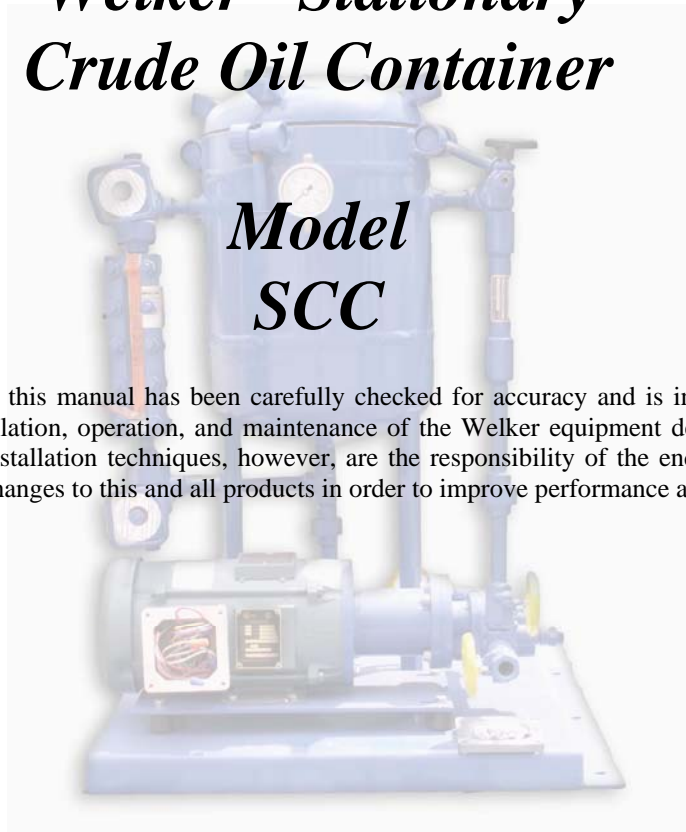




Welker[®] Stationary Crude Oil Container

Model SCC

The information in this manual has been carefully checked for accuracy and is intended to be used as a guide for the installation, operation, and maintenance of the Welker equipment described above. Correct operating and/or installation techniques, however, are the responsibility of the end user. Welker reserves the right to make changes to this and all products in order to improve performance and reliability.



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SPECIFICATIONS

1. GENERAL

1.1 INTRODUCTION

We appreciate your business and your choice of Welker products. The installation, operation, and maintenance liability for this product becomes that of the purchaser at the time of receipt. Reading the applicable *Installation, Operation, and Maintenance (IOM) Manual* prior to installation and operation of this equipment is required for a full understanding of its application and performance prior to use.*

If you have any questions, please call 1-800-776-7267 in the USA or 1-281-491-2331.

Notes, Warnings, and Cautions



NOTE

Notes emphasize information or set it off from the surrounding text.



CAUTION

Caution messages appear before procedures that, if not observed, could result in damage to equipment.



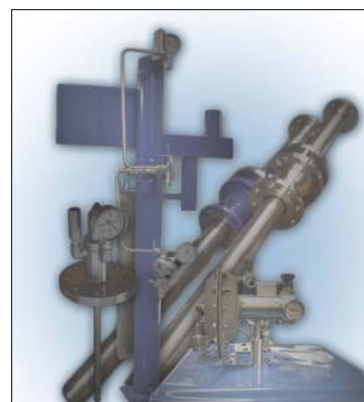
WARNING

Warnings alert users to a specific procedure or practice that, if not followed correctly, could cause personal injury.

The following procedures have been written for use with standard Welker parts and equipment. Assemblies that have been modified may have additional requirements and specifications that are not listed in this manual.

1.2 DESCRIPTION OF PRODUCT

The Welker Stationary Crude Oil Container is designed to be an atmospheric receiver for sampling systems that are looking for basic sediment and water (BS&W). The unit is a self-contained container and mixing system. It incorporates a static mixer into the circulation system. The product is contained in the receiver during the sample period, then it is thoroughly mixed to provide an excellent homogeneous mix of the sample for the lab. The Welker SCC is designed to meet the basic guidelines of ASME Chapter 8.2.



