KNIGHT

IDEX

IDEX CORPORATION

Foam Clean 25-95
Instruction Manual

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CAUTION: Wear protective clothing and eyewear when dispensing chemicals or other materials. Observe safety handling instructions (MSDS) of chemical mfrs.

CAUTION: When installing any equipment, ensure that all national and local safety, electrical, and plumbing codes are met.

INTRODUCTION

Foam cleaning is recognized as an effective method for removing oil and heavy soils from all types of surfaces. It is used for cleaning throughout the food processing, dairy, transportation, industrial and agricultural industry. Due to it's characteristics, cleaning with foam is safe and cost effective. Foam can adhere to irregular surfaces and provide better coverage than liquid cleaning chemicals. Foam stays in place longer to actively lift dirt and oil from surfaces until it is rinsed off.

Knight's Foam Clean system dispenses a rich lather of foam up to 65 GPM with a distance of up to 30 feet. With a built-in 4 GPM (15 ltr/min) air operated pump, you'll get consistent foaming quality for clean results. Simply turn a knob and you can adjust the dryness or wetness of the foam for different cleaning applications.

APPLICATIONS

Food Processing Plants: Process Food, Beverage, Dairy, Baking, Poultry, Smoke Houses, Seafood.

Transportation: Trucking, Aviation, Transit, Automotive, Military, Ships, Construction Equipment.

Industrial: General Cleaning, Machinery Degreasing, Paint Manufacturers, Paper Mills.

Agricultural: Dairy, Poultry, Farm Equipment, Hog.

REQUIREMENTS

- Minimum 60 PSI clean, dry air at 5 – 10 CFM during operation of the foamer.
- Chemical requirement: Most foam cleaning dilution rates operate at 3 to 5 oz/gal (24 to 39 ml/ltr) — consult your chemical supplier for the proper foaming product and mixing ratio to use.

SPECIFICATIONS

Foam Output	65 gal/min (246 ltr/min)
Foaming Distance	25—30 feet (7.5—9 meters)
Chemical Compatibility	Santoprene: All acids, corrosives, and petroleum products Viton: Alkalines, soaps, mild acids, sodium hypochlorite
Air Operated Pump Materials	Polypropylene Body w/ Santoprene Seals and Diaphragm Polypropylene Body w/ Viton Seals and Diaphragm
Air Consumption	60-80 psi, 5-10 scfm
Hose	Portable: 25 feet (7.6 meters) reinforced hose, 3/4" ID with wand

SAFETY PRECAUTIONS

- Read and understand the MSDS sheets for the cleaning chemicals that will be used — consult your chemical supplier if you have any questions.
- Always wear safety goggles and protective gloves while operating the foam unit.
- Avoid contact of cleaning agents with skin and eyes. If contact occurs, rinse affected area with water for 15 minutes, and seek medical attention, if needed.
- Drain fluid contents of unit and flush out tank if using different types of chemicals from operation to operation.
- Never point the Discharge Foam Wand at anyone.
- Be sure to flush unit with fresh water when switching from alkaline to acid, or acid to alkaline product.
- Never leave unit unattended while discharge hose is under pressure.
- Never foam directly into an uncovered electrical outlet or electrical panel.
- Stand far enough away from surface being foamed to prevent foam from splashing on you.

AFTER-USE

(1) Fill the tank with fresh water and rinse thoroughly. With discharge valve “open”, allow pump to run until all chemical has been pumped through discharge hose, and air has been purged.

(2) Close the Air Inlet Valve and relieve all remaining pressure on the unit by opening the valve on the discharge hose and leave in the “open” position.

(3) Open the drain plug on the bottom of the tank to remove any remaining liquid from the tank. The drain plug is 1” NPT with a 1.375” hex head.

MAINTENANCE

- Periodically check the air pump for leaks or evidence of wear/breakdown.
- Periodically replace filter media in filter/dryer.
- Periodically check the pickup tube for blockage, and flush to clean.

OPERATION

(1) [Fig. A] Fill the foamer tank with a combination of water and foaming chemical — consult your chemical supplier for proper dilutions. Do not overfill tank.

