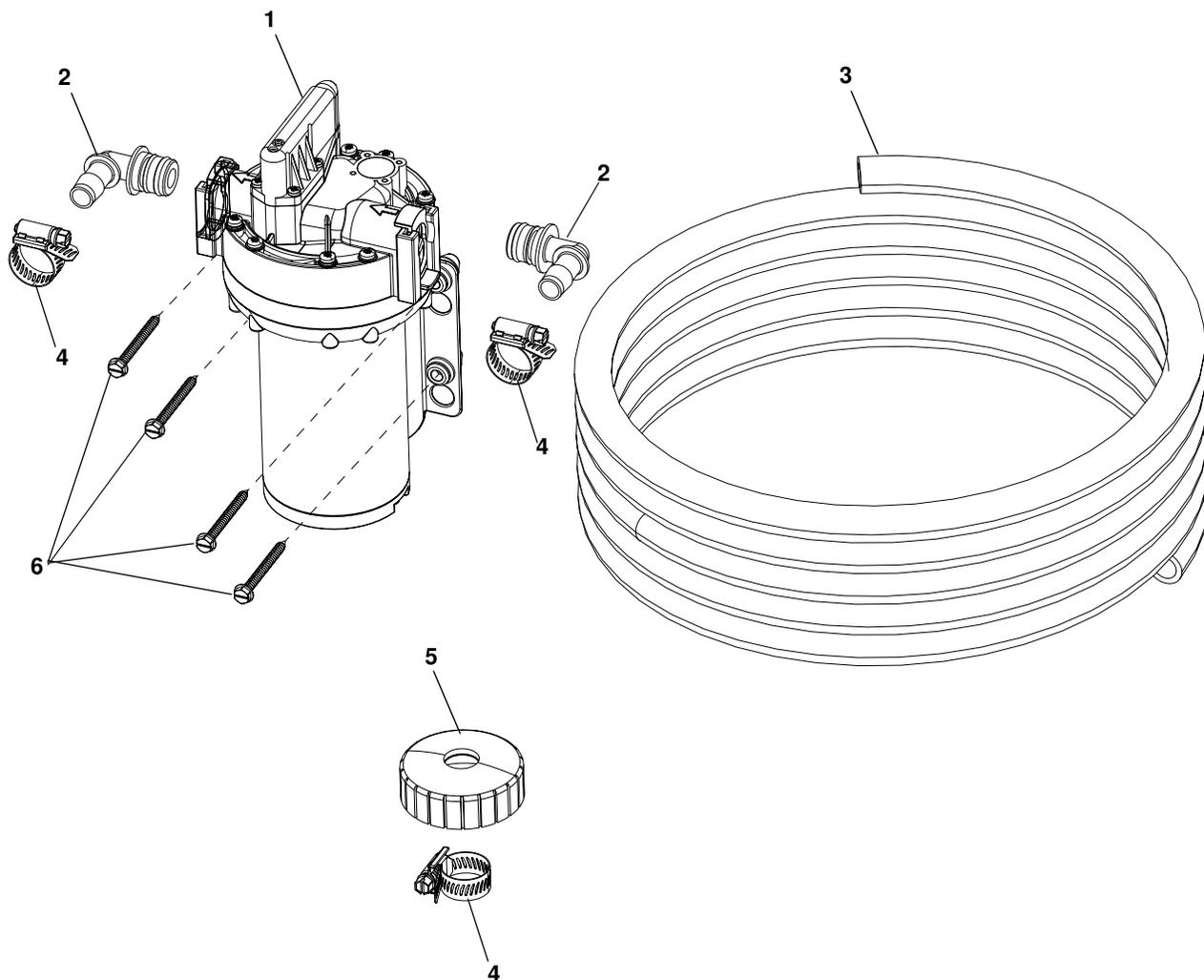


Figure 1-5

Place the input hose into the solution being pumped into the tank. Then, lightly screw the output hose onto the tank. Plug the pump into the outlet to begin filling. Keep an eye on the solution level in the tank. The pump will not shut off when the tank is full. When the desired capacity of the tank is reached, unplug the filling pump. Wrap up and store the hose for later use.

SERVICE PARTS

SWS Filling Station



ITEM	PART NO.	DESCRIPTION	QTY
1	96115763	Pump.....	1
2	96115764	Elbow Fitting.....	2
3	96115749	Hose, 1/2" ID (25 ft).....	1
4	98100518	Hose Clamp	3
5	96115762	Filling Cap	1
6	98100584	Stainless Steel Screw.....	4

MAINTENANCE

End of Season Clean-Out Instructions

1. Run a few gallons of water through the lines to clean any solution out in the system.
2. Cycle some RV antifreeze mix and water through the lines.

TORQUE SPECIFICATIONS

SAE Grade and Head Markings	1 or 2 No Marks 	5 5.1 5.2 	8 8.2 
SAE Grade and Nut Markings	2 No Marks 	5 	8 

	Grade 1		Grade 2		Grade 5, 5.1 or 5.2		Grade 8 or 8.2	
	Lubricated ^a	Dry ^b						
SIZE	lb-ft	lb-ft	lb-ft	lb-ft	lb-ft	lb-ft	lb-ft	lb-ft
8-32			14*	19*	22*	30*	31*	42*
10-24			21*	27*	32*	43*	45*	60*
1/4	2.8	3.5	4.5	5.5	7	9	10	12.5
5/16	5.5	7	9	11	15	18	21	26
3/8	10	13	16	20	26	33	36	46
7/16	16	20	26	32	41	52	58	75
1/2	25	31	39	50	63	80	90	115
9/16	36	45	56	70	90	115	130	160
5/8	50	62	78	100	125	160	160	225
3/4	87	110	140	175	225	280	310	400
7/8	140	175	140	175	360	450	500	650
1	210	270	210	270	540	675	750	975
METRIC COARSE THREAD Grade 8.8			Grade 8.8		Grade 10.9		Grade 12.9	
			Dry	Lubed	Dry	Lubed	Dry	Lubed
M6-1			8	6	11	8	13.5	10
M8-1.25			19	14	27	20	32.5	24
M10-1.5			37.5	28	53	39	64	47
M12-1.75			65	48	91.5	67.5	111.5	82
M14-2			103.5	76.5	145.5	108	176.5	131
M16-2			158.5	117.5	223.5	165.5	271	200

DO NOT use these values if a different torque value or tightening procedure is given for a specific application.

Fasteners should be replaced with the same or higher grade. If higher grade fasteners are used, these should only be tightened to the strength of the original.

^a "Lubricated" means coated with a lubricant such as engine oil, or fasteners with phosphate and oil coatings.

^b "Dry" means plain or zinc plated without any lubrication

* Values with asterisk are in lb-in.

NOTES

DELIVERY CHECKLIST

The following checklist is to be accomplished with the customer present, Place an X in the box after accomplishing each item on the checklist.

- After giving the Customer his Owner's Manual, instruct him to read it **PRIOR** to operating the Snow Plow. If he has any questions or does not understand part(s) of the Manual, ask him to contact the Dealer for answers or explanations **BEFORE** operating the unit.
- Record the Serial Number, Date of Purchase, Purchaser's Name and Address, and the Dealers Name, Address and Phone Number in the space provided on Page 2 of the Owner's Manual.
- Explain mounting and removal procedures.
- Demonstrate controller operation.

SNO-WAY® INTERNATIONAL, INC.

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