SPECIFICATIONS

1.3 IMPORTANT INFORMATION

N NOTE

Cleaning of the system between batches is important to assure that each sample volume has the integrity and is solely representative of that batch.

1.4 SPECIFICATIONS

N NOTE

The specifications listed in this section are generalized for this equipment. Welker can modify the equipment according to your company's needs. However, please note that ***the specifications may vary depending on the customization of your product.**

Table 1

Specifications	
Materials of Construction:	Carbon steel with an epoxy coated interior - other materials available.
Maximum Allowable Operating Pressure**:	140 psi (9.65 bar)
Connections:	1/4" & 1/2" NPT, others available
Volumes:	3-, 5-, 10-, 15-, 20-, 30-, 40-gallon containers available
Viscosity Range*:	8 - 50° API gravity
Temperature Range*:	-20°F to 250°F (-28.9°C to 121.1°C)
Products Sampled:	Stabilized or weathered crude oil, gasolines, diesels, and other fuels.
Power Connections*:	115 V, 60 Hz - other voltages available
Area Classification*:	Class I, Division II, Groups C & D w/ explosion-proof pump

SPECIFICATIONS

1.5 OPTIONS

- Materials of construction
 - Sizes
 - Voltages
 - Pressure ranges
 - High-level detection ball
 - Overpressurization protection
 - Heat tracing
 - Enclosures
 - Pressure or level transmitters
 - Spill containment
 - Customer specific paint or welding
 - Weigh scales
-

1.6 SYSTEM COMPONENTS

- 3-, 5-,10-,15-,20-, 30-, 40-gallon capacity tank
- Skid base
- Motor mounting plate with vibration absorbers
- Tank volume level sight glass
- Motorized pump
- Top spray nozzle
- Side spray nozzle
- Pressure relief valve
- Vacuum relief
- Pressure gauge
- Static mixer
- Two sample inlet ports
- Clean out port/valve
- Draw off/sample outlet port/valve
- Probe for draw off port/sample outlet
- Outlet to drain/sump port
- All associated fittings, tubing, etc.
- On/Off switch



