SCHROEDER LOG HOME SUPPLY, INC.
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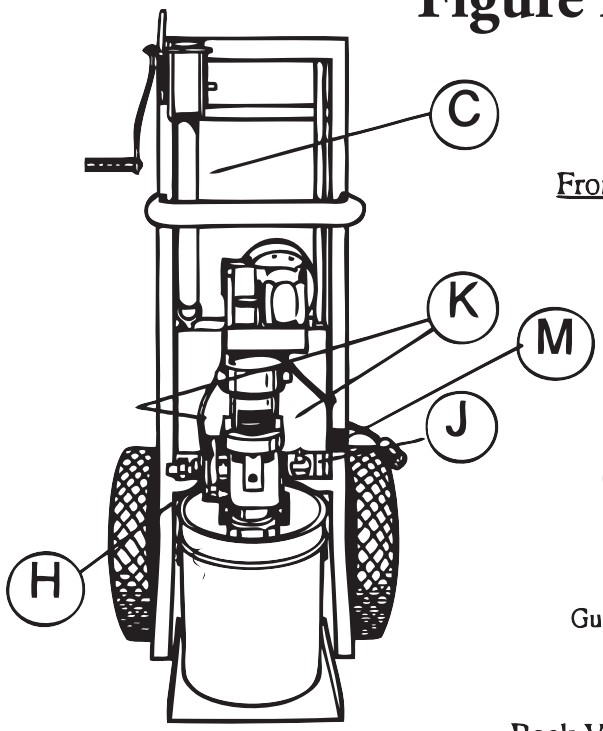
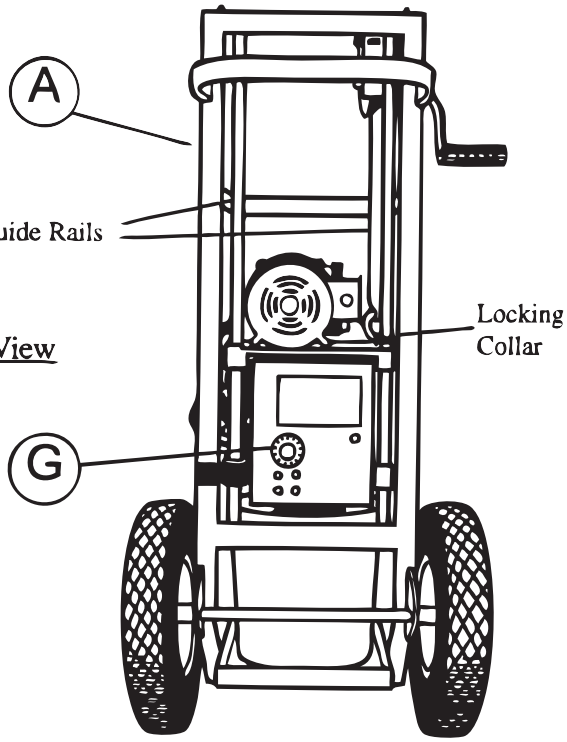
Sashco Snorkler Manual
Revision Series: No 12
Serial No. _____

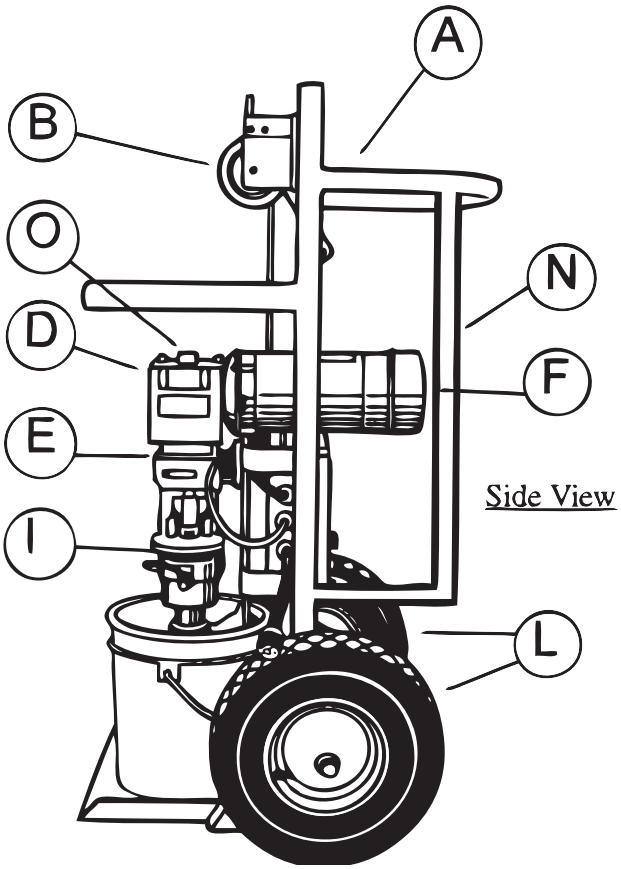
Figure No. 1



Front View



Back View



Side View

Key:

(A) Frame
(B) Winch
(C) Winch Strap
(D) Gear Reduction Box
(E) Adaptor Plate
(F) Motor
(G) Speed Control
(H) Outlet Flange
(I) Suction Housing
(J) Side Valve
(K) Packing Gland Nuts
(L) Wheels and Tires
(M) Change Pail Indicator
(N) Guard Rails
(O) Cap

Forward

All of these changes have been made as the result of either direct feedback from the field or common problems observed when Snorklers are repaired at the factory.

1. OUTLET FLANGE (see fig. no 1) has been rotated 90° to help prevent hose damage when transporting the Snorkler.

2. CONVERTER BOARD (see fig. 5B -"F") has been replaced with a board identical to the original except it now has a current limiting feature.

3. Components found in the CONTROL BOX (see fig. 5A and B) are now mounted with screws to ease any replacement.

4. Red lines have been added to both the Snorkler frame and pump carriage to indicate to the operator when the pail should be replaced.

5. The power cord "B" in fig. 5A has been shortened to prevent running over the cord with the Snorkler wheel, and causing severe damage to the components of the CONTROL BOX.

6. The tires now utilize inner tubes for better reliability in the field.

7. The SPEED CONTROL is now mechanically locked in place to help prevent internal rotation.

8. Guard rails have been added to the frame to protect both the rear of the motor and the front of the CONTROL BOX.

9. A cap has been added to seal off the top opening on the gear reduction box. This action will aid in any subsequent tear down requirement.

Table of Contents

General Specifications

HEIGHT: 51"

WIDTH: 25¾"

DEPTH: 29"

WEIGHT: 270 LB.

