

RAY-VAC®



Installation Manual

⚠ WARNING

FOR YOUR SAFETY - This product must be installed and serviced by authorized personnel, qualified in pool/spa installation. Improper installation and/or operation can create a hazard which can cause serious injury, property damage, or death. Improper installation and/or operation will void the warranty.

Jandy®

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Equipment Information Record

Date of Purchase _____ Purchased From _____

Ray-Vac Model Number _____

Serial Number _____

Installed by _____ Service Number _____

Notes: _____

SECTION 1. Safety Information

1A. Safety Instructions

**READ AND FOLLOW THESE SAFETY INSTRUCTIONS!
PLEASE SAVE THESE INSTRUCTIONS**

 Caution

1. Handrails which extend into the water must be removed or substituted with a figure four design so as not to obstruct the movement of the cleaner.
2. Ladders present a special situation requiring our special Ladder Guard Kit. If the ladder guard is not installed on the cleaner head, the unit can become entangled in the ladder.
3. Ideal pools are those with curved corners with a radius of at least 6" including all steps and love seat areas. Pools with square corners or corners with less than 90° angles (especially in step or love seat areas) can cause problems.
4. Never install the pool cleaner in pools which have obstacles such as islands, stools, or non-removable fountains, as the cleaner can become entangled.

SECTION 2. General Information

2A. Introduction

This manual contains information for the proper installation and operation of Jandy Ray-Vac Automatic Pool Cleaners. Procedures in this manual must be followed exactly. To obtain additional copies of this manual contact us at 707-776-8200, ext. 237. For address information see back cover.

The Ray-Vac Pool Cleaner requires either (1) an operable booster pump installed in the pool circulation system: or (2) the pool circulation system plumbed per Jandy installation instructions for non-booster pump applications. If you are uncertain if the pool meets one of the above requirements, consult your local pool professional.

SECTION 3. Wall Mounting Location

3A. Pool Cleaner Line

1. The pool cleaner line should be located on the "clean wall" (no obstacles such as steps, love seats, ladders, etc.).
2. The location should also be equidistant from the furthest points of the pool (see Fig. 1).
3. Position the pool cleaner so that it will be 6" to 8" below the normal water level of the pool.

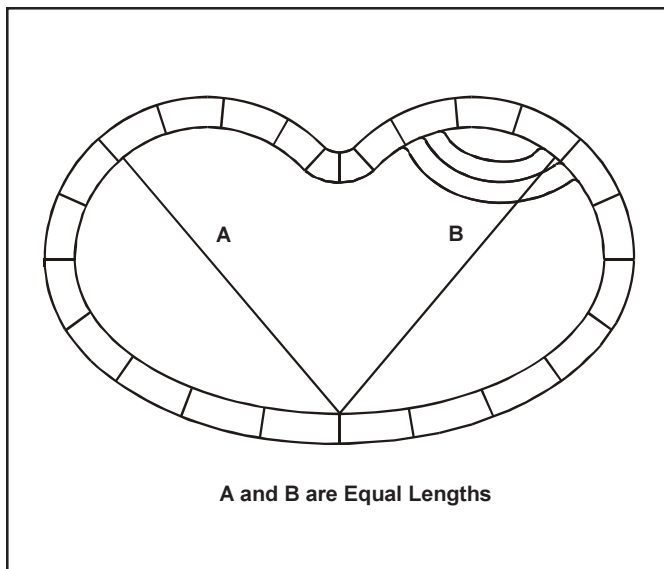


Figure 1. Pool Cleaner Line Location

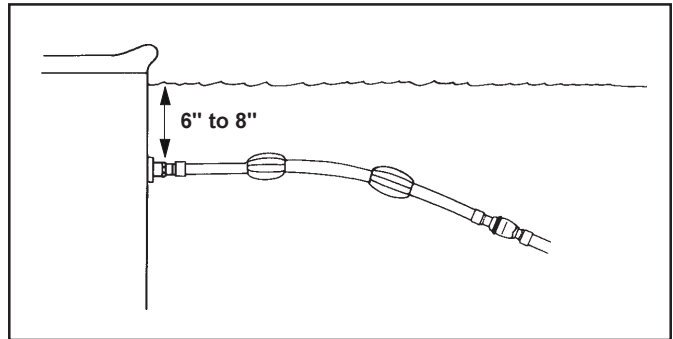


Figure 2. Ray-Vac Hose in Pool

SECTION 4. Head and Hose Installation

4A. Attaching Ray-Vac Head to Hose

1. Unpackage and lay out hoses. Locate Ray-Vac pool cleaner head. Locate package of lettered reducer washers (Booster Pump Kit).

Note: The washers are for use with booster pump cleaner only. Do not use for non-booster pump installation.

2. Insert barbed end of pusher jet into silicon hose on Ray-Vac head. Be sure silicone hose completely covers barb and is on straight (see Fig. 3).

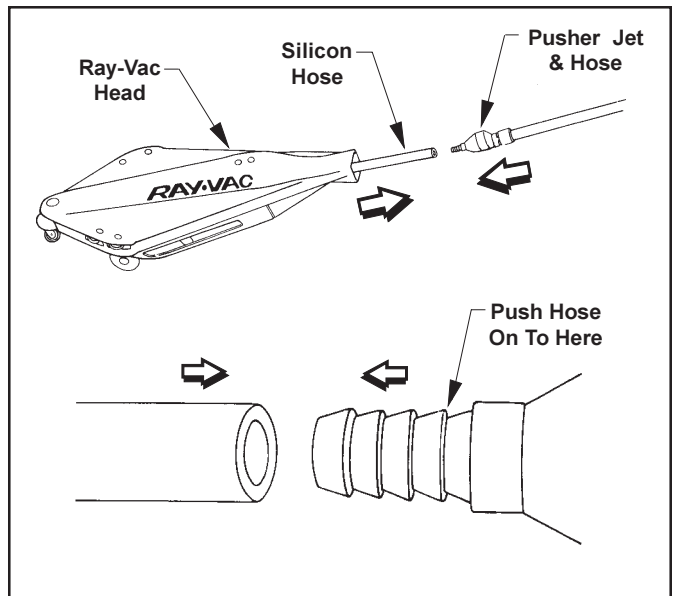


Figure 3. Attaching Pusher Jet Hose to Ray-Vac Head

4B. Connecting Ray-Vac Hose to Pool Wall

1. Locate the pool cleaner wall fitting in the pool. Determine the size of the wall fitting. The most common size is 1½", but some wall fittings are ¾". If you do not have the ¾" or 1½" wall fitting, consult your pool professional.
2. Thread the correct wall reducer into the pool wall fitting. **Hand tighten only.**
3. To connect the Ray-Vac hose to the pool wall, insert the quick disconnect fitting (end of Ray-Vac hose) into the wall reducer. Line up tabs on fitting with slots in wall reducer. Push in firmly until the fitting is flush in wall reducer, then turn clockwise until locked.
4. To disconnect the Ray-Vac, push in firmly on fitting and turn counterclockwise and pull out.