Figure A

(2) [Fig. B] Close Wet Foam/Dry Foam Valve completely — turn clockwise until it stops.

Figure B

(3) [Fig. C] Make sure the ball valve on the discharge hose is <u>closed</u>!

Figure C

(4) [Fig. D] Connect a clean, dry, air supply to the 5/16" quick connect fitting on the unit. Note: Unit will operate when air supply is on.

(5) [Fig. C] <u>Slowly</u> open the ball valve on the discharge hose while <u>holding foam wand away from you.</u> Closing the ball valve will turn pump off.

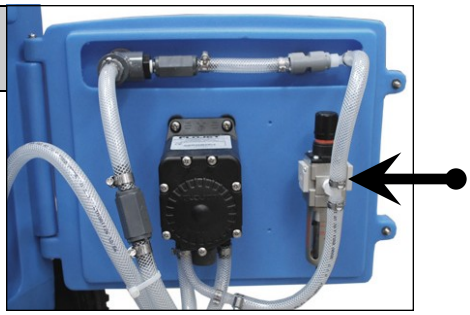
Figure D

(5) [Fig. E] Adjust air pressure regulator to achieve desired pump flow rate (between 60—80 PSI for optimum results).

(6) [Fig. B] Open Wet Foam/Dry Foam Valve in the counter-clockwise direction four complete turns.

(7) [Fig. B] Continue to open the Wet Foam-Dry Foam Valve in ¼ turn increments, allowing a few seconds between adjustments, until the proper consistency (dryness) of foam is achieved.