POWER: 115 VOLTS AC

USED WITH: 5 Gallon, straight sided pails

HOSE (STANDARD): 25 Feet

EXPECTED FLOW RATE: .8 Gallon per minute at high speed
(LOG JAM @ 70 Degrees F. product temperature) *

Expected Production Rates *

JOINT SIZE	**SPEED**
1" X 1/4"	123.2'/ MIN.
2" X 1/4"	31.2'/MIN.
3" X 1/4"	20'/MIN.
4" X 1/4"	15.2'/MIN.

* Note: Flow rate is affected by length of hose, temperature and viscosity of material being pumped, and size of tip used.

Startup Procedure

With the exception of having to loosen with a 3/16" allen tool and reposition the LOCKING COLLAR. (SEE FIG. No. 1) upper most on its GUIDE RAIL (This Collar should be used any time the Snorkler is transported), the Snorkler is shipped ready to use.

The following steps are recommended to ensure longer pump life and should be followed when using the pump for the first time each season or after the pump has been flushed or cleaned during repair.

1. Before pumping the first pail of material into the pump, turn the speed control midway in its travel. Open the SIDE valve (Fig. No. 1, J)(in the pump SUCTION HOUSING). Place a container under the valve. Use the trigger control switch to start the pump for 3 seconds, then stop the pump for 3 seconds. Continue this process until product flows from the valve. Close the side valve. Pumping may then be continued normally.
2. The packing in a new pump needs to “run in” before it is fully seated. The packing is adjusted at the factory, but during the first 10 hours of use the packing will seat. The packing gland nuts will gradually loosen and some slight leakage may occur. After the packing has fully seated, only occasional adjustment will be needed.

After each half hour of use, check the packing gland nuts. If the nuts are loose or there is leakage around the pump shaft, tighten the nuts a quarter turn. Small, frequent adjustments will help the packing and pump shaft last.

See the maintenance section under Packing for more details.

COLOR CHANGING & FLUSHING

Changing colors or types of product may require cleaning the machine. This is not difficult, but some product will be lost. When a different color of the same product is being used, it may save time and product to simply run the new product through the Snorkler until the color is even. The mixed - color product can then be saved and used where it will not be seen.

To clean the pump, fill a 5-gallon, straight sided pail with warm soapy water (Any dish washing liquid detergent). Run the water through the pump until it runs clear, changing the water as needed. Normally one pail will be sufficient. To clean the hose and gun, they should be cleared initially using air pressure not exceeding 100 psi (you can also use a “snake” or even plain water under pressure). After the hose is cleared, it should also be flushed with water* (normally one pail will be sufficient). Clean the follow plate thoroughly. Remove any material stuck to the bottom of the follow plate and rubber gasket.

* See under long term storage, page 8.

DO'S & DON'TS

Do's:

1. Check packing adjustment frequently. See the Maintenance section.

2. Limit power extension cords to 100 feet. Use only grounded (3 conductor) cords in good condition. Cords must be 14 gauge or larger.

3. Operate the pump at a speed at which the material flow is easily controlled.

4. Take care to protect the hose trigger cord from the gun to the machine.

5. Operate the machine in a safe and level location on the job site. Take care that the machine does not tip over.

6. Use a tip smaller than the joint you are finishing.

7. When traveling, keep an empty pail under the follow plate. Travel with the Snorkler upright whenever possible. Use the LOCKING COLLAR to hold the Pump in place.

8. KEEP CLEAR OF THE WINCH WHILE THE SNORKLER IS BEING USED. Operate the winch carefully.

9. Stand clear of the unit when it is in use. Unplug the Snorkler before making any adjustments.

Don'ts:

1. Don't run the pump dry or let it run out of material. This is extremely harmful to the pump stator. More than a few seconds of running dry may ruin the stator or reduce its life. When the RED LINE on the Snorkler frame aligns with the RED LINE on the PUMP CARRIER, it's time to change pails. Any material left in the pail can be scraped into the replacement pail.

2. Don't over grease the pump bearings. Too much grease is as harmful as too little. See the maintenance section under Lubrication for details.

3. Don't allow the pump to run with the GUN dispensing valve shut off or restricted. A ruptured hose or damage to the pump drive and stator will result.

4. Don't over tighten packing. See the Maintenance section under Packing for details.

5. Don't use ungrounded outlets or extension cords. Make sure the ground conductor is not broken off of the plug.

6. Don't allow the follow plate to dry out. This can cause chunks of dried material to be drawn into the pump, leading to a clogged hose.

7. Don't allow material to freeze in the machine. Protect the Snorkler from cold in freezing weather.

8. Don't allow material to build up on any part of the machine, especially the edges of the follow plate gasket.

9. Don't allow material to build up around the pump shaft. Adjust the packing as needed.

10. DON'T RUN THE PUMP WITH THE HAND WINCH ENGAGED. When in operation, the pump assembly must be allowed to slide down along the guide rails. Running the pump with the winch engaged will ruin the stator.

Diagnostics

The Sashco Snorkler is equipped with four diagnostic indicator lights. They monitor the electrical functions of the unit. The lights are located on the door of the control box below the speed control knob. If the pump does not operate properly, this diagnostic feature can save valuable time in isolating the problem(s).

1. **RED**: The red light indicates that 120 volt power is supplied to the Snorkler. This light should remain lit whenever the unit is plugged in, whether pumping material or not.
2. **YELLOW**: The yellow light indicates that the relay supplying power to the DC converter has been actuated, and that the converter is receiving power. This light should be lit only when the unit is pumping material.
3. **GREEN**: The green light indicates that the 24 volt transformer is working properly to supply power to the trigger switch. This light should be lit whenever the unit is plugged in.
4. **BLUE**: The blue light indicates that the trigger switch has been actuated. It should be lit only when the unit is pumping material.

Diagnostic Indicator Lights
Normal Operation

Trigger released:		**Trigger depressed:**	
RED:	ON	RED:	ON
YELLOW:	OFF	YELLOW:	ON
GREEN:	ON	GREEN:	ON
BLUE:	OFF	BLUE:	ON

A DC voltmeter is mounted inside the control box. This meter indicates the voltage coming from the converter card to the motor. The meter will read 0 until the trigger is pressed. At the lowest speed setting, the meter will read 0 and the pump will not turn. At the highest speed setting, the meter should read 90 to 100 volts. If the meter does not read the correct voltage, see the REPAIR INSTRUCTIONS section under Converter Adjustment.

REGULAR MAINTENANCE

1. LUBRICATION:

A. **PUMP BEARINGS:** The pump bearings are lubricated and sealed at the factory. They will not require lubrication for at least 1500 hours of operation. Repacking the bearings requires removal of the motor and gearbox and disassembly of the pump.

B. **WHEELS:** The wheels are lubricated at the factory and will require grease only every few months.

C. **GEARBOX:** The gearbox is filled at the factory with a permanent synthetic lubricant. No oil change is necessary for the life of the unit. If the lubricant must be replaced for any reason, use Mobil SHC 634.