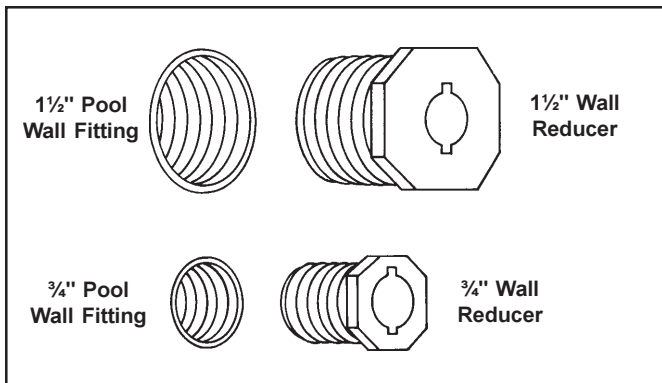


Figure 4. Wall Reducers

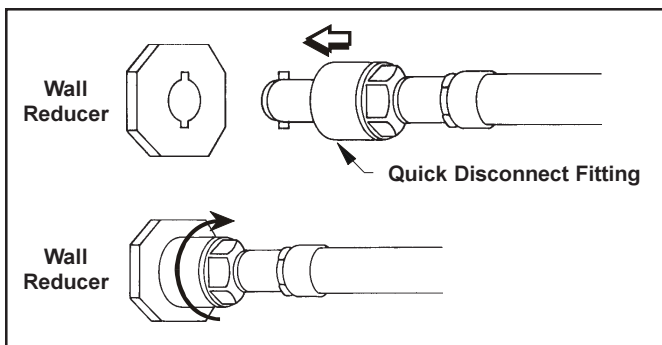


Figure 5. Quick Disconnect Fitting

4C. Hose Length Adjustment

1. Grasp the Ray-Vac head and take it to the farthest point away from the wall fitting in the pool. The Ray-Vac should be able to extend out of the pool approximately 2' to 5'. If the Ray-Vac does not

reach out of the pool, the hoses are too short. If the Ray-Vac extends beyond 5' out of the pool, the hoses are too long (see Figs. 6-8).

Note: Before operating the cleaner for the first time or if the cleaner has been coiled for an extended period, it is advisable to stretch the entire cleaner out in the sun for a day to soften the hoses and prevent tangling.

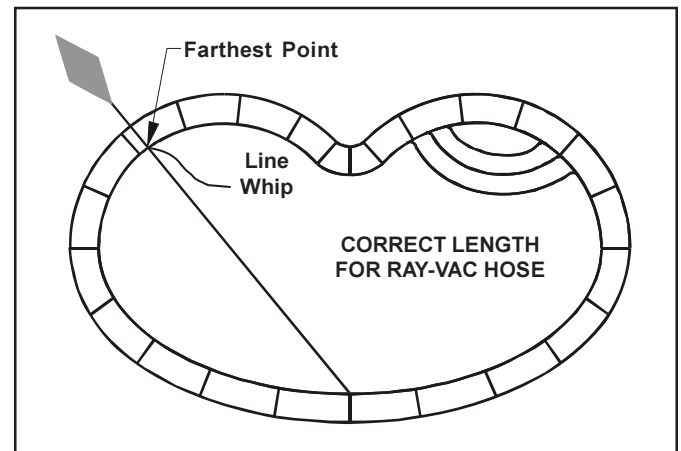


Figure 6. Correct Ray-Vac Hose Length

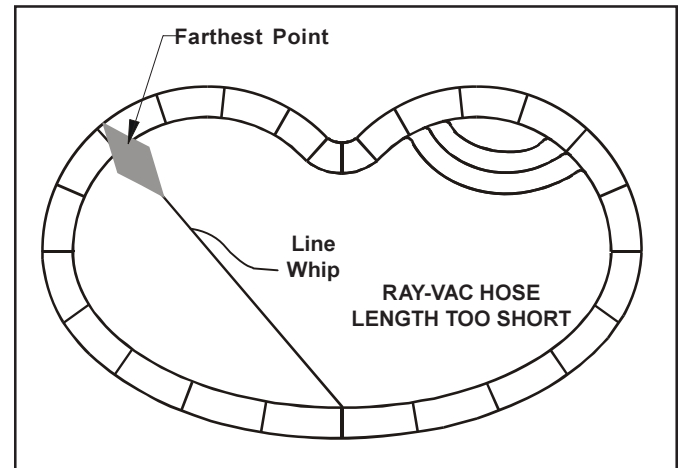


Figure 7. Ray-Vac Hose too Short

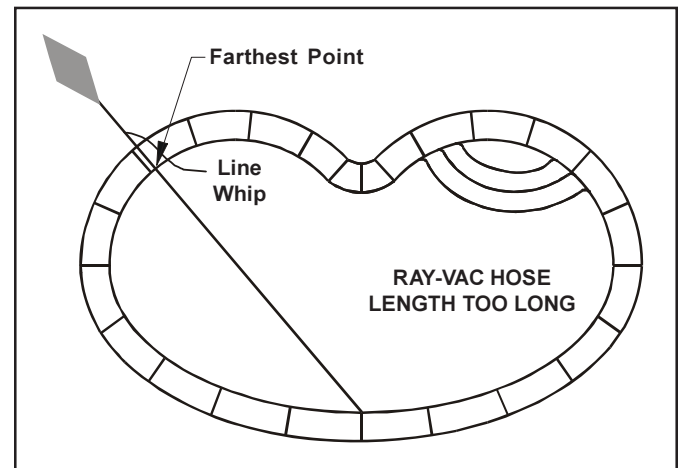


Figure 8. Ray-Vac Hose too Long

2. If your Ray-Vac hoses are the correct length, proceed to Section 5, "Speed Adjustment Booster Pump Installation" or Section 6, "Speed Adjustment Non-Booster Pump Installation."
3. If your Ray-Vac hoses are NOT the correct length, use one of the following steps to correct the hose length:
 - a. If the hose length is too long, remove 3' hose sections as required to shorten the hose. Follow hose section numbering for order of removal when you must remove more than one section.

