

VST Installation Procedure for Stage II Coaxial ORVR Nozzle Repair Kits

Part Number Series: VST-FEK-200, VST-VCK-200, VST-NSA-200



Vapor Systems Technologies, Inc.
650 Pleasant Valley Drive
Springboro, Ohio 45066 (USA)

Toll Free: 1-888-878-4673
Phone: 937-704-9333
Fax: 937-704-9443
www.vsthose.com

TOOLS

Adjustable Wrench	Narrow End Nipper
Approved Fuel Container	Torque Wrench
Wide Mouth Funnel	Vaseline (or suitable lubricant)

GENERAL INFORMATION

If hanging hardware components are involved in a drive-off or incur other customer abuse, VST recommends that a qualified service technician functionally test each individual component prior to customer dispensing activities.

INSTALLATION PREPARATION

This procedure must be followed to insure proper operation of all hanging hardware components.

1. Turn off and tag the power to the dispenser. Dispenser must be de-energized prior to service to avoid personal injury.
2. Barricade work area to block vehicle access to the dispenser.
3. Close the dispenser shear valve prior to removing hanging hardware (hoses, safety breakaways, and nozzles).
4. Visually inspect and assess the extent of the damage to all hanging hardware components. If there are no imperfections/damage, proceed to FUNCTIONAL TEST.
5. Drain liquid product from the hanging hardware set into an approved container prior to replacing any hanging hardware component.
6. Remove hanging hardware from the dispenser prior to making replacement component assembly connections. (VST recommends connecting the whip hose to the dispenser as the last connection during hanging hardware re-assembly.)
7. To drain nozzle:
 - a. Hold the backend of the nozzle over an approved container
 - b. Pull nozzle lever to fully drain the nozzle

VAPOR COLLECTION KIT (VST-VCK-200) REMOVAL (See Figure 1)

1. Remove large band clamp from the Vapor Collection assembly with end nippers.
2. Pull the Vapor Collection assembly (boot) off of the clamping groove of nozzle body.
3. Pull Vapor Collection assembly off of the spout by slightly twisting to go over the spout latch ring.
4. Properly discard the removed components.

VAPOR COLLECTION KIT REPLACEMENT (See Figure 1)

1. Place the large band clamp on the collection sleeve.
2. Slide VCK over the spout.
3. Align and center the alignment marks on top of the vapor collection kit.
4. Tighten collection band clamp until collection sleeve will not rotate.

NOZZLE SPOUT ASSEMBLY (VST-NSA-200) REMOVAL

1. Remove Vapor Collection Kit.
2. Loosen spout nut with smooth-jaw wrench. (See Figure 2)

NOTE Do not wrench on spout. Do not use pipe wrench or locking-type pliers.

3. Once threads are completely disengaged, pull the spout straight out.

NOZZLE SPOUT ASSEMBLY REPLACEMENT (See Figure 2)

1. Fuel chamber should remain in the nozzle casting with the vacuum sensing tube hole oriented at the top.
2. If the fuel chamber is pulled out of the nozzle casting:
 - a. Check O-ring for damage
 - b. Replace O-ring if damaged (check for cuts, nicks, etc.)
 - c. Lubricate O-ring prior to re-assembly

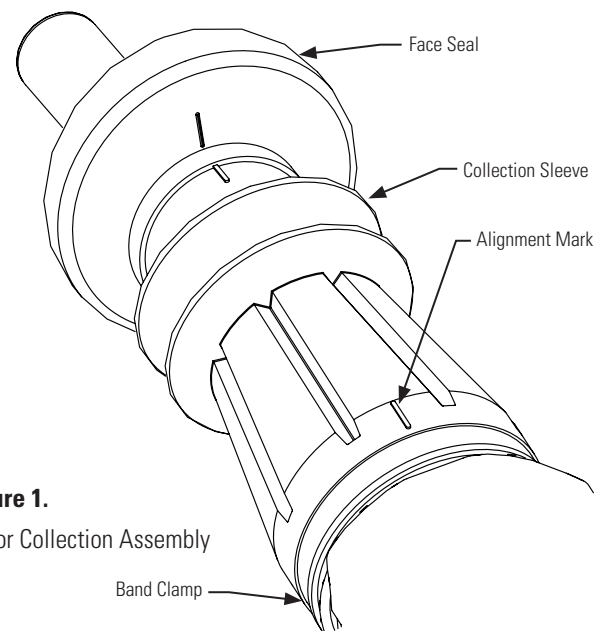


Figure 1.
Vapor Collection Assembly