D. **MOTOR:** The motor is equipped with pre-lubricated bearings and requires no lubrication.

E. **GUIDE RAILS:** The pump frame guide rails must be kept clean and smooth for the pump to function properly. A light coating of a spray lubricant such as WD-40 or a silicone product will prevent binding and also protect against rust.

F. **WINCH:** A light application of spray lubricant will prevent rust on the winch and help with smooth operation. (A void spraying the winch strap.)

2. PACKING ADJUSTMENT

The packing in the pump acts as a seal to keep product from leaking around the drive shaft. It is important that the packing be adjusted properly. If the packing is too loose, product will be forced through the packing and will build up around the drive shaft. Adjusting the packing too tight will cause the packing to run hot and wear out quickly. Wear on the drive shaft will also be greatly increased. The trick is to adjust the packing just tight enough to stop the leakage. No additional greasing of the special packing used by Sashco is required.

Regular Maintenance (cont'd)

Locate the Packing Gland (Y) (FIG. No 2, page 18) and the two adjusting nuts, one on each side. With a 9/16" wrench, tighten each nut one half turn each. After the pump has run for a while, check the packing gland. It is normal for it to run slightly warm, but not hot. Check for leakage. If the pump still leaks, adjust the packing again the same way. Always tighten the packing gland nuts evenly.

The packing gland may eventually "bottom out" against the pump housing. At least one extra bag of packing is shipped with the Snorkler. It is to be installed when there is no more room for adjustment. After this extra packing is worn out, and the PACKING GLAND ("Y" in Fig. No.2) bottoms, the entire packing must be replaced.

3. **TIRES:**
The Snorkler is equipped with tube-type pneumatic tires for reliability and easy handling on the job site. The tires should be kept inflated to a maximum of 30 PSI.

4. **MOTOR:**
The motor brushes should be inspected occasionally for wear and replaced if needed. New brushes are 1-1/4" long. Brushes should be replaced if they are worn down to 5/8" or less.

5. **FOLLOW PLATE:**
Keep the follow plate clean and free of any dried material, especially around the gasket. Occasionally check the screws holding the gasket for tightness.

6. **FASTENERS:**
Periodically check the nuts and bolts on the Snorkler for tightness. Check more frequently when the unit is being used heavily.

7. **CLEANING:**
Keep the Snorkler clean by wiping it down with a wet rag. Don't hose the unit off.

THE CONTROL BOX IS NOT WATERPROOF!

LONG TERM STORAGE

If the Snorkler is to be stored for a long period of time, clean the outside surfaces thoroughly. Fill a 5 gallon pail with warm soapy water and run it through the Snorkler*. Continue this process, changing water as needed, until the water runs clean. Clean all surfaces of the follow plate, especially the gasket. Remove the hose and drain it thoroughly ... (You may want to help "clear" the hose with a "snake" or with a pressurized water hose similar to that found at car washes, and then flush with soapy water until it runs "clean"). Remove the stator and drain all water from the pump. (This would be a good time to inspect the stator, rotor, and shaft pin for wear.) After the pump has dried out, lubricate the rotor with a light coating of grease and reinstall the stator. The hose may be reinstalled once it has dried. Make sure that no material is left inside the hose or gun. See the REPAIR section under STATOR REPLACEMENT for instructions on removing and reinstalling the stator.

* We suggest removing the hose from the pump and totally or at least partially clearing the hose and gun by a means other than trying to pump it clear. STATORS may be ruined while trying to pump the hose and gun clear using only water, especially when the material is semi-hardened.

Repair Instructions

Mechanical:
For steps 1 through 4, please refer to figure No.2 (Pg. 18) for part identification. **CAUTION ... any** time the pump has been "tom down" for repair, please follow the startup" procedure on page 2 when placing the pump "back in service".

1. STATOR REPLACEMENT
The pump stator will eventually wear out and need to be replaced. The stator is not covered by warranty because under operation it is expected to wear out and will require replacement (see warranty on page 26). The life of a stator varies dramatically and depends on care and type and temperature of material being pumped. The stator can be easily replaced in the field. Take this opportunity to inspect the shaft pin (T) for wear. See "SHAFT PIN REPLACEMENT" below.

A. With the unit unplugged, remove the follow plate, coupler, and short pipe nipple from the end of the stator.
B. Use a pipe wrench to unscrew the stator from the suction housing. Slide the stator off of the rotor.
C. Clean the rotor and inspect it for damage or wear.
D. Lubricate the rotor with a thin coat of grease. Apply pipe dope to the threads on both ends of the stator. Use Teflon paste or tape.
E. Slide the new stator onto the rotor. Rotating the stator slightly will make this easier. Thread the stator into the suction housing and tighten it.
F. Reinstall the follow plate, coupler, and pipe nipple. Use pipe dope on all threads.
G. Open the valve in the suction housing. Make sure a pail of material is loaded into the Snorkler and the hand winch is released. Open the dispensing valve and pull the trigger on the dispensing gun to start the pump for a few seconds, then stop. Continue this process until material flows from the valve in the suction housing. The Snorkler is now ready to return to service.

2. SHAFT PIN REPLACEMENT
The shaft pin (T) eventually wears and begins to allow play in the connecting rod (R). If heavy wear is found, replace the pin.

A. Rotate the pump shaft so that the drive pin retaining screws (U) are accessible. Unplug the Snorkler. Remove the drive pin retaining screws from the shaft collar (K). Use a pin punch to drive the shaft pin (T) out through the other side of the shaft collar. It may be necessary to rotate the shaft back and forth to release the pin.

Repair Instruction (cont'd)

B. The shaft collar will now drop down the drive shaft (X). Remove the retaining screw washers (P). Take care not to lose them. Inspect the holes in the connecting rod (R) for "egging out".
C. Put the retaining screw washers back in place. Slide the shaft collar back into place. Lubricate the new pin with grease and carefully slide it into place. (Note: The collar must be in place before the pin is installed.) Lubricate the retaining screws and reinstall them. Make sure the end of the shaft pin is centered in the depressions in the retaining screws. Tighten the screws snugly.

3. CONNECTING ROD REPLACEMENT

A. Remove the stator as outlined in PUMP STATOR REPLACEMENT, and the shaft pin as in SHAFT PIN REPLACEMENT. The rotor (FF) and connecting rod (R) can then be removed.
B. Tap the shaft collar (0) off of the rotor. This may require some persuasion. Penetrating oil helps release the collar. Take care not to damage the rotor.
C. Use a pin punch to tap the rotor pin (S) out. This will release the old connecting rod from the rotor.
D. Install the new connecting rod into the rotor. Install a new rotor pin (S), and new connecting rod washers (Q). Lubricate the pin retainer and tap it into place.
E. Slide the connecting rod back into the suction housing.
F. Install a new shaft pin (T) as outlined in step "C" of SHAFT PIN REPLACEMENT.
G. Replace the stator as outlined in steps "D" through "G" of STATOR REPLACEMENT.