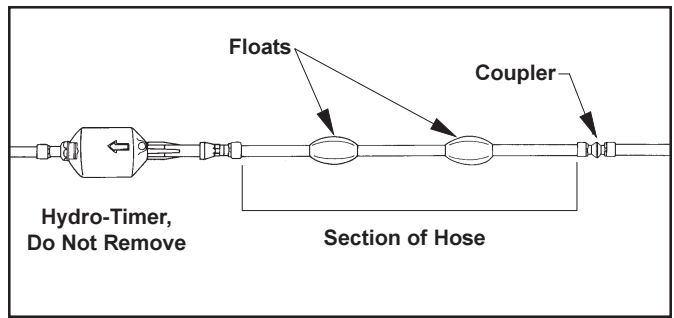
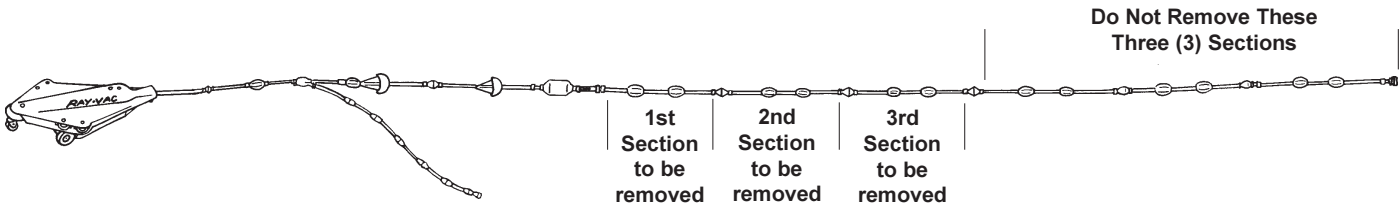
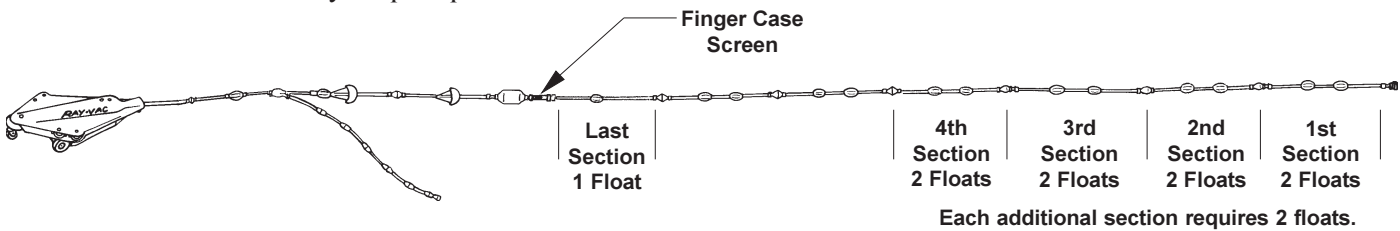


Figure 9. Ray-Vac Hose Section

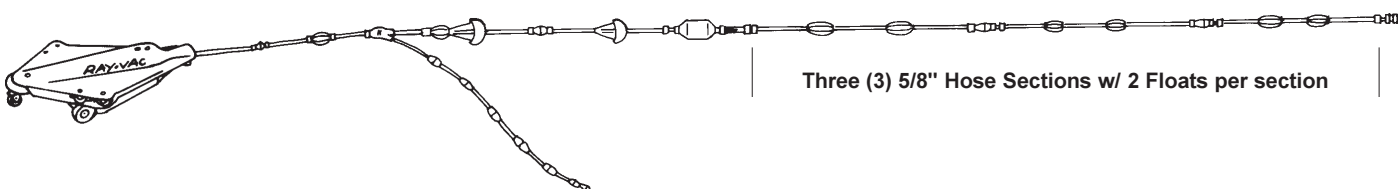


Remove one or more of these sections to shorten length.

- b. If the pool size is 20' x 40' or greater and the cleaner hose requires seven 5/8" hose sections or more to size the cleaner correctly to the pool, you must set the floatation as follows: Starting at the finger screen case there must be two (2) floats on all sections, except the section nearest the hydro-timer. The hose section nearest the hydro-timer should have one (1) float in the center of the hose. If your Ray-Vac requires eight (8) sections or more, a booster pump may be needed. Consult your pool professional.



- c. If the pool size is 15' x 30' or less, all sections between the hydro-timer and the wall mount should now have two (2) floats.



4. To disconnect hose sections
 - a. Remove the "C" clip from the coupler.
 - b. Slide mender sleeve off hose.
 - c. Pull hose off the coupler.
 - d. Remove mender ferrule from hose (5/8" hose only).

Do not lose mender ferrule.

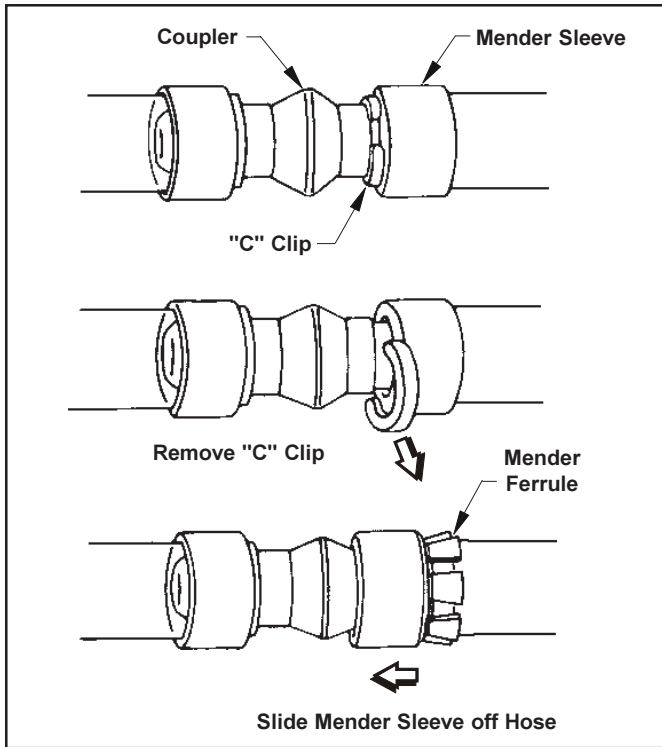


Figure 10. Disconnect Hose Section

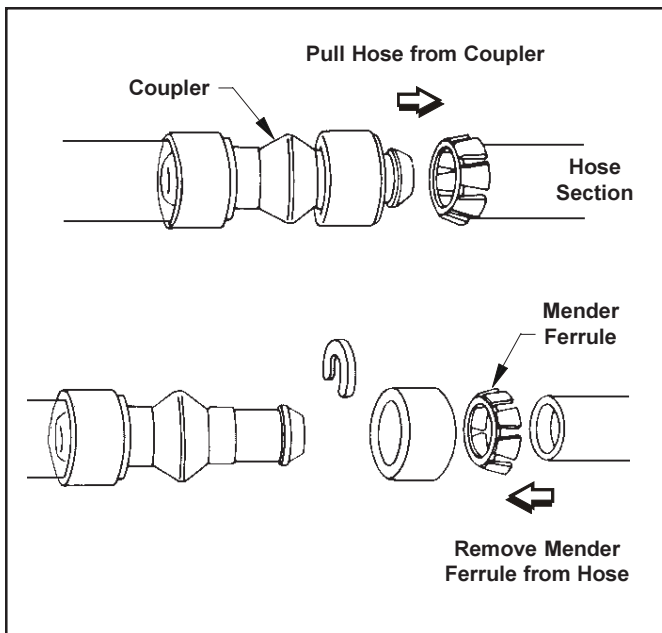


Figure 11. Disconnect Hose Section

5. To reconnect hose sections:
 - a. Place mender sleeve loosely over hose coupler small end first.
 - b. Place mender ferrule over hose section.
 - c. Push hose section and ferrule onto coupler.
 - d. You must pull the mender sleeve, mender ferrule and hose hard enough to expose the valley behind the barb on the coupler. If the "C" clip is not in the valley the mender sleeve can slide off and the hose will come apart.
 - e. Snap "C" clip into valley in the coupler. The clip must "snap" into the valley behind the mender sleeve.

