

ENGINEERING STANDARDS

Rosedale Products, Inc.
3730 West Liberty Road
Ann Arbor, MI 48103

IOM
7_4_21 Model 8
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Issue Date: 22MAY98
Revision: A
Revision Date: 30May2003

Specification No.
7.4.21
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INSTALLATION, OPERATION, & MAINTENANCE MANUAL

INSTALLATION, OPERATION AND MAINTENANCE MANUAL

ROSEDALE PRODUCTS, INC.



GIARDIA FILTER SYSTEM

NSF / 150 PSIG RATED LOW FLOW RATE FILTER UNIT

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I. Installation

Please remove all shipping and crating materials carefully. Be sure to remove the plugs from the inlet and outlet openings. Dispose of all crating materials safely.

Rosedale offers a variety of Giardia Filter Systems to handle a wide range of customer requirements. Although Rosedale's low flow rate, 2 stage, 2 housing system is the most common, higher flow rate Multi-Bag and Multi-Plex systems are also available. All Rosedale Giardia Filter Systems share many similar features. However, operating procedures do differ between models. This manual covers only the standard low flow rate system. Prior to operating your filter system, be sure you have the proper manual for your particular system.

Your Rosedale Giardia Filter System (low flow rate) consists of two standard 150 psig Model 8 Filter Housings. A Pre-filter, and the primary Giardia Filter. Each housing is clearly labeled and the direction of flow is marked on each label. The two housings are connected in series via a 2" Butterfly valve between the outlet (below the basket level) of the Pre-filter, and the Inlet (above the basket level) of the Giardia Filter. The main inlet and outlet of the Giardia Filter System are equipt with 2" NPT threaded flanges for easy connection to standard 2" pipe.

The inlet service line should be connected to the threaded inlet flange of the Pre-filter unit located toward the top of the unit (above the basket level).

There are two 1/4" NPT ports on the shell of each filter unit to accommodate the differential pressure switch, and one 1/4" NPT port on the cover of each filter unit to accommodate the 1/4 ball valve (pressure release).

After completing installation be sure to double check connections for integrity. Your Giardia Filter System has been factory pressure-tested leak free. Therefore, any seepage problems usually occur from improper installation connections or loosening during shipping.

You are now ready to install the filter basket and bags. Each filter unit uses a unique filter bag. Be sure to install the proper filter bag into the correct filter unit. Failure to do so will lead to improper operation of the system. Both units use the same type filter basket, but different bags. The Pre-filter must use a Rosedale P/N GD-PO-523-2 Graded Density Pre-Filter bag. The Giardia filter unit requires a specific GLR (Giardia Lambliia Removal) bag. Remove the cover by loosening the cover eye nuts. The eye nuts in the slotted corners should be loosened sufficiently to swing free of the cover. Loosen the stationary eye nut sufficiently to allow the top cover and closure assembly to swing away from the top of the unit.

Remove the stainless steel filter bag support basket and hold down device. Check to insure that the basket sealing gasket is properly installed (See Spare Parts Diagram No. 1). If missing or damaged, insert a new basket seal into the basket collar.

Insert the filter bag into the filter bag support basket making sure the filter bag ring is firmly seated inside the basket flange, and the filter bag is fully extended to the bottom of the basket. Place the basket/filter bag assembly into the filter housing pressing the basket flange firmly against the basket collar.

Before replacing cover assembly, inspect cover seal gasket (replacing as necessary). Install the correct filter bag hold down device. The Pre-Filter uses a stainless steel spring, and the Giardia Filter uses a machined spring

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loaded assembly. Make sure both hold down devices seat directly on top of the filter bag. The hold downs provide tension on the filter basket/bag to ensure that the filter basket/bag remains fully seated. Close cover and alternately tighten the three clamp assemblies evenly to ensure a leak proof seal between the cover and housing body. Torque closure assemblies to a maximum of 60-90^{ft-lbs}. Higher torque may be required depending on your application and filter condition.

Your Rosedale Giardia Filter System is now ready for operation!