4. PACKING REPLACEMENT

A. Disconnect power from the Snorkler.
B. Remove the two adjusting nuts from the packing gland (Y). Slide the packing gland up the shaft. Use tape or a piece of wire to hold the packing gland up and out of the way.
C. Remove all the old packing material. Clean the packing cavity thoroughly.
D. Follow the installation instructions included with the new packing kit.
E. Replace the packing gland adjusting nuts and tighten them finger tight. Then tighten each nut three full turns.

NOTE: When returning the Snorkler to service, follow step 2 in the STARTUP PROCEDURE to seat the packing.

Repair Instructions (cont'd)

Electrical:

1. **Converter adjustment:**
   If the Converter is replaced or must be adjusted, set the screwdriver adjustment "POTS" as noted below. (These are approximate or "starter settings" and will vary slightly from pump to pump.

ACCEL:	fully counterclockwise (off)
DECEL:	fully counterclockwise (off)
MAX. SPEED:	(see 1,C)
MIN. SPEED:	(see 1,B)
TORQUE:	Set halfway
IR COMP:	Fully counterclockwise (off)

WARNING: Use extreme caution when following this procedure. Shock hazard exists. Use a nonmetallic tool when making these adjustments. Do not contact any wires or terminals inside the box or door, unless instructed.

A. Make sure there is a pail of material under the pump. Open the cover on the control box and locate the voltmeter.

B. Turn the speed control knob on the door of the control box all the way down (counterclockwise). Pull the trigger to start the pump and read the voltage on the meter. Adjust the MIN. SPEED dial on the Converter until the voltmeter reads 10 volts. (This is the suggested setting, but there is no harm in setting the minimum speed lower or higher if desired.)

C. Turn the speed control knob all the way up (clockwise). Pull the trigger to start the pump. Adjust the MAX. SPEED dial on the Converter until the voltmeter reads 90 to 100 volts. Do not exceed this setting.

D. Unplug the Snorkler and close the cover back of the control box.

Troubleshooting

If any problems occur, troubleshooting can be done in the field with only common tools. If you have difficulty troubleshooting your pump or have questions, call Sashco at (303) 286-7271. We will be glad to help.

Troubleshooting can be divided into two categories:
Electrical and Mechanical

Electrical troubleshooting:

Warning: hazardous voltage is present inside the pump's control box. Do not open the cover unless then unit is unplugged. Do not contact any wires or terminals unless instructed to do so.

Open the GUN dispensing valve and hold the trigger of the dispensing gun down. Check the diagnostic indicator lights. If the lights do not function properly as outlined in the diagnostics section, find the diagram on the following pages that matches the lights on your control box, and follow the procedures outlined in the order they are listed. (Under conditions #1 through #5, make sure bulbs are not merely burned out.)

Condition # 1

RED: OFF
YELLOW: OFF
GREEN: OFF
BLUE: OFF

Problem: No AC power is being supplied to the unit.

1. Check the outlet the unit is plugged into. Using other power tools on the same circuit with the Snorkler may cause fuses or breakers to blow.
2. Check the 15 AMP CKT BREAKER on the bottom of the CONTROL BOX and reset if needed.
3. Check the power cord on the Snorkler. Look for damage to the cord. Check for loose connections on the plug.
4. Unplug the Snorkler and open the control box cover. Look for loose connectors, wires that have come loose, or loose screws on the terminal strip.

Troubleshooting (cont'd)

Condition #2

Red: ON
Yellow: OFF
Green: ON
Blue: OFF

Problem: A failure in the switch circuit has occurred. Unplug the Snorkler, then check the following items:

1. Check the 114 amp CKT. BREAKER on the bottom of the CONTROL BOX and reset if necessary.
2. Check all connections in the cord running from the control box to the switch on the GUN. Look for loose connectors or broken wires.
3. To find the location ofa break in the wire, first open the dispensing valve and engage the trigger lock. Plug in the Snorkler. Disconnect the electrical connector at the gun. Using a piece of insulated wire with insulation stripped from both ends, connect pins A and C on the wire leading back to the control box. If the pump starts, the problem is either a broken switch or a break in the wire on the gun. If the pump does not start, disconnect the wire at the next junction down the line and repeat the process. Replacement wire and connectors are available from Sashco.
4. Disassemble the trigger switch. Look for loose mounting screws or damage to the switch unit.

Condition #3

Red: ON
Yellow: OFF
Green: OFF
Blue: OFF

Problem: The 24 volt transformer is not supplying power.

1. Unplug the unit and open the control box cover. Look for loose wires or connectors, repair as needed.
2. Replace the transformer.

Troubleshooting (cont'd)

Condition #4

Red: ON
Yellow: OFF
Green: ON
Blue: ON

Problem: The relay is not supplying 120 Volts AC power to the converter.

1. Unplug the unit and open the control box cover. Look for loose wires or connectors, repair as needed.
2. Replace the relay. (The relay is not repairable.)

Condition #5

Red: ON
Yellow: ON
Green: ON
Blue: ON

If all the indicator lights are lit but the pump still does not function, check the following:

1. Check the speed control knob. Try turning it clockwise to increase pump speed. If this works, the converter card may need adjustment. See the Maintenance section under Converter Card for instructions.
2. Unplug the Snorkler and check inside the control box for loose wires or connectors. Repair as needed.
3. Inspect the cord that runs between the control box and the motor. Look for damage. Replace the cord if needed.
4. Unplug the Snorkler and remove the cover from the junction box on the side of the motor. Look for loose wires. Remove the wire nuts and inspect the connections. Repair as needed.
5. Warning: use extreme caution when following this procedure. Shock hazard exists. Do not contact any wires or terminals unless instructed to do so. Unplug the Snorkler and open the cover of the control box. Pull the trigger and read the voltage on the meter. If no voltage is present, the converter has failed and must be replaced.

Troubleshooting (cont'd)

6. Warning: use extreme caution when following this procedure. Shock hazard exists. Do not contact any wires or terminals unless instructed to do so. Unplug the Snorkler and remove the cover from the junction box on the side of the motor. Unscrew the wire nuts from the wires. Using a DC voltmeter rated for at least 100 volts, wrap the wires from the control box around the voltmeter's probes. Insulate the connections with electrical tape so that no metal is exposed. Plug in the Snorkler and pull the trigger. Read the voltage indicated on the meter. If no voltage is present, the cord between the control box and motor is defective. Replace the cord.
7. Unplug the Snorkler. Remove the brushes from the motor and inspect them for damage or wear. Replace them if needed.