SPECIFICATIONS

1.6 SYSTEM COMPONENTS

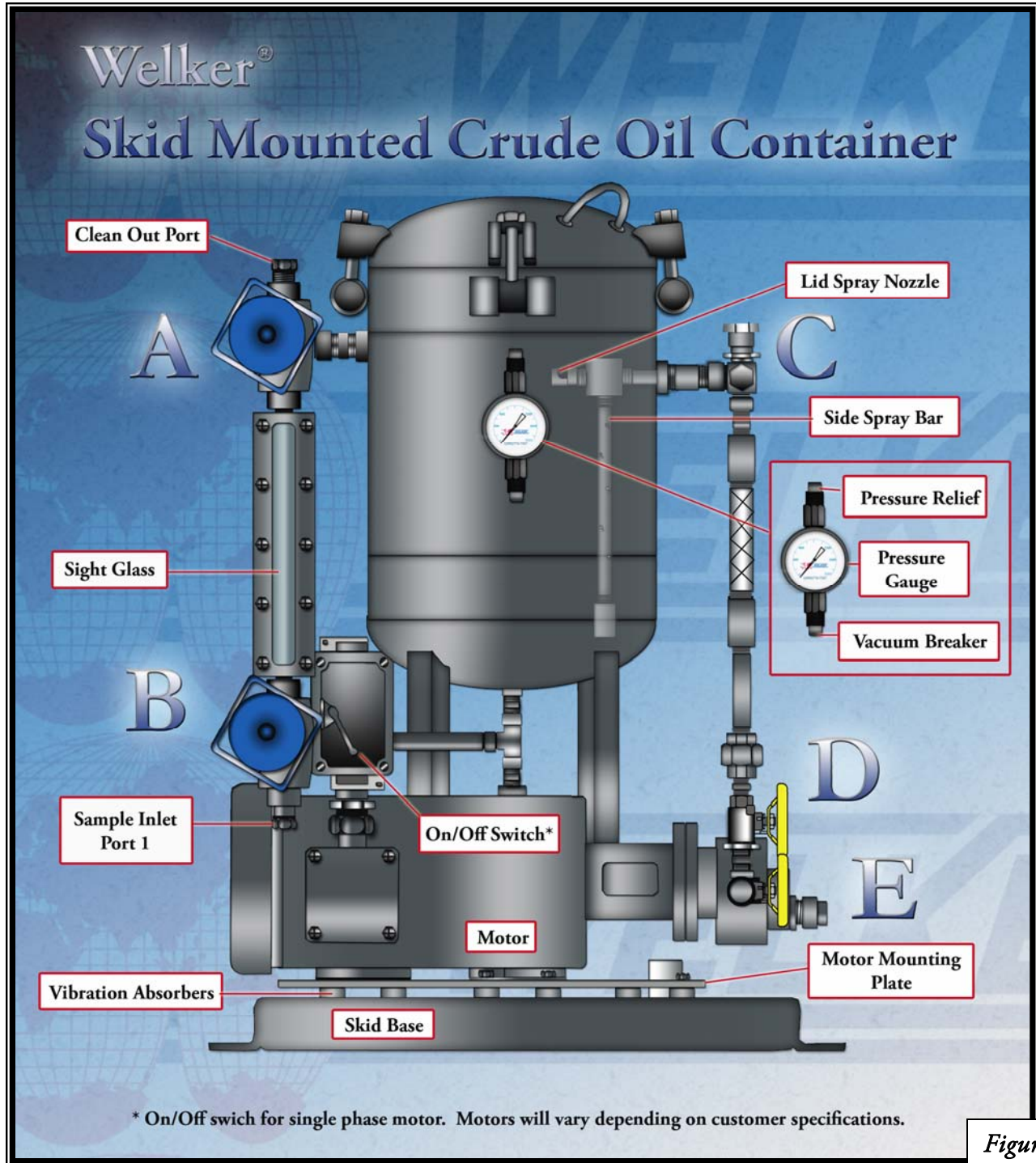


Figure 1

Refer to above figure throughout manual.