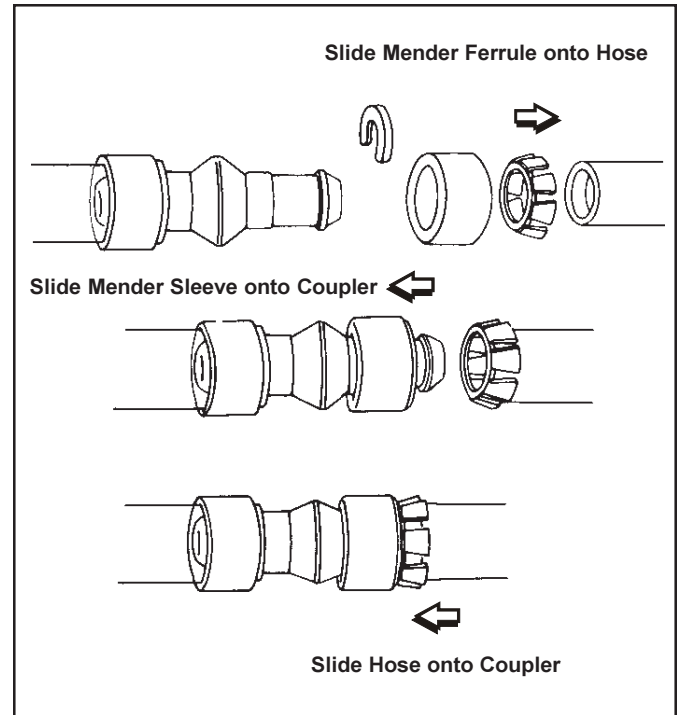


Figure 12. Reconnecting Hose Section

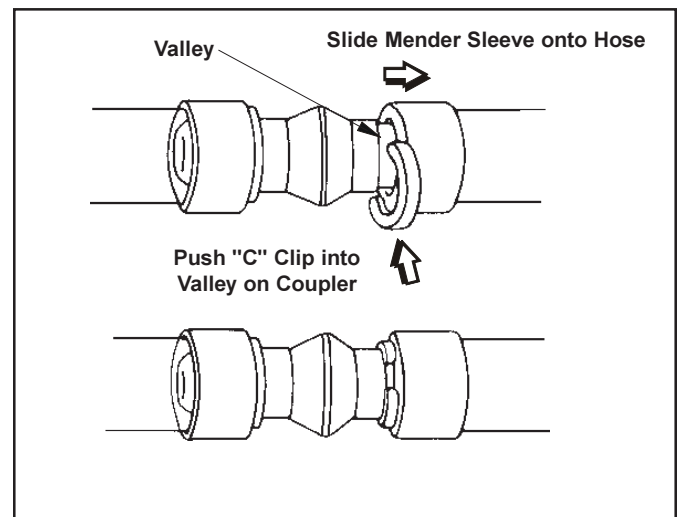


Figure 13. Reconnecting Hose Sections

SECTION 5. Speed Adjustment with Booster Pump

This section assumes that a booster pump is properly plumbed and operating in the pool circulation system. If not, you must install a booster pump before proceeding (see instruction package with the booster pump for installation). If you are uncertain whether the pool has a booster pump, check with your local pool professional.

5A. Speed Adjustment

- From the kit, take the pressure gauge and thread it into the test gauge case.
- Locate where the Ray-Vac hose is connected to the pool wall. Turn the quick disconnect fitting and remove the hose from the pool wall fitting.
- Unscrew the quick disconnect fitting from the end of the cleaner hose. Remove the hose washer from the quick disconnect fitting (see Fig. 14).
- From the selection of five (5) speed adjustment washers, select "C" and place it into the quick disconnect fitting (see Fig. 4).
- Insert the hose washer into the quick disconnect fitting. The hose washer will hold the speed adjustment washer in place.
- Thread the quick disconnect fitting onto the end of the filter screen case that has external threads and thread this assembly onto the end of the cleaner hose.
- Insert quick disconnect fitting back into pool wall fitting (see Fig. 5).
- At the equipment pad turn on the filter pump. Wait until the system is fully primed (pressure shows on filter tank gauge).