Mechanical Troubleshooting:

Note: for identification of parts referenced in mechanical troubleshooting please refer to fig. No. 2, (Page No. 18).

1. Low flow rate:

A. Make sure the dispensing valve is fully open. Check the valve to make ure it is in good condition.

B. If the pump has been allowed to run out of material, an "air lock" may have formed in the suction housing. Slowly open the side valve on the suction housing to release the air.
CAUTION! The air trapped in the suction housing may be under considerable pressure.

C. Check for clogs in the hose or gun. Dried material allowed to accumulate on the pump and falling into the bucket is a likely cause. Open the side valve in the suction housing and check the pump flow. If it is normal, disconnect the gun from the hose and check the flow again. If the flow is low, check the hose and gun for clogs. If none are found, continue with the following procedures.

D. Speed adjustment may be incorrect. See the maintenance section under Converter for instructions on setting the card.

E. The stator may be worn out. See the Maintenance section under Pump Stator for replacement instructions.

Troubleshooting (cont'd)

2. No flow, pump shaft turning:

A. Make sure the dispensing valve is completely open. Check the valve to make sure it is in good condition.
B. Check for clogs in the hose or gun.
C. If the pump has been allowed to run out of material, an "air lock" may have formed in the suction housing. Slowly open the side valve in the suction housing to release the air. CAUTION! The air trapped in the suction housing may be under considerable pressure.
D. The stator may be worn out. See the Maintenance section under Pump Stator for replacement instructions.
E. The shaft pin (T), may be sheared off. To check the pin, remove both drive pin retaining screws (U). Use a pin punch to drive the shaft pin through the shaft and out the other side. A new pin can be installed in the shaft without further disassembly.

NOTE: Make sure the shaft collar (K) and retaining screw washers (P) are in place before driving the pin into the shaft. **Be careful not to lose the washers!**

3. Material leaking:

A. Material leaking around the pump shaft indicates that the packing needs to be adjusted or replaced. See the Maintenance section for instructions.
B. Leaks around the outlet flange of the pump can usually be stopped by tightening the flange bolts. Replacing the flange gasket may be necessary. Inspect the flange for cracks.
C. Leaks around the follow plate are usually a result of a buildup of dried material on the gasket. Clean the gasket and inspect it for wear, cracks, or cuts. Make sure the screws holding the gasket on to the follow plate are all in place and tight.

SUGGESTED ON-SITE TOOLS

Maintenance on the Snorkler can be perfonned with common hand tools. The fasteners on the Snorkler are all SAE thread, no metric parts are used. It is a good idea to have the following tools available on the job site.

1. Grease gun

2. Combination wrenches in the following sizes:
7/16"
1/2"
9/16"
5/8"
3/4"

3. Allen wrench set, including 5/32", 3/16" and 1/4" sizes.

4. Screwdrivers, Phillips and slotted

5. 5/16" nut driver

6. Pipe wrench

7. Pin punch

8. Pliers or Vise Grips

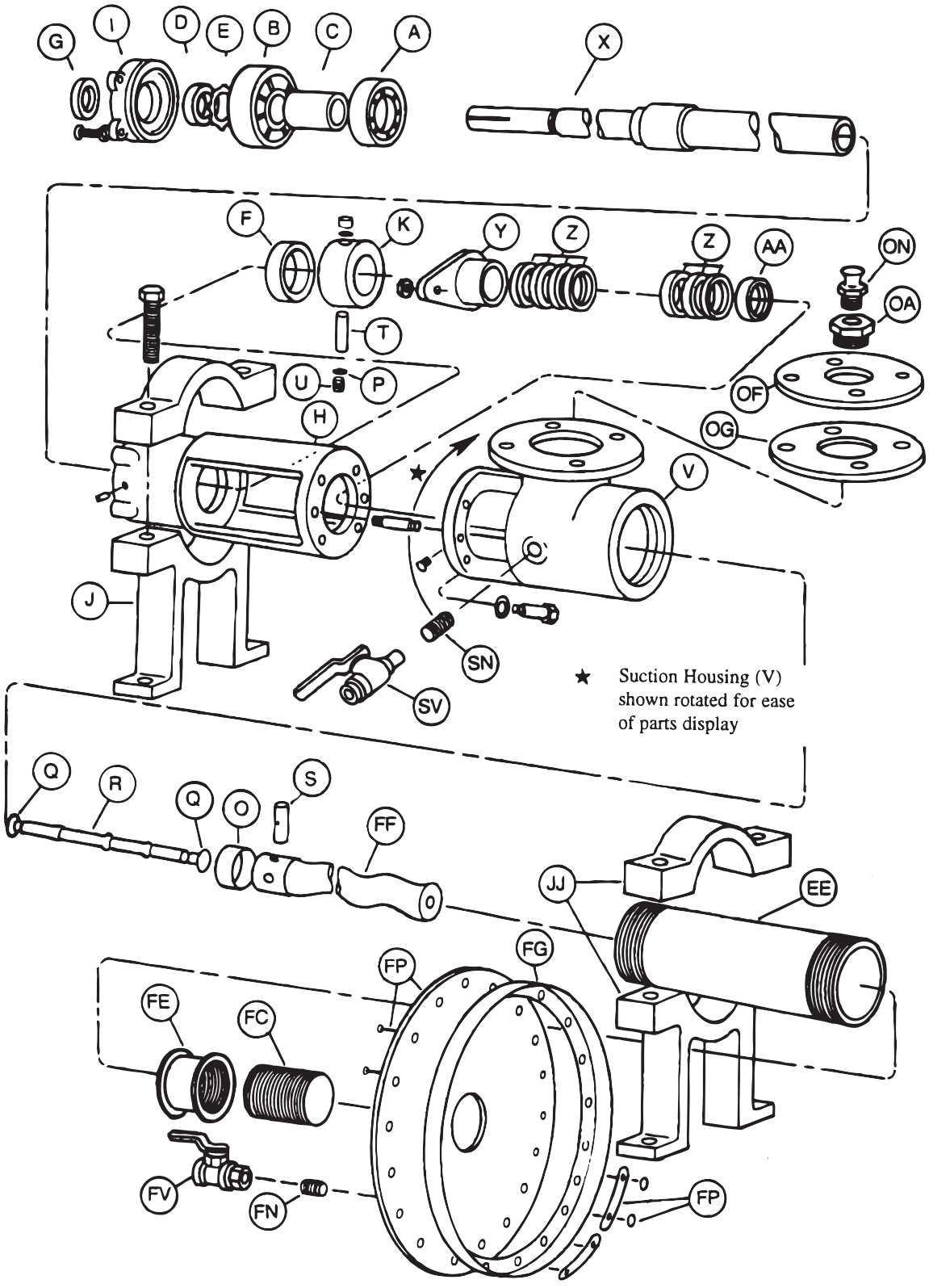
9. Electrical tape

10. Multimeter capable of measuring 120 volts DC and 120 volts AC. (Inexpensive multimeters are available for less than $20.)