I. Operation

Filter System Start-Up Procedure:

Prior to turning on the flow to the inlet service, please make the following checks:

1. Check inside the filter unit to be sure that the basket and proper filter bag are in the housing and do not require cleaning or replacement. If necessary install a clean filter basket and bag.
2. Each filter housing must be filled, vented and purged individually before being placed in service. This is necessary to remove substantial quantities of air that are trapped in the housing and filter bag. Failure to purge and vent the system may result in inaccurate turbidity measurements down stream of the filter system and transportation of air bubbles down stream. The air bubbles purged from the bags and housings have a "soap suds" like appearance. These suds can last for several hours with the water retaining a milky appearance. After the filter bags have been installed in the filter housings and the top cover is securely fastened to the housing, you are ready to purge the filter bags of air. The air purging procedure is similar for both stages. We recommend purging the Pre-Filter stage first, followed by the Giardia Filter stage. Isolate the filter housing to be purged by closing the 2" valve located on the outlet of the filter housing. Partially open the air vent located on the Cover of the filter housing and the drain valve located at the bottom of the housing. Slowly open the inlet valve approximately 25% of full operation. Some air will escape through the top vent while the housing is filling with water. When a continuous flow of water is obtained through the top vent, close it. Continue to allow flow from the drain until the water is clear (This usually requires 75-200 gallons). When finished, repeat the process with the Giardia Filter stage using the appropriate valves. When the purge has been completed, all inlet-outlet valves should be completely opened and the drain and top cover valves should be completely closed. The system is designed to allow individual housing purges. This provides the flexibility to change either a Pre-Filter bag or Giardia Filter bag separately on an "as needed" basis.

Once the desired service flow has been established, the filter will operate efficiently until dirty. However, under no circumstances should the Differential Pressure through the filter be allowed to exceed 15 psig. Operating the filter unit with a high differential pressure may cause filter bags to rupture and/or cause damage to the filter system and downstream equipment.

To prevent excessive pressure drop through the filter unit, regular inspection of the filter media is required. As a means of determining whether or not the filter media needs cleaning or replacement, the Giardia Filter System has been equipt with two D.P. gauges. The gauge for the Pre-filter is a gauge only with a range of 0-30 psig. Most systems include a standard 0-60 PSID differential pressure gage for the Giardia Filter stage.

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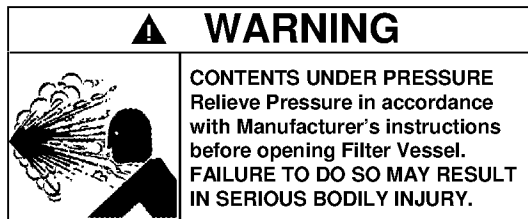
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However, some states may require an additional switch feature. This switch feature can be used to communicate to an optional Bypass valve or other compatible control system.

When it becomes necessary to clean or replace filter media, follow the procedure outlined below:

1. First close the flow from the inlet service line.
2. Close the flow to the outlet service line.
3. Relieve the pressure from the filter unit through the Ball Valve Cover Vent.



4. Drain housing sufficiently to access filter basket.
5. Remove cover by loosening the cover eye nuts. The eye nuts in the slotted corners should be loosened sufficiently to swing free. Loosen the stationary eye nut sufficiently to allow the top cover and closure assembly to swing away from the top of the unit.
6. Remove the filter basket and clean thoroughly, remove the filter bag and throw away. (Cleaning and reusing the filter bag is not recommended.)
7. Remove debris and sludge from inside the inlet portion of the housing to avoid interference with the cover seal or flow of the fluid being filtered.
8. Remove the basket seal and inspect, replace if necessary. Clean the basket seal groove and replace the basket seal (see spare parts diagram for location of basket seal).
9. Install the clean filter basket and filter bag. Place the basket into the filter housing, make sure the basket flange is firmly seated into the basket collar. If applicable, insert bag into the bag basket making sure the filter bag ring is firmly seated inside the basket flange. For best results, be sure the filter bag is installed fully extended to the bottom of the basket. Install the correct hold down device.
10. Inspect cover gasket for cuts or other signs of failure (replace if necessary), and make sure it is properly seated.
11. Move cover back into position, and alternately tighten the three clamp assemblies evenly to ensure a leak proof seal between cover and housing body. Torque closure assemblies to a maximum of 60-90^{ft}-lbs. Higher torque may be required depending on your application and filter condition.
12. Purge housing as previously described in paragraph 2 of the Filter System Start-up Procedure.

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III. Spare Parts List

Your Rosedale Giardia Filter System will give you many years of reliable service provided periodic inspections are made of various components and replacement of worn parts are made promptly. The following is meant to be a recommended spare parts list, these parts are illustrated in the Spare Parts Diagrams.