SPECIFICATIONS

1.6 SYSTEM COMPONENTS

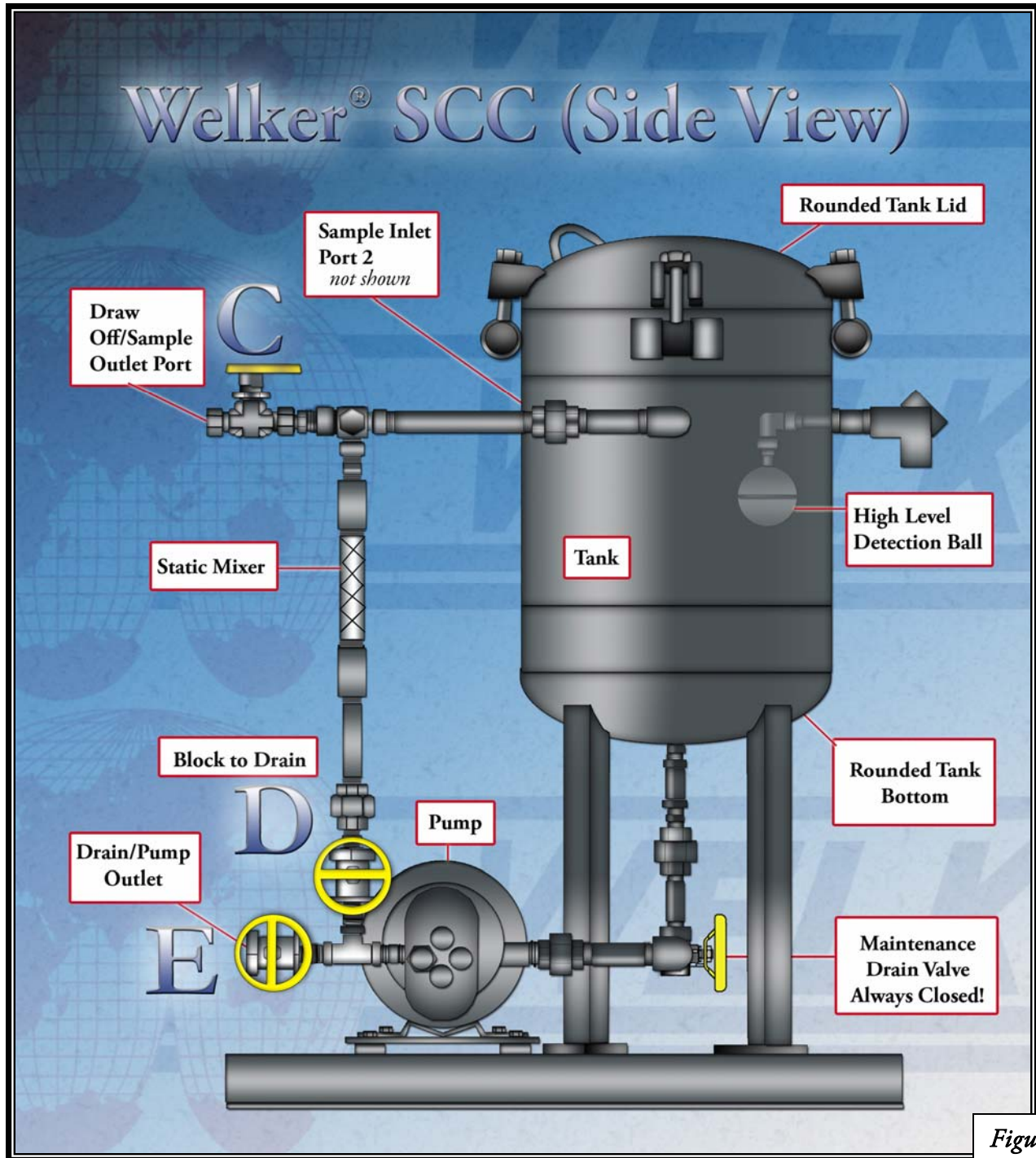


Figure 2

Refer to above figure throughout manual.

INSTALLATION & OPERATIONS

2. INSTALLATION & OPERATION INSTRUCTIONS

2.1 GENERAL

After unpacking the unit, check it for compliance and for any damages that may have occurred during shipment.

N NOTE

Claims for damages caused during shipping must be initiated by the receiver and directed to the shipping carrier. Welker is not responsible for any damages caused from mishandling by the shipping company.

N NOTE

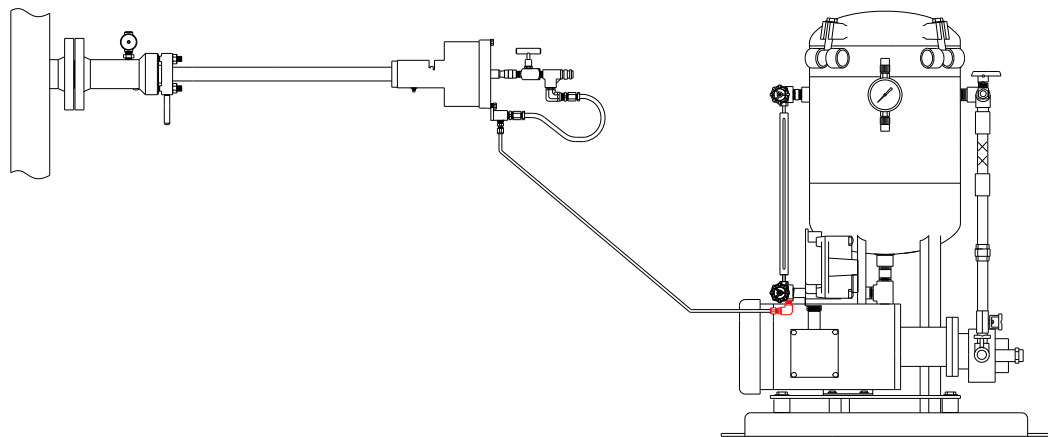
When sealing fittings with PTFE tape, refer to the proper sealing instructions for the tape used.