11. Hammer

12.5/8" crowsfoot with 3/8" drive, and a minimum 6" extension with ratchet (This combination is needed to separate the SUCTION HOUSING [“V” - Fig. 2] from the BEARING HOUSING [“H” - Fig. 2])

Figure No. 2


G
I
D
E
B
C
A
X
F
K
Y
Z
Z
AA
ON
OA
T
U
P
H
OF
OG
V
J
SN
SV
★ Suction Housing (V) shown rotated for ease of parts display
Q
R
Q
O
S
FF
JJ
EE
FG
FP
FE
FC
FV
FN
FP

Parts List

Key	PIN	See Figure	Description	Comments
1. Pump and Associated Parts				
N/A	979300	2	Pump assembly	A through Z plus EE, FF & JJ
A	979301	2	Ball bearing (radial)	
B	979302	2	Ball bearing (thrust)	
C	979303	2	Bearing spacer	
D	979304	2	Bearing lock nut	
E	979305	2	Bearing lock washer	
F	979306	2	Grease seal (radial)	
G	979307	2	Grease seal (thrust)	
H	979308	2	Bearing housing	
I	979312	2	Bearing cover plate (machined)	
J	979310	2	Upper pump support	
K	979311	2	Shaft collar	
0	979315	2	Pin retainer	
P	SNK4-WAS	2	Retaining screw washer*	
Q	SNK4-CRW	2	Connecting rod washer*	
R	979318	2	Connecting rod	
S	SNK4-PIN	2	Rotor pin*	
T	SNK4-SPN	2	Shaft pin*	
U	979321	2	Drive pin retaining screw*	
V	979322	2	Suction housing	
X	SNK4-DRV	2	Drive shaft*	
y	979324	2	Packing gland	
Z	SNK4-RFL	2	Packing, complete set*	
AA	SNK4-PKW	2	Packing washer*	
EE	SNK4-STA	2	Stator*	
FF	SNK4-ROT	2	Rotor*	
N/A	SNK4-ROD	2	Connecting rod kit contains P through U)*	
FG	SNK4-FPG	2	Follow plate gasket*	w/o “FP”
FP	977020	2	Follow plate* Modified and with “FG”	w/o “FV” and “FN”

Parts List (cont/d)

Key	PIN	See Figure	Description	Comments
FC	979329	2	Stator nipple	
FE	979330	2	Stator coupler	
FV	977450	2	Follow plate 1/2" Ball valve*	
FN	979331	2	Follow plate Pipe nipple	
OG	979332	2	Output flange gasket*	
OF	977400	2	Output flange	
OA	979333	2	Output flange reducer	
ON	977415	2	“Male” output Flange kamlok*	
SV	977456	2	Suction housing 1/4" Ball valve*	
2. Frame				
A	977025	1	Frame Bare	w/o wheels and tires
L	977055	1	Tire and Wheel	
3. Winch and Strap				
B	SNK4-WIN	1	Winch*	w/o “C” & MT'G hdw.
C	SNK4-WSR	1	Winch strap with Eye bolt*	w/o “B”: inc.
N/A	979334	1	Winch and Strap	**w/o MT’G hwd.**
4. Gear reduction box and adapter plate				
D	977050	1	Reduction box 10 to 1	
E	977000	1	Adapter plate	
0	97714	1	Reduction box cap*	w/ MT’Ghwd.
5. Hose				
A	SNK4-HOSI	3,B	Hose* with “I”	25 ft. w/o “K” and “L”
B	SNK4-HOS	3,B	Extension hose*	w/o “I,” “K” and “L”
K	SNK4-KCD	3,B	Hose “female” kamlok*	Pump end
L	SNK4-KAA	3,B	Hose “male” kamlok*	Required for extension use

Parts List (cont/d)

Key	PIN	See Figure	Description	Comments
6. Gun and nozzles				
C	SNK4-GUN	3,A	Complete gun*	W/O “D,” “E,” “F” and “G”
D	SNK4-034	3,A	3/4" nozzle*	
E	SNK4-100	3,A	1" nozzle*	
F	SNK4-150	3,A	1½" nozzle*	
G	SNK4-GBV	3,A	Gun ball valve*	
M	977115	3,A	Gun handle*	W/O “H” and “J”
N	977030	3,A	Gun pipe	W/O “M” or “G”
7. Motor and brushes				
F	977040	1	Motor*	
N/A	979327	N/A	Brushes*	Qty 2
8. Trigger switch				
H	SNK4-GTS	3,A	Trigger switch*	W/O handle and “J”
9. Electrical cords:				
J	SNK4-TCI0	3,A	Gun trigger cord*	W/plug one end
B	977106	5,A	Power cord	10” w/plug
I	SNK4-HTC	3,B	Hose trigger cord *	Approx.25’ w/plugs both ends
A	979328	5,A	Control box Trigger cord*	Approx. 30” lg. w/plug one end
10. Control box and components				
C	977006	5,A	Control box*	Complete w/ “A,” “B” and motor cord
D	977185	5,B	24 Volt trans. *	
E	SNK4-PWR	5,B	Relay*	
F	977100	5,B	Converter board *	
G	977190	5,B	Voltmeter*	W. leads and mtg. plate
H	SNK4-Y4CB	5,B	1/4 amp.*	Circuit breaker
I	SNK4-15CB	5,B	15 amp.*	Circuit breaker

Parts List (cont/d)

Parts are available from Sashco. When ordering, please specify part name and number. Also mention your Snorklers Serial Number which can be found in the front of this manual and also found stamped in the pump carriage housing.

An asterisk (*) behind the description in the parts list indicates that part is normally carried in stock at Sashco.