SPARE PARTS LIST			
Balloon	Description	Part Number	Time-Frame
1	Cover Seal	8150CG-FG	as needed
2	Basket Seal	8BG-FG	as needed
3	Cover	8CG150-S	as needed
4	Eye Nut	8ENNI	as needed
5	Rod End	8RENI	as needed
6	Clevis Pin Assembly	8CPNI	as needed
7	Filter Bag(Pre-Filter)	(See Order)	as needed
8	Filter Bag(Giardia)	GLR-PO-825-2	as needed
9	Filter Basket	0-730-PB	as needed
10	Tripod Legs	8T22SS	as needed
11	2" Bray Butterfly Valve w/ Handle	0-1366	as needed
12	1/4" Ball Valve	5-8514	as needed
13	1/4" Hose 20" Lg. Teflon/304	5-7288	as needed
14	2" 150lb Flange Gasket	5-9230	as needed
15	Differential Pressure Gauge w/Switch	5-8565	as needed
16	Differential Pressure Gauge	5-8970	as needed
17	Denver Hold Down (DHD)	8-7474	as needed
18	Standard Bag Hold Down	8-7200	as needed
19	2"150# ANSI RFTF	5-9350	as needed
20	Bolt Set for Butterfly Valves (4), 5/8-11 x 4-1/2"	Bolt/Valve Kit	as needed
21	Bolt Set for Flange to Flange Connection (4)	Bolt/Flange Kit	as needed

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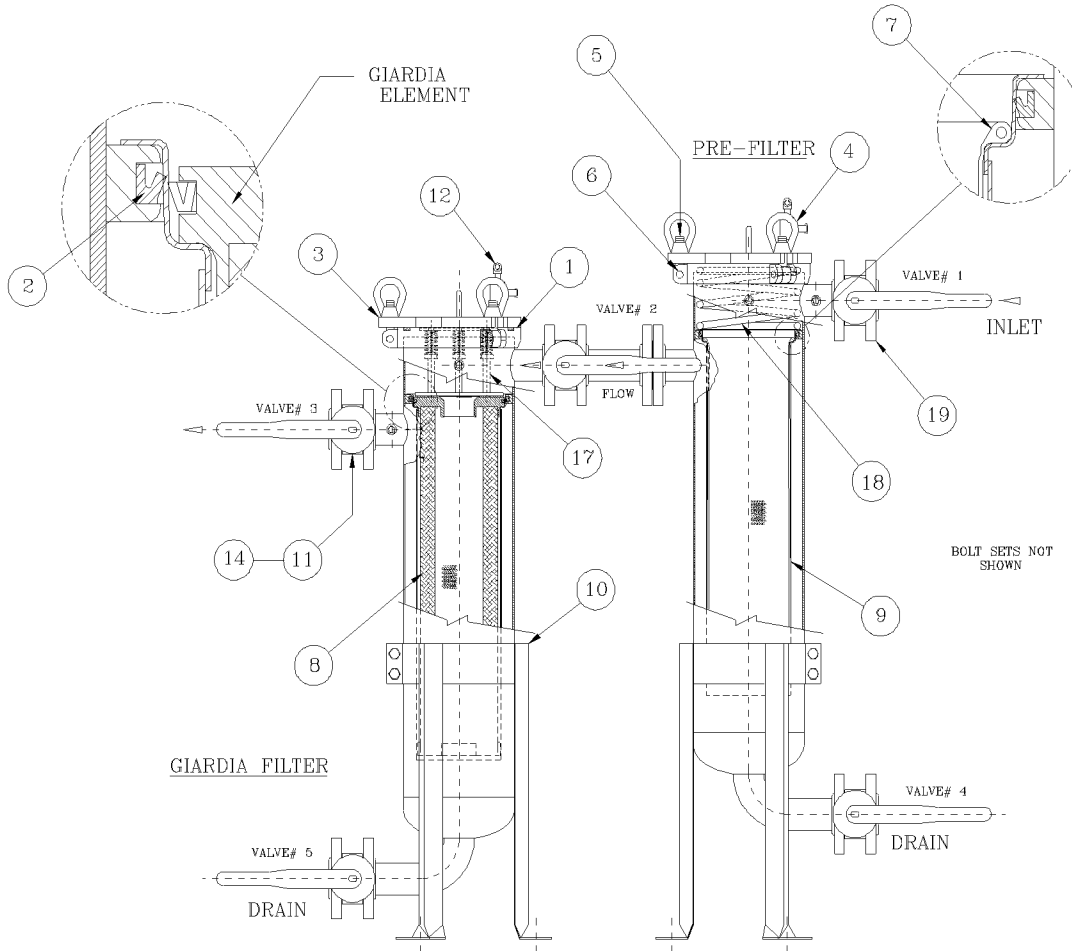
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IV. Spare Parts Diagram No. 1

