

Welker[®] Crude Oil Collection Assembly with Welker[®] Volume Regulator

Model AWL-3 with AWL-1 & AWL-2



Installation, Operation, and Maintenance Manual

1.1 Product description

The Welker Crude Oil Collection Assembly is designed to take samples of product from a pipeline and regulate the samples to a desired volume.

Specifications

Materials of Construction	Aluminum or 316 SS, Viton, and PTFE (others available)
Sample Outlet Connection	1/4" MNPT (others available)
Solenoid Electrical Connection	1/4" MNPT (others available)
Pipeline Connection	1/2", 3/4", 1" MNPT
Maximum Allowable Operating Pressure	125 PSI @ -20° F to 100° F (6 bar @ -28° C to 37° C)

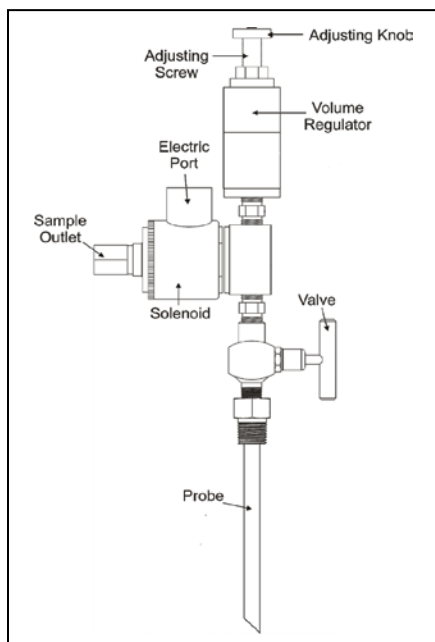


Figure 1

1.2 Installation and operation

N NOTE

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

- 1.2.1 Depressurize the pipeline to prepare for installation.
- 1.2.2 Connect the probe to the pipeline.
- 1.2.3 Connect the sample container to the sample outlet of the solenoid.
- 1.2.4 Make the appropriate electrical connections into the top port of the solenoid.
- 1.2.5 Tighten the adjusting knob on the volume regulator to correspond with the desired volume.

N NOTE

The volume measurement is indicated in cubic centimeters (cc) on the body of the adjusting screw.

- 1.2.6 Open the valve on the assembly.
- 1.2.7 The unit is now in operation. When the solenoid is energized, the volume regulator will insert the desired volume of sample into the sample container.

1.3 Maintenance

- 1.3.1 Depressurize the pipeline to prepare for maintenance.
- 1.3.2 Close the valve on the assembly.
- 1.3.3 Disconnect the electrical connections from the solenoid electrical port.
- 1.3.4 Disconnect from the sample outlet port to the sample container.
- 1.3.5 Remove the volume regulator from the assembly.
- 1.3.6 Disassembly is complete.
- 1.3.7 Place the volume regulator on a smooth, clean surface. *(maintenance instructions continued)*

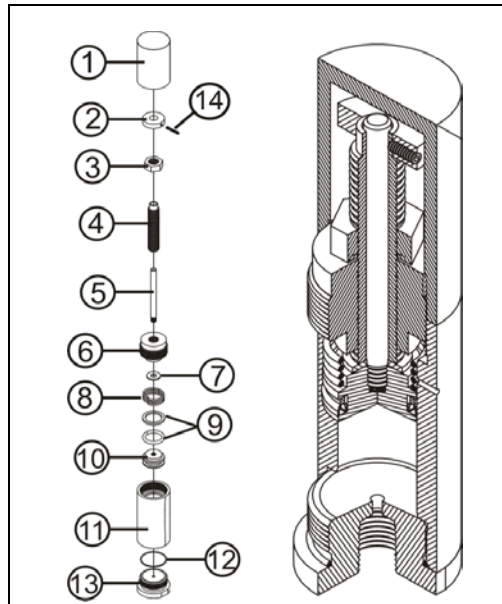


Figure 2

- 1.3.8 Remove the clear plastic dust cover (Part 1).
- 1.3.9 Remove the set screw (Part 14) from both the adjusting knob (Part 2) and the adjusting screw (Part 4).
- 1.3.10 Unscrew the jam nut (Part 3) on the adjusting screw.
- 1.3.11 Unscrew and remove the adjusting screw from the top cap (Part 6).
- 1.3.12 Remove the top cap connected to the cylinder (Part 11).
- 1.3.13 Remove the shaft (Part 5), washer (Part 7), spring (Part 8), and piston (Part 10) from the cylinder.
- 1.3.14 Examine the piston and the shaft for scratches. If scratches are present, the parts will need to be replaced.
- 1.3.15 Replace the seals (Part 9) in the piston.

N NOTE

New seals supplied in spare parts kits are not lubricated. They should be lightly coated with lubrication grease (Dow Corning 111 [DC 111] or equivalent lubricant) before they are installed into the equipment. This helps with the installation of the seals while reducing the risk of damage when positioning them on the parts.

- 1.3.16 Examine the cylinder for scratches.
- 1.3.17 Replace the seal (Part 12) on the base (Part 13).
- 1.3.18 Reinstall the piston, spring, washer and top cap into the cylinder.
- 1.3.19 Reinsert the shaft.
- 1.3.20 Screw the adjusting screw back into the top cap.
- 1.3.21 Screw the jam nut back onto the adjusting screw.
- 1.3.22 Place the knob back on the adjusting screw and reinsert the set screw into both.
- 1.3.23 Replace the dust cover.
- 1.3.24 Reattach the regulator to the solenoid on the assembly.
- 1.3.25 The assembly is now ready for reinstallation.



13839 West Bellfort, Sugar Land, Texas 77498-1671
 Phone: (281) 491-2331
 Fax: (281) 491-8344
 Toll Free: (800) 776-7267
 Web Page: www.welkereng.com