Figure E

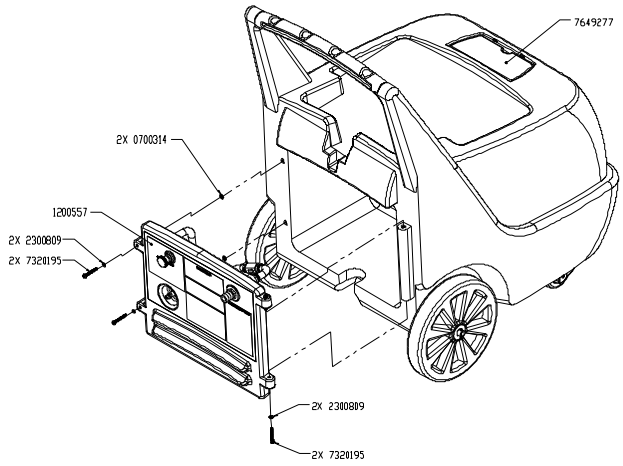


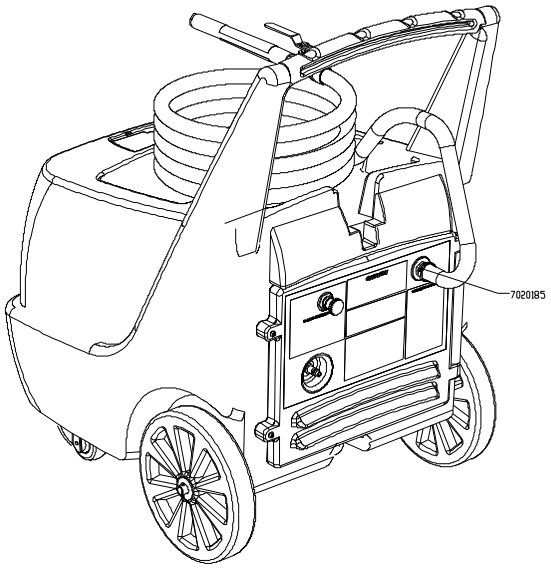
TROUBLESHOOTING

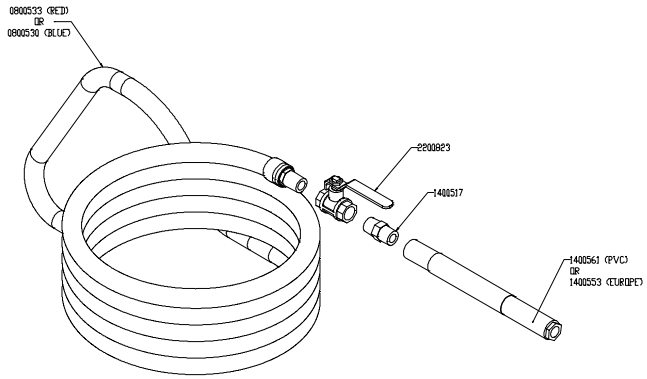
PROBLEM	***SOLUTION***
(1) Unit will not operate.	❑ Check for proper air pressure (60 PSI or more into unit). 60 PSI on Air Gauge. ❑ Check Air Regulator Filter for obstruction such as water, oil, or debris. ❑ Check for plugged strainer and replace Air Regulator Filter Assembly, if necessary.
(2) Unit will not make foam.	❑ Make sure the correct foaming chemicals and concentrations are being used. ❑ Checkvalve is installed backwards. ❑ Packing is contaminated or degraded. See item #8 for details on how to service the packing.
(3) Wet Foam-Dry Foam Valve is opened too far pump will not cycle properly due to lack of air pressure.	❑ If this occurs, close valve and follow the instruction in Steps 5—7 under “Operation” (page 3).
(4) Air passes through the pump without cycling.	❑ Repair or replace the pump.
(5) Foam Solution backs up into the air filter.	❑ Checkvalve needs replacing.
(6) Pump cycles but no liquid is discharged.	❑ Check to see if pump is primed. ❑ Check footvalve/strainer orientation. Arrow must point toward pump suction port. ❑ Suction line leak. ❑ Pump fittings loose or broken. ❑ Suction line not submerged down into liquid.
If all of the above check out okay.	❑ Repair or replace the pump.

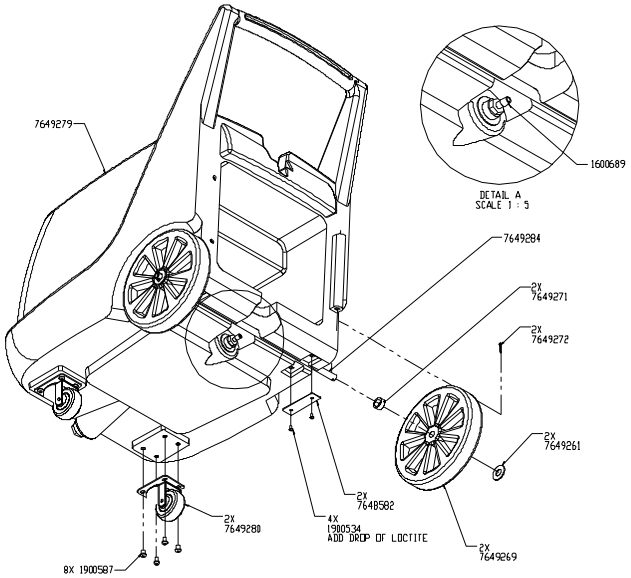
PROBLEM	***SOLUTION***
(7) Foam comes out wet regardless of where the Wet Foam-Dry Foam is set.	❑ Checkvalve may be plugged and needs replacing. ❑ Ball valve may not be open all the way on foam wand. This may happen if the operator is standing too close to a wall and closing the ball valve slightly to reduce splash of foam.
(8) Unit foams at reduced pressure.	❑ Check the air supply into the unit. If air pressure is low, turn unit off until air supply can bring pressure back up. ❑ If you know the air supply is 60 PSI or higher, check the internal air gauge which should read near 60 PSI or higher. Adjust Pressure Regulator to required minimum 60 PSI.
If both of the above check out okay, the S.S. packing could be plugged. Remove and clean it per the instructions to the right:	(i) Be sure to turn off air to unit and open the cut-off valve on the discharge hose to remove back-pressure on the unit. (ii) Remove the hose barb from the Discharge Tee. (iii) Remove the screen retainer and packing from inside the tee. (iv) Clean any particles from the packing and the screen retainer. (v) Replace the packing and screen retainer into the tee and replace the hose barb fitting. Use a pipe thread sealant to prevent leaks.
(9) Pump does not stop with ball valve (wand) turned off.	❑ Chemical lines not primed and/or air leaks in the pump tubing.