Note: For Additional Components, see Diagram No. 2



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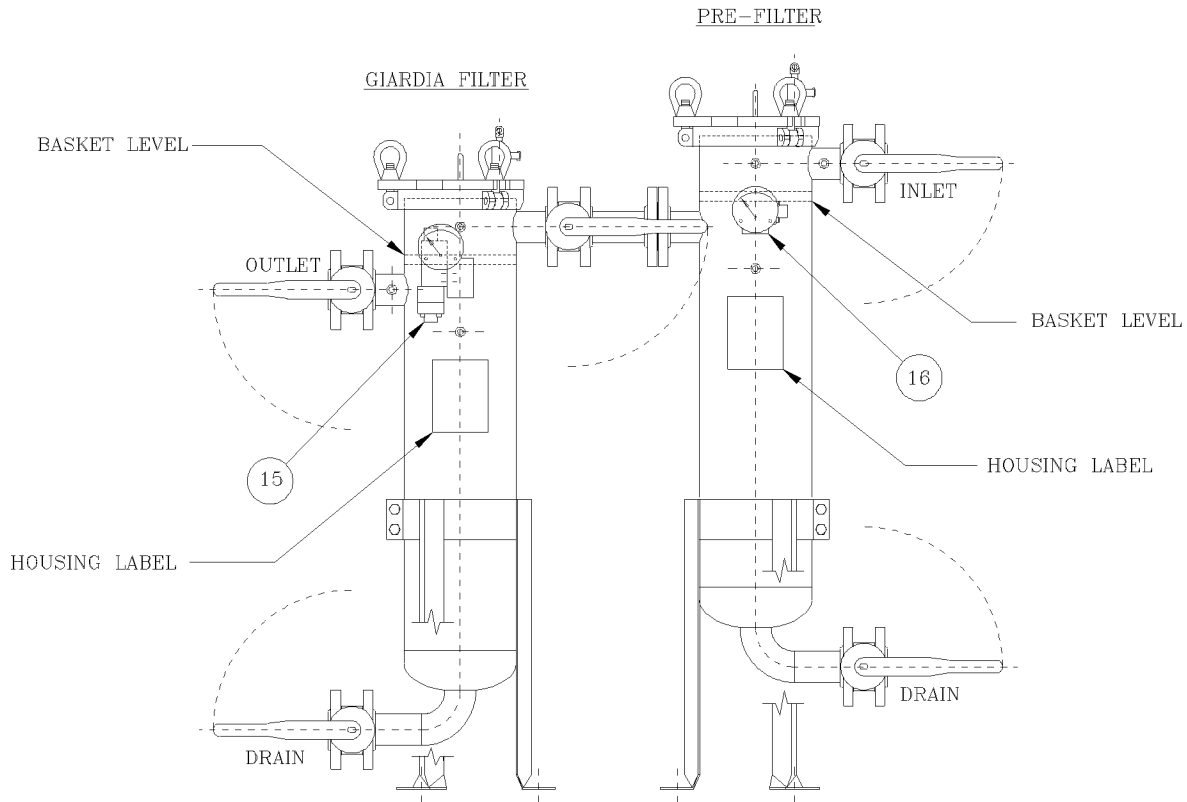


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IV. Spare Parts Diagram No. 2



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Important Notice

Warranty: In the event any Rosedale Products, Inc. filtration product is found to be defective in material, workmanship, or not in conformance with any express warranty for a specific purpose, Rosedale's only obligation and your exclusive remedy, shall be to repair, replace or refund the purchase price of such parts or products upon timely notification thereof and substantiation that the product has been stored, maintained and used in accordance with Rosedale's written instructions.

EXCLUSIONS TO WARRANTY: THIS WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHER WARRANTY OF QUALITY, EXCEPT OF TITLE AND AGAINST PATENT INFRINGEMENT.

LIMITATION OF LIABILITY: Except as provided above, Rosedale shall not be liable or responsible for any loss or damage, whether direct, indirect, incidental, special or consequential, arising out of sale, use or misuse of Rosedale filtration products, or the user's inability to use such products.

THE REMEDIES SET FORTH HEREIN ARE EXCLUSIVE.

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