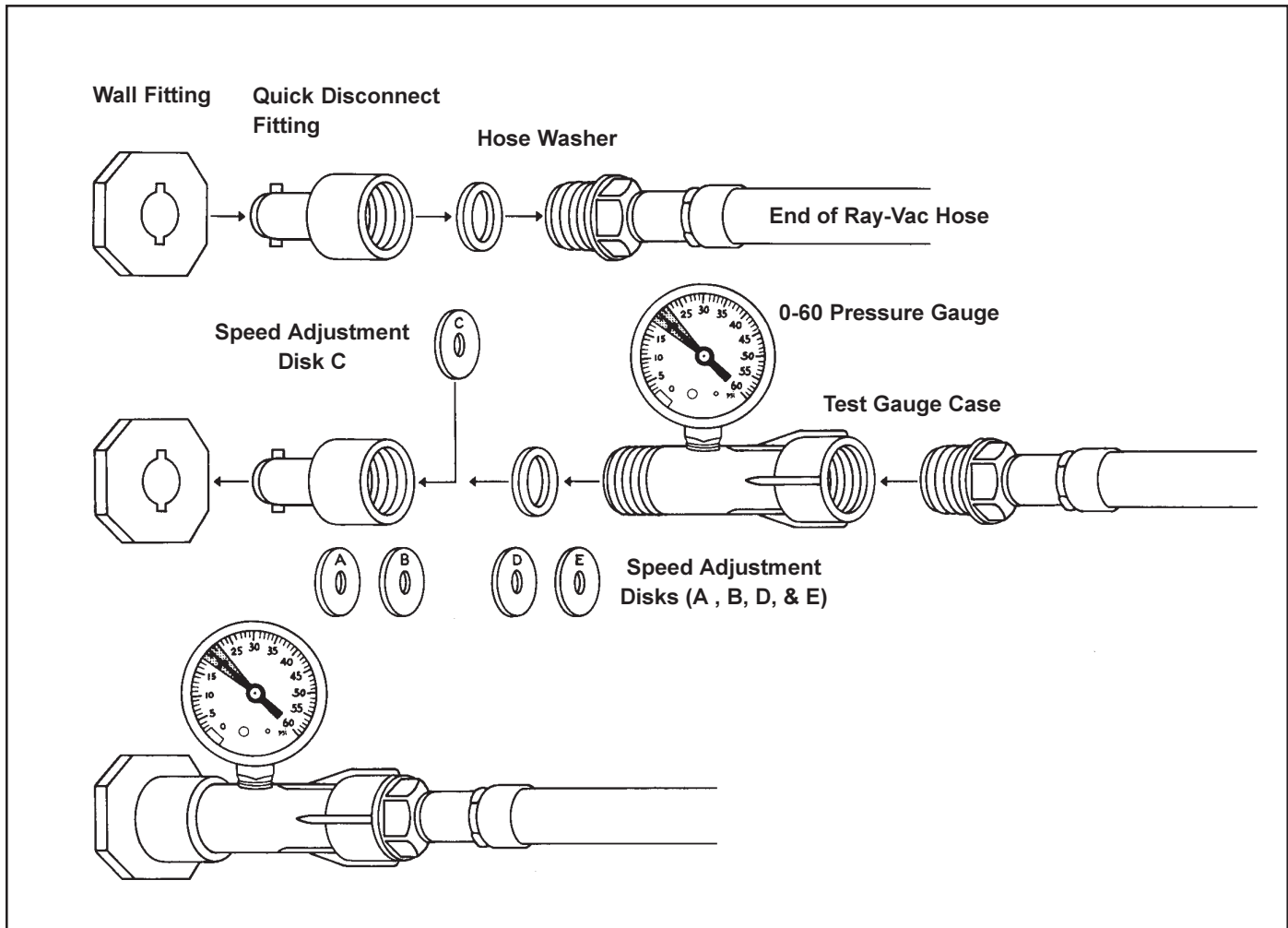


Figure 14. Speed Adjustment

9. Turn on booster pump.
10. At pool side, read the pressure gauge installed on cleaner hose. Pressure should be set (see Table 1) for the length of hose in your pool.
11. If the pressure is too **low**, replace the speed adjustment washer with "D" or "E" speed adjustment washer (follow steps 1-10). Each letter up will increase pressure approximately 2 psi.
12. If the pressure is too **high**, replace the speed adjustment washer with "A" or "B" speed adjustment washer (follow steps 1-10). Each letter down will decrease pressure approximately 2 psi.
13. When the Ray-Vac speed is properly adjusted, turn off all pumps.
14. Remove the pressure gauge and filter screen case from the pool wall. Unthread the quick disconnect fitting from the filter screen case. Remove the washer and speed adjustment disk. **Place the washer back into the quick disconnect fitting.**
15. Unthread the filter screen case from the end of the hose. Thread the quick disconnect fitting back onto the hose end (see Fig. 6).
16. Push the quick disconnect fitting into the pool wall fitting.
17. Shake the water out of the pressure gauge and store the unit for future adjustment (if necessary).
18. Turn on the filter pump to prime the system. When there is pressure in the system, turn on the booster pump.
19. Check operation of the cleaner.

Length of hose between wall fitting and nose of Ray-Vac	Pressure Setting on Gauge
21' 5"	18 psi
24' 5"	19 psi
27' 5"	20 psi
30' 5"	21 psi
33' 5"	22 psi

Table 1. Ray-Vac Pressure Settings

NOTE: Information in this table is a "guideline" only.

SECTION 6.

Speed Adjustment Non-Booster Pump

This section assumes that a Jandy Energy Filter and Valve or a Jandy Energy Valve is properly installed in the pool circulation system. If not, you must use a booster pump or the equivalent. If you are uncertain check with your local pool professional.

6A. Speed Adjustment

- At the equipment pad, turn off the filtration pump. Follow filter manufacturer's recommended procedures for cleaning main filter. Before cleaning main filter, be sure to turn the Jandy 3-port valve so the line to the Ray-Vac is closed.

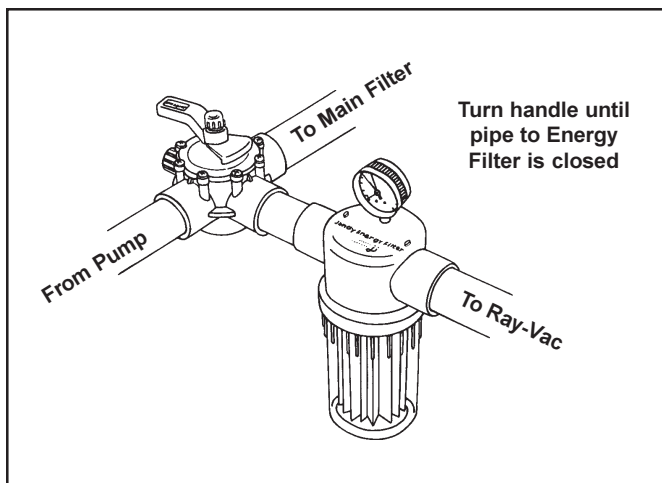


Figure 15. Ray-Vac Energy Filter and Jandy Valve

NOTE: If your pool filter is a diatomaceous earth (D.E.) type you must leave the Ray-Vac line closed during the filter recharging period (adding D.E.).

- Check the Jandy Energy Filter bowl. If clogged, you must clean the filter. Use the following steps:
 - Grasp clear bowl.
 - Remove the clear bowl and filter element. If the bowl is tight, place a large screwdriver between two of the tabs at the bottom of the bowl. Use the shank of the screwdriver as a lever to loosen the bowl.
 - Rinse off the filter element and replace into bowl.
 - Tighten clear bowl by spinning the bowl into the housing until resistance is felt. Then tighten $\frac{1}{4}$ turn further. **Do not over tighten.**

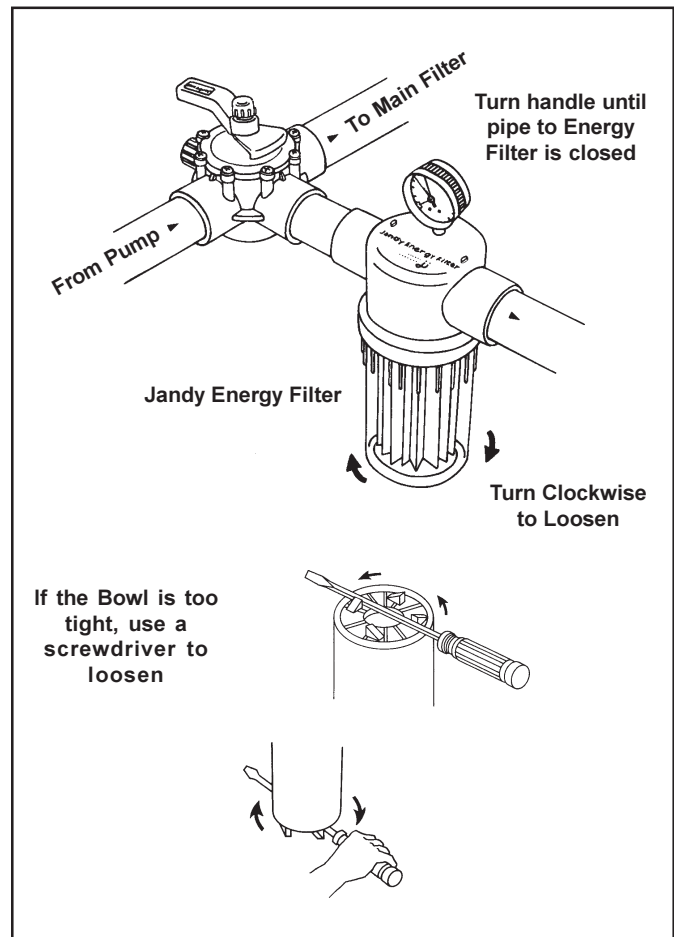


Figure 16. Removing Ray-Vac Energy Filter Bowl

3. Check the Finger Screen (at rear of Hydro-Timer)

If it is clogged, use the following steps to clear:

 - a. Grasp and hold the Hydro-Timer while you unscrew the Finger Screen Case.
 - b. Remove the Finger Screen and rinse it off.
 - c. Place the Finger Screen back into its case and tighten onto the Hydro-Timer.