END

Figure No. 3A

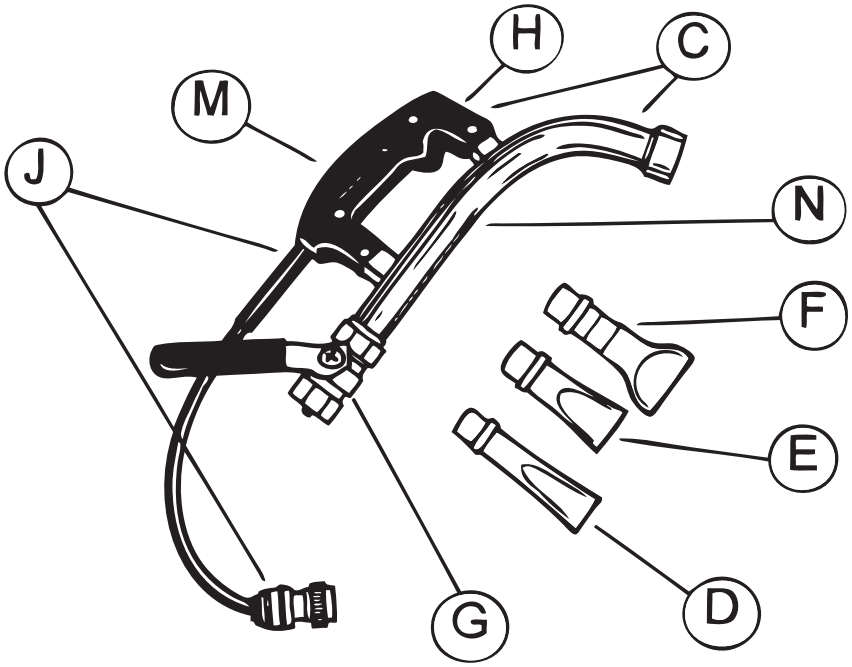
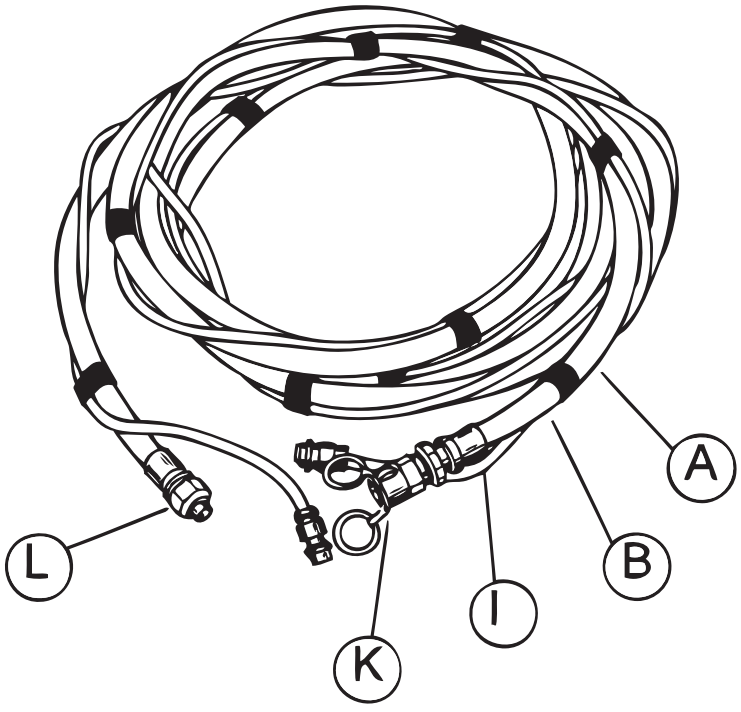
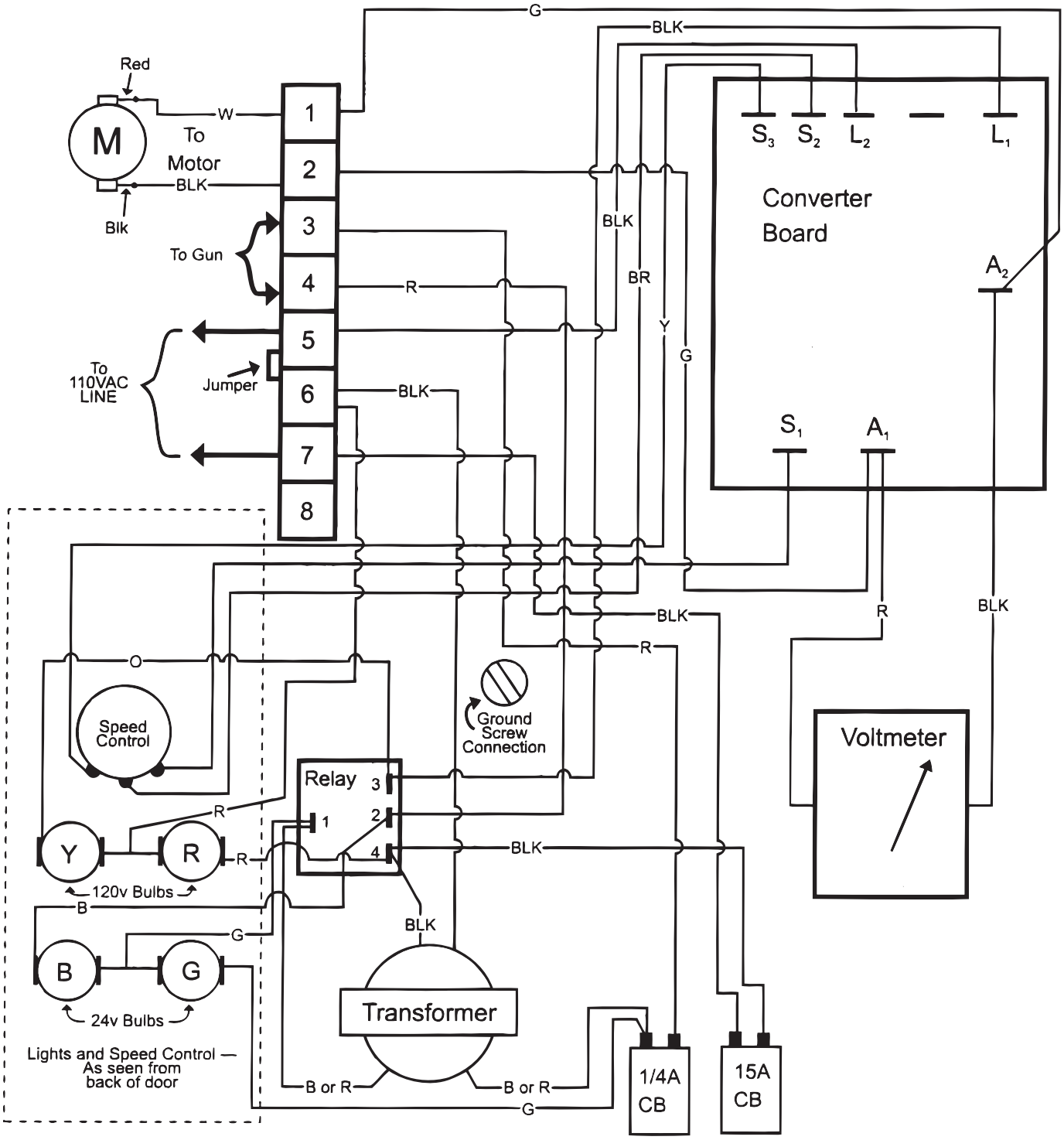


Figure No. 3B



Complete Wiring Diagram (Figure No. 4)

Parts List (cont'd)