2.2 INSTALLATION INSTRUCTIONS

1. Make sure that all valves on the unit are closed.
2. Mount the skid base to a flat level surface.
3. Tube the sample outlet on the sampler to one of the two sample inlet ports, "B", or the one on the back of the container, using 1/4" to 3/8" O.D. stainless steel tubing.

N NOTE

The sample lines should always be leading down to the container without sags. This allows sample to drain into the container.



4. Connect drain/pump outlet to a sump or safe recovery system.
5. Have a qualified electrician make the appropriate electrical connections using the schematic supplied with the unit or the schematic on the motor plate.

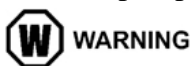
INSTALLATION & OPERATIONS

2.3 SAMPLING PROCEDURES

1. Open valves "A" and "B".
2. Sampling into the container can now begin.

2.4 MIXING & COLLECTION OF COMPOSITE SAMPLE

1. When sampling is complete, open valves "D" on the circulation loop.
2. Start the pump by switching the power to the On position.



Never operate the pump with the lid open.



The tank must contain fluid when the motor is operating. Running the pump with no fluid can result in damage to the motorized pump.

3. Let the contents circulate for a sufficient period, usually approximately 15 minutes, or consult your measurement department for a company-approved mixing procedure.



The SCC has a downcomer with upper and lower spray nozzles affixed. Once mixing begins, this assembly completely washes the lid and the sides of the container to mix any condensation that might have formed due to temperature fluctuations.



Within the motor switch assembly, there is a heat protector. Once the motor reaches a preset temperature, the heat protector interrupts the power to the unit until the motor reaches a lower temperature.

4. Place a transport container (we recommend the **Welker® Portable Crude Oil Container** model TCC) under the draw off valve "C" and open the valve. Once the required volume of sample is obtained, close the valve.
5. Switch the power of the motor to the Off position, and proceed to Maintenance Section 3 for cleaning instructions.



In order to maintain the integrity of samples collected, the container must be thoroughly cleaned after each sampling cycle. Failure to do so will contaminate any further sampling.