4. At the pool equipment pad, turn the valve handle until pressure gauge reads according to the chart for your cleaner hose length (see Table 2).

5. If the Ray-Vac sticks in an obstacle (i.e. corners, ladders, skimmers, etc.) it is possible to increase the pull out by changing the backup jet size.
 - a. Remove Jet "A" from its holder and place it in the discharge hole "B."
 - b. Use a flat head screwdriver to turn the tab under the locking tab "C."

Note: Jet "A" is not available in some systems.

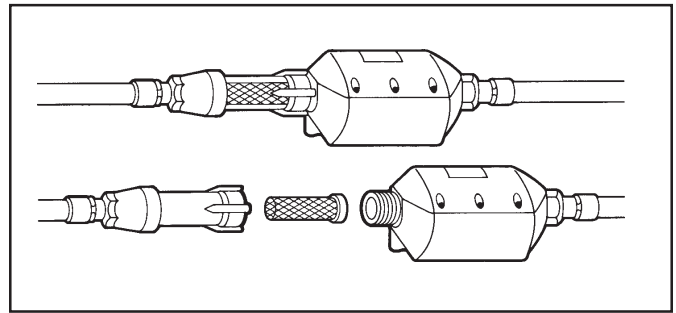


Figure 17. Cleaning Finger Screen

Length of hose between wall fitting and nose of Ray-Vac	Pressure Setting on Gauge
21' 5"	18 psi
24' 5"	19 psi
27' 5"	20 psi
30' 5"	21 psi
33' 5"	22 psi

Table 2. Ray-Vac Pressure Settings

NOTE: Information in this table is a "guideline" only.