Color Key: G - Green; R - Red; BLK - Black; B - Blue; O - Orange;
Y - Yellow; BR - Brown; W - White

Figure No. 5A

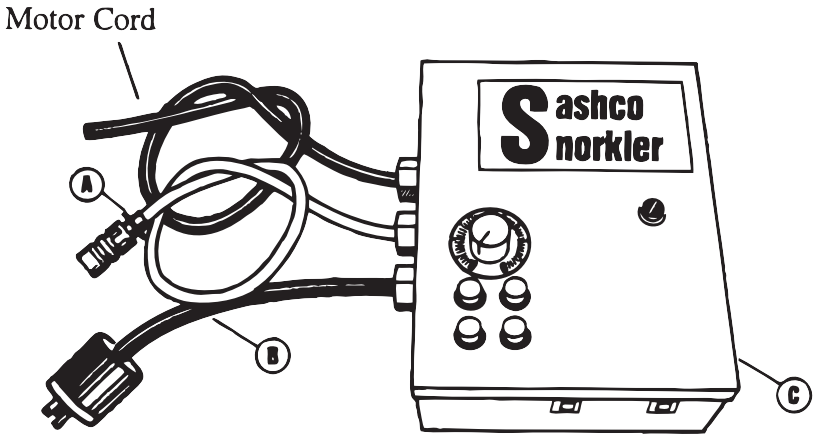
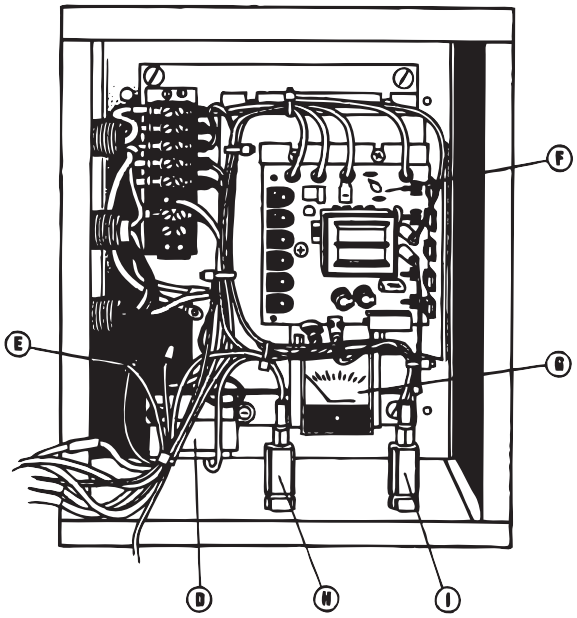


Figure No. 5B

Control Box with door removed



90 Day Limited Warranty

All Snorkler parts (excluding the stator and packing) are warranted against defects for a 90 day period. Parts are warranted under usage described in the instruction manual and are limited to parts replacement.

CUSTOMER NOTES

Sashco Snorkler
Basic Operation

Please refer to Fig. No.1 for both identification and location of parts referenced.

1. Loosen and slide the locking collar upper most on its guide rail and lock out of the way.
2. Using the winch in the dog latching position, raise the pump just enough to slide an open pail of material under the follow plate.
3. Open the valve on the follow plate.
4. While firmly holding the winch handle, set the winch to the "free run" setting and carefully lower the pump and follow plate into the pail of material ... taking care that the follow plate rubber gasket uniformly enters the top of the pail. *Caution: Any time the winch is in the free run setting, stay clear of the handle. Considerable force is released by the handle swinging around as the pump is following the material or just being lowered.*
5. Once the follow plate has contacted the material in the pail, close the valve on the follow plate.
6. Attach the hose to the output flange and connect the two yellow trigger cords by means of the connector.
7. Make sure the trigger on the gun is off and not being held on by the locking button on the handle; also, set the speed control knob on the control box to its minimum setting (completely counterclockwise).
8. Connect the power cord of the Snorkler to a grounded 110 volt AC supply. (Both the red and green lights should light.)
9. Momentarily squeeze the trigger on the gun. Both the yellow and blue lights should light.
10. Release the gun trigger, and open the side valve.
11. Set the speed control knob approximately mid range on its dial.
12. Again squeeze the gun trigger for approximately 3 seconds. The shaft of the pump should be seen turning. Repeat this 3 second squeeze of the trigger with about 5 to 10 seconds off until material starts to flow from the side valve.
13. Close the side valve. You are now ready to pump material through the hose to your work. Make sure the gun ball valve is open.
14. Once material is being pumped from the nozzle on the gun, you should adjust the speed control knob to a setting that pumps material at a rate that you can comfortably handle.
15. *Do not pump the pail completely dry! Severe damage to the pump can occur!* Replace the pail when the RED LINES align. Scrape any unused material into the new pail. If allowed to run dry, steps 2 through 13 must be repeated to load a new pail for pumping.

Sashco Snorkler
Basic Operation

Please refer to Fig. No.1 for both identification and location of parts referenced.

1. Loosen and slide the locking collar upper most on its guide rail and lock out of the way.
2. Using the winch in the dog latching position, raise the pump just enough to slide an open pail of material under the follow plate.
3. Open the valve on the follow plate.
4. While firmly holding the winch handle, set the winch to the "free run" setting and carefully lower the pump and follow plate into the pail of material ... taking care that the follow plate rubber gasket uniformly enters the top of the pail. *Caution: Any time the winch is in the free run setting, stay clear of the handle. Considerable force is released by the handle swinging around as the pump is following the material or just being lowered.*
5. Once the follow plate has contacted the material in the pail, close the valve on the follow plate.
6. Attach the hose to the output flange and connect the two yellow trigger cords by means of the connector.
7. Make sure the trigger on the gun is off and not being held on by the locking button on the handle; also, set the speed control knob on the control box to its minimum setting (completely counterclockwise).
8. Connect the power cord of the Snorkler to a grounded 110 volt AC supply. (Both the red and green lights should light.)
9. Momentarily squeeze the trigger on the gun. Both the yellow and blue lights should light.
10. Release the gun trigger, and open the side valve.
11. Set the speed control knob approximately mid range on its dial.
12. Again squeeze the gun trigger for approximately 3 seconds. The shaft of the pump should be seen turning. Repeat this 3 second squeeze of the trigger with about 5 to 10 seconds off until material starts to flow from the side valve.
13. Close the side valve. You are now ready to pump material through the hose to your work. Make sure the gun ball valve is open.
14. Once material is being pumped from the nozzle on the gun, you should adjust the speed control knob to a setting that pumps material at a rate that you can comfortably handle.
15. *Do not pump the pail completely dry! Severe damage to the pump can occur!* Replace the pail when the RED LINES align. Scrape any unused material into the new pail. If allowed to run dry, steps 2 through 13 must be repeated to load a new pail for pumping.

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