MAINTENANCE

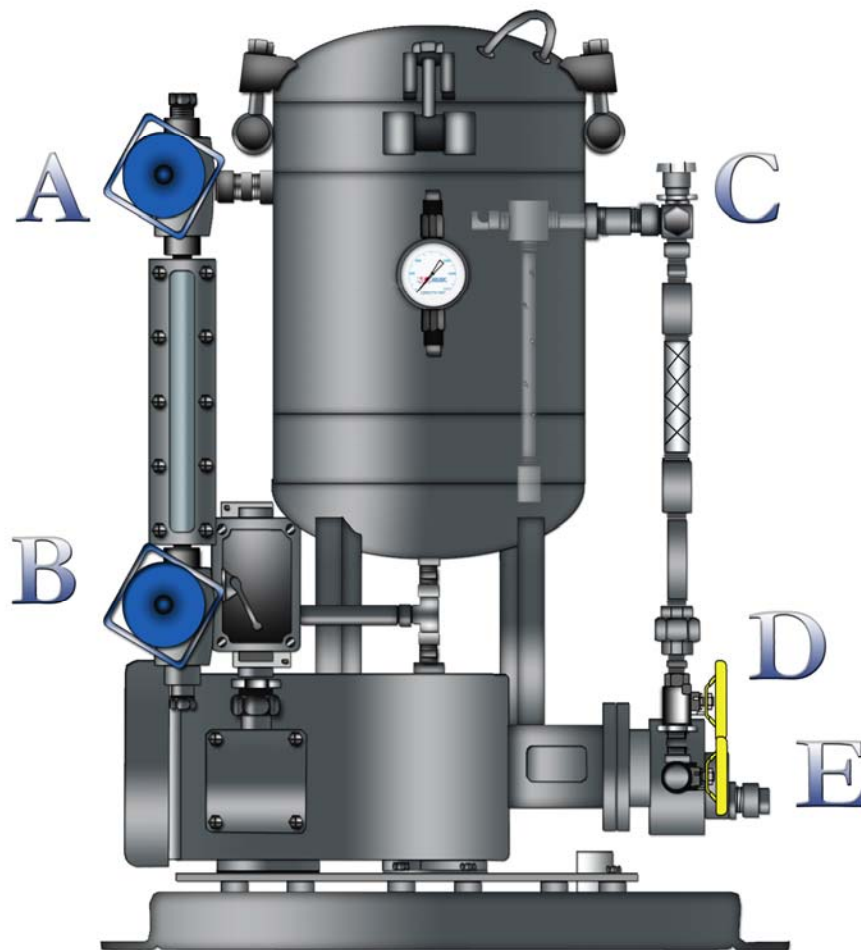
3. MAINTENANCE

3.1 GENERAL

Prior to maintenance or disassembly of the unit, it is advisable to have a repair kit handy for the system in case of encountering unexpected wear or faulty seals.

N NOTE

We recommend that the unit have annual maintenance under normal operating conditions. In the case of severe service, dirty conditions, excessive cycling usage, or other unique applications that may subject the equipment to unpredictable circumstances, a more frequent maintenance schedule may be appropriate.



MAINTENANCE

3.2 CLEANING

1. Close the circulation valve "D" that is downstream of the mixing pump and within the mixing loop (see page 10).
2. When the container needs to be emptied and cleaned, open the valve "E" to the sump. It is the valve that is isolated from the mixing loop downstream from the mixing pump.
3. If the motor is not running, switch the power switch to the On position, and allow motor to pump out remaining product to the sump or safe recovery system.
4. When the container is empty (view sight glass for verification), shut off the motor, close valve "E" to the sump and open the container.
5. Wipe off the walls and lid, and fill approximately one half of the container with solvent or kerosene.
6. Close the lid and make sure the circulation valve "D" is open.
7. Turn on the pump motor and run it for three to four minutes.
8. Open valve "E" to the sump and allow motor to pump out the remaining solvent.
9. Once the container is emptied, shut off the pump motor and open the container.
10. Repeat steps 2-9 several times until the container is completely clean and no product remains. This will prevent contamination of the next sample batch. Once system has been thoroughly flushed out, proceed to next step.
11. Open the container, wipe it clean and dry removing any excess solvent then close the lid.
12. Clean the sight glass if necessary.
13. Close valves "C", "D", and "E".
14. The unit is now ready to reuse.

3.3 MAINTENANCE INSTRUCTIONS

15. Periodically, check for leaks at all connections.
16. Replace O-ring lid seal annually or at any indication of damage to the seal.

TROUBLESHOOTING

4.1 TROUBLESHOOTING GUIDE

The following is a troubleshooting table of issues most commonly associated with the Welker SCC models. If you are having a problem that is not listed, or if the solution provided does not repair the problem, please call Welker for service options.

PROBLEM	POSSIBLE CAUSE	SOLUTION
The sight glass is filling up before the container is filled.	Valve "B" is closed on the sight glass.	Open both valves on sight glass.
There is a very slow output of sample coming from Valve "C".	The vacuum breaker is not working.	Clean and adjust the vacuum breaker.
Container fills before the sight glass fills.	Valve "A" is closed.	Open both valves on the sight glass.



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