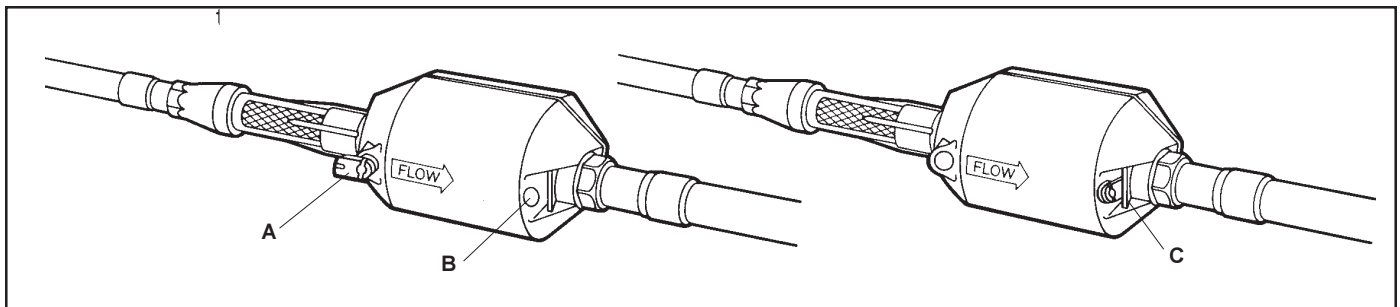


Figure 18. Changing Backup Jet Size

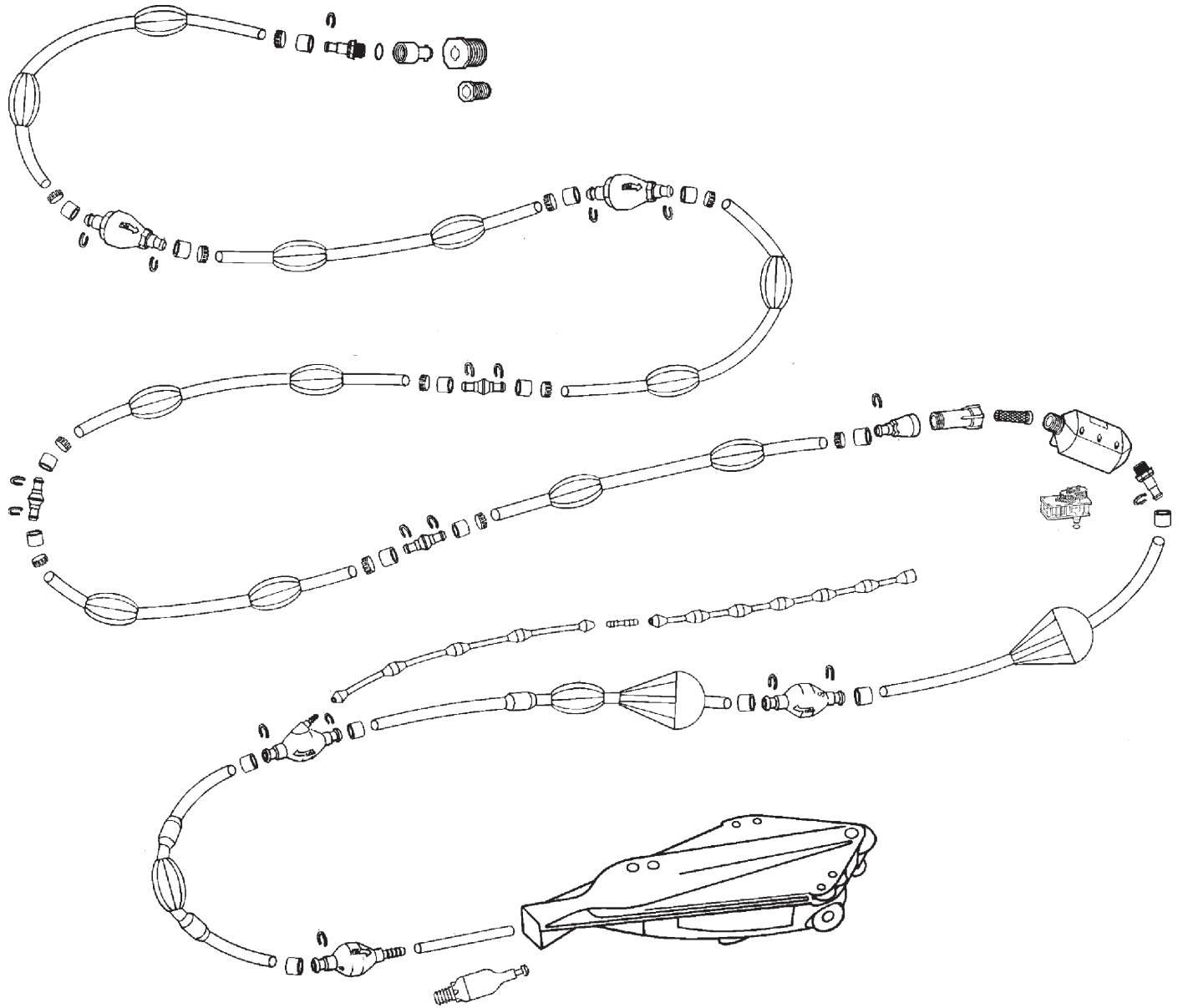
SECTION 7. Troubleshooting

7A. Troubleshooting

<u>Problem</u>	<u>Cause</u>	<u>Solution</u>
Pool Cleaner stalls in corner.	Corner restricting movement of Ray-Vac. Nose caster wheel jammed with debris. Increase backup.	No adjustment needed. Wait until backup jet pulls unit out of the corner. Clean or replace. See instructions under Speed Adjustment.
Pool Cleaner stalls in skimmer.	Skimmer opening is larger than Ray-Vac. Increase backup.	No adjustment needed. Wait until backup jet pulls unit out of corner. Add optional skimmer guard. See instructions under Speed Adjustment.
Cleaner stops moving.	Filter system off. Unit in backup cycle. Dirty Finger Screen or Energy Filter. Hole in hose. Backup Hydro-Timer releasing most of the water out of the discharge hole. Transporter jet plugged.	Check time clock. Set to Normal operation. Clean Finger Screen or Energy Filter. Replace defective hose. Replace defective backup jet gear assembly. Clean or replace the transporter jet.
Cleaner moves very slowly.	Debris chamber full. Finger Screen, Energy Filter, main filter, or filter pump strainer is dirty. Insufficient speed. Hole in hose. Water in head float. Pressure gauge has false reading.	Clean chamber. Clean as necessary. Increase speed by increasing pressure to cleaner. Replace defective hose. Replace defective head float. Replace pressure gauge
Hose tangles.	Debris chamber full. Cleaner moves too slowly. Feed hose too long. Frozen swivels. Bent or irregular hose. Water in head float. Floatation incorrect.	Clean chamber. Speed up cleaner by increasing pressure to cleaner. Recheck hose length. Check and/or replace swivels. Straighten or replace hose. Replace defective head float. See "Hose Length adjustment" section.
Dirt accumulates near main drain.	Insufficient suction on the main drain. Cleaner is not operating long enough.	Reset suction so at least 50% of the circulation water is sucked from the main drain. Increase running time of the cleaner by adjusting time clock to operate longer.
Finger Screen is often found dirty.	Energy Filter element is damaged. Debris is passing by main filter. Valve to Ray-Vac was not closed.	Check Energy Filter element and replace if necessary Main filter element damaged. Replace as necessary. Close valve to Ray-Vac before cleaning the main filter.
Cleaner beaches on top step.	Insufficient water above top step.	Cleaner needs a minimum of 5" of water to operate properly.
Cleaner stops on main drain.	Too much suction through main filter.	Reset suction on main drain.
Cleaner tangles in ladder.	Ladder/skimmer guard not installed.	Install optional ladder/skimmer guard.

