

INSTALLATION AND OPERATION INSTRUCTIONS FOR WELKER AVA-SERIES VOLUME ANALYZER ("BITE CHECKER")

The Welker AVA-1 and AVA-2 are designed to give positive sample bite volume verification in liquid sampling services. The AVA is actuated each time the sampler is actuated. When the sampler is deactivated, the AVA releases the sample to the container. If the AVA is equipped with a reed switch, a contact closure can be set at a specific volume, and thus, sends an electronic signal to a monitoring control, verifying that the sampler has taken an adequate sample.

To place into operation, the following steps should be followed:

1. After unpacking the unit, check it for compliance and any damage.
2. The AVA is to be located between the sampler outlet and the container inlet, preferably in an elevation that ensures the sample line is always sloping down from the sampler to the container.
3. 'T' off the instrument supply to the lower port in the sampler motor and tube to the AVA actuation port. Use 3/8" diameter tubing to ensure good pressure and response. Keep the AVA and the sampler as close to each other as possible.
4. Tube from the sample outlet of the sampler to the inlet port of the AVA. Use 1/4" or 3/8" diameter tubing for crude oil services (1/8" or 1/4" for light liquid hydrocarbon services).
5. Tube from the outlet port of the AVA to the inlet of the sample container. Use 1/4" or 3/8" diameter tubing for crude oil services (1/8" or 1/4" for light liquid hydrocarbon services). ***Important**: The outlet port of the AVA must be equipped with a check valve (approximately 50 psi).
6. Connect the electrical wires to the reed switch pig tails. The reed switch provides a contact closure. For example, do not wire to 110 AC voltage!
7. The AVA is now ready to put into service.
8. Stroke the sampler several times to assure that all tubing to the AVA is liquid filled. The unit will not function correctly until all the air is purged from the tubing.
9. Adjust the movable switch well so that the reed switch trips when the magnet is at the top of its travel during sampler actuation. Move the switch well down slightly to allow for slight variance in sample bite.
11. Tighten all set screws on switch tower.

12. Check all fittings for leaks.

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

13. AVA installation is now complete.

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