MOBILE CART & DISCHARGE HOSE

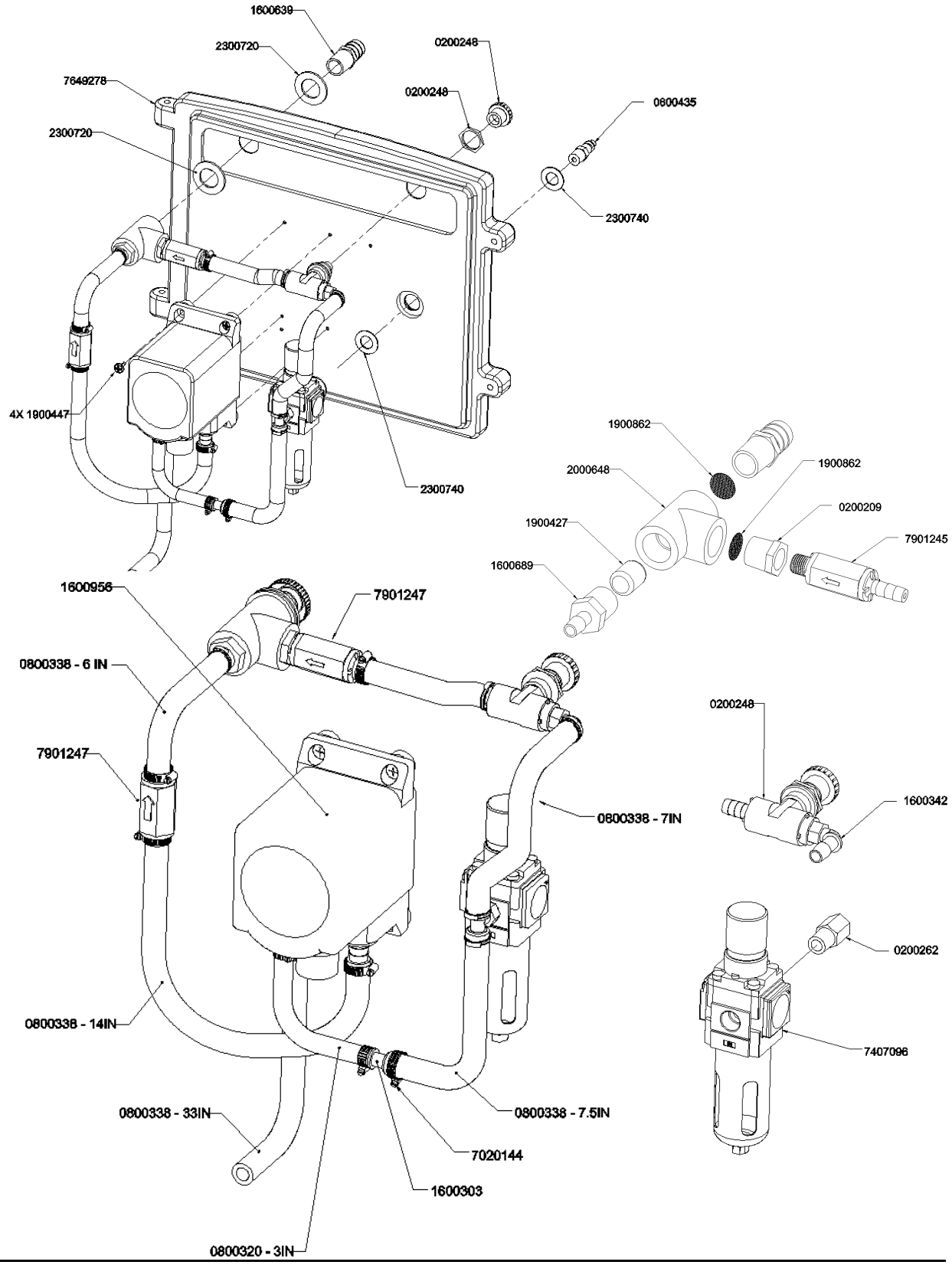








PUMP & PLUMBING



EUROPEAN PARTS

0800537
Air Supply Hose
50 ft (15.2m) European Plug

0800538
Air Supply Hose
25 ft (7.6m) European Plug

0800539
Foam Clean Hose
3/8 ID x 25 ft (7.6m)

0800545
3/8 ID x 40 ft (12m)

7649288-1
Front Wheel Kit
Steel with Brakes

7649288-2
Front Wheel Kit
Stainless Steel with Brakes

PVC Wand Assembly, 1/2” FPT
1400554-1 18in (46cm)
1400554-2 24in (61cm)
1400554-3 36in (91cm)

PVC Wand Assembly, 3/8” NPT
1400556-1 18in (46cm)
1400556-2 24in (61cm)
1400556-3 36in (91cm)

SST Wand Assembly, 3/8” NPT
1400557-1 18in (46cm)
1400557-2 24in (61cm)
1400557-3 36in (91cm)

REPLACEMENT PARTS LIST

Part Number	Description
0800533	Hose, Reinforced Red 3/4 ID X 1 OD X 30 Ft
0800530	Hose Reinforced Blue 3/4 ID X 1 OD X 10 Meters
2200823	Valve, Ball 1/2 FNPT Brass/Nickel
1400517	Nipple, 1/2 NPT Hex Brass/Nickel
1400561	Wand, PVC Foam Clean
1400553	Assembly, Foam Wand Europe
1600342	Fitting, ELL, Kynar 1/4 NPT X 3/8 Barb
0200248	Valve, Needle 1/4 FNPT X 3/8 Barb
0200262	Fitting, Brass/NI 1/4 FNPT X 1/4 MNPT
7407096	Air Regulator, Auto Drain & Filter, 7-125 PSI, 1/4 NPT
7901247	Check Valve, Viton 3/8 Barb X 3/8 Barb
7901245	Check Valve, Viton, Gray PVC 3/8 Barb (in) x 1/4 Mnpt (out)
1600956	Pump, Flojet AOP 3/8 Inch, Santoprene
7649269	Wheel Foam Clean, Mobile
7649269-1	Wheel, Foam Clean, Mobile Rubber, Black, Soft
1600639	Fitting, Brass Ni Pl 1/2 NPT X 3/4 Barb
0600435	Air Fitting 1/4 In NPT Male
7649278	Door, Foam Clean 25-95
1600689	Fitting, Kynar 1/2 MNPT X 3/8 Barb
1900427	Packing, S.S. Shaving Foam Clean
2000648	Fitting, Tee, PVC 1/2 T, Sch 80
1900862	S.S. Wire Cloth, .75 Dia 18 X 18 Mesh
0200209	Bushing, Reducer, Poly 1/2 MNPT X 1/4 FNPT
1600303	Fitting Adapter 1/4 Barb X 3/8 Barb
7020144	Clamp, Hose, S.S. , 7/16 X 11/16

DISCLAIMER

Knight LLC does not accept responsibility for the mishandling, misuse, or non-performance of the described items when used for purposes other than those specified in the instructions. For hazardous materials information consult label, MSDS, or Knight LLC. Knight products are not for use in potentially explosive environments. Any use of our equipment in such an environment is at the risk of the user, Knight does not accept any liability in such circumstances.

WARRANTY

All Knight controls and pump systems are warranted against defects in material and workmanship for a period of ONE year. All electronic control boards have a TWO year warranty. Foam Clean 25-95 Air Pump warranty is two years for defects in material and workmanship. Warranty applies only to the replacement or repair of such parts when returned to factory with a Knight Return Authorization (KRA) number, freight prepaid, and found to be defective upon factory authorized inspection. Bearings and pump seals or rubber and synthetic rubber parts such as “O” rings, diaphragms, squeeze tubing, and gaskets are considered expendable and are not covered under warranty. Warranty does not cover liability resulting from performance of this equipment nor the labor to replace this equipment. Product abuse or misuse voids warranty.

FOOTNOTE

The information and specifications included in this publication were in effect at the time of approval for printing. Knight LLC reserves the right, however, to discontinue or change specifications or design at any time without notice and without incurring any obligation whatsoever.

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