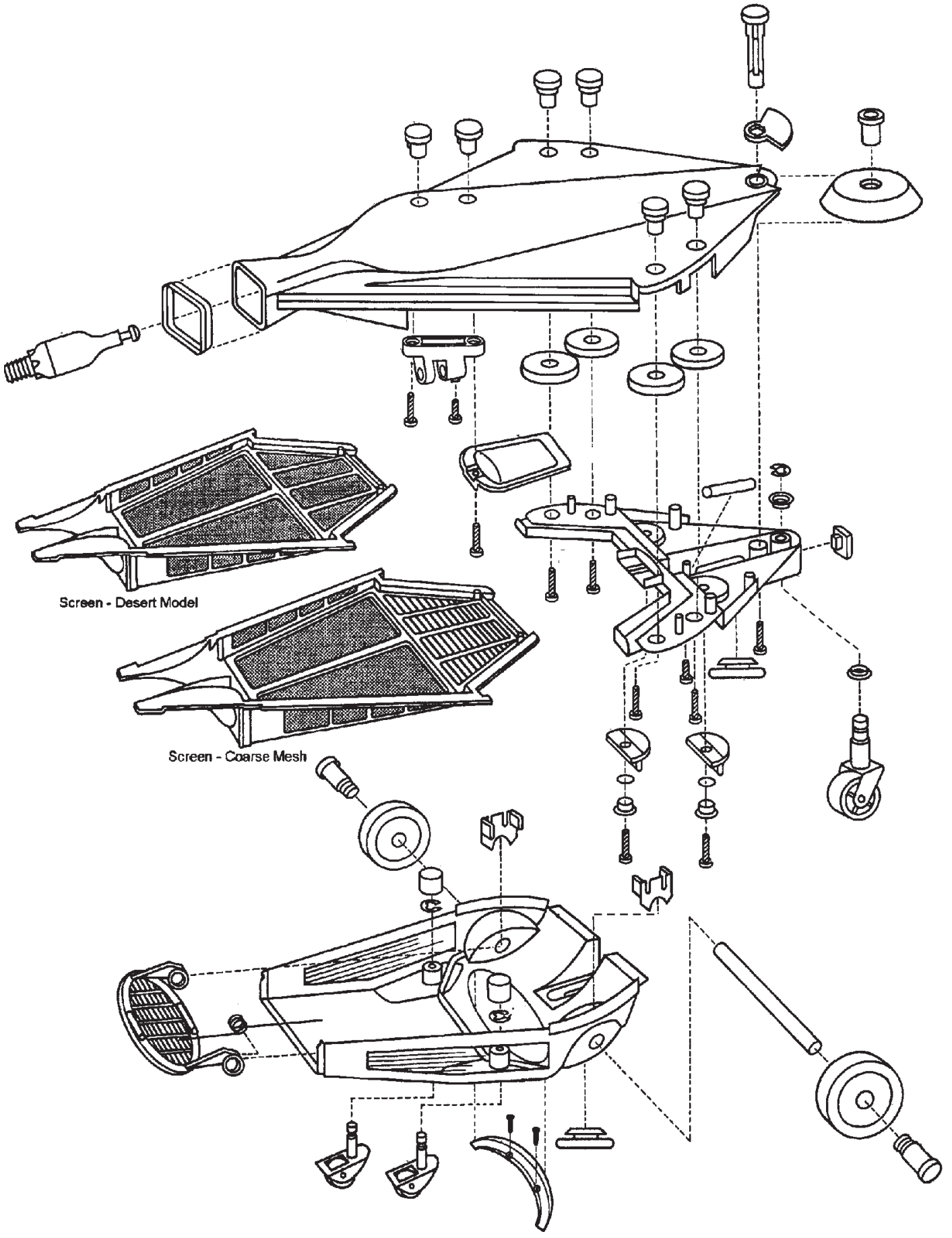
SECTION 8. Exploded Views

8A. Hose

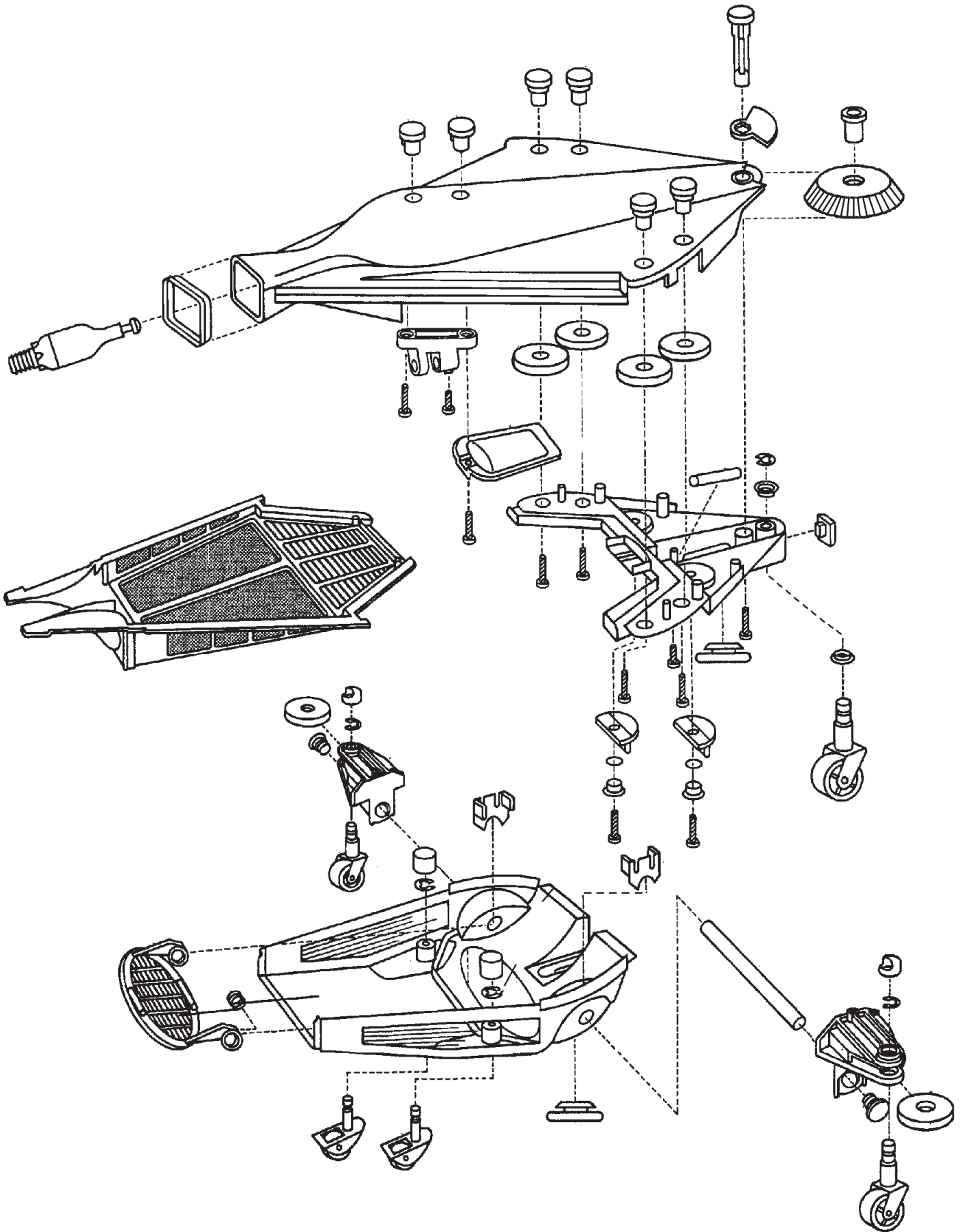


8B. Heads

1. Gunite Head



2. Vinyl Liner/Fiberglass Head



LIMITED WARRANTY

Thank you for purchasing Jandy® pool and spa products. Jandy Pool Products, Inc. warrants all parts to be free from manufacturing defects in materials and workmanship for a period of one year from the date of retail purchase, with the following exceptions:

- AquaLink® RS units installed with Jandy Surge Protection Kits will be covered for two years.
- NeverLube® valves are warranted for the life of pool and/or spa on which they were originally installed.
- AquaPure™ Electronic Chlorine Generator Electrolytic Cells carry a 5 year limited warranty on a prorated basis.

This warranty is limited to the first retail purchaser, is not transferable, and does not apply to products that have been moved from their original installation sites. The liability of Jandy Pool Products, Inc. shall not exceed the repair or replacement of defective parts and does not include any costs for labor to remove and reinstall the defective part, transportation to or from the factory, and any other materials required to make the repair. This warranty does not cover failures or malfunctions resulting from the following:

1. Failure to properly install, operate or maintain the product(s) in accordance with our published Installation, Operation and Maintenance Manuals provided with the product(s).
2. The workmanship of any installer of the product(s).
3. Not maintaining a proper chemical balance in your pool and/or spa [pH level between 7.2 and 7.8, Total Alkalinity (TA) between 80 to 120 ppm, Total Dissolved Solids (TDS) less than 2000 not including salt ppm].
4. Abuse, alteration, accident, fire, flood, lightning, rodents, insects, negligence or acts of God.
5. Scaling, freezing, or other conditions causing inadequate water circulation.
6. Operating the product(s) at water flow rates outside the published minimum and maximum specifications.
7. Use of non-factory authorized parts or accessories in conjunction with the product(s).
8. Chemical contamination of combustion air or improper use of sanitizing chemicals, such as introducing sanitizing chemicals upstream of the heater and cleaner hose or through the skimmer.
9. Overheating; incorrect wire runs; improper electrical supply; collateral damage caused by failure of O-Rings, DE grids, or cartridge elements; or damage caused by running the pump with insufficient quantities of water.

LIMITATION OF LIABILITY:

This is the only warranty given by Jandy Pool Products, Inc. No one is authorized to make any other warranties on behalf of Jandy Pool Products, Inc. **THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE AND MERCHANTABILITY. JANDY POOL PRODUCTS, INC. EXPRESSLY DISCLAIMS AND EXCLUDES ANY LIABILITY FOR CONSEQUENTIAL, INCIDENTAL, INDIRECT OR PUNITIVE DAMAGES FOR BREACH OF ANY EXPRESSED OR IMPLIED WARRANTY.** This warranty gives you specific legal rights. You may also have other rights which vary by state or province.

WARRANTY CLAIMS:

For prompt warranty consideration, contact your dealer and provide the following information: proof of purchase, model number, serial number and date of installation. The installer will contact the factory for instructions regarding the claim and to determine the location of the nearest designated service center. If the dealer is not available, you can locate a service center in your area by visiting www.jandy.com or by calling our technical support department at (707) 776-8200 extension 260. All returned parts must have a Returned Material Authorization number to be evaluated under the terms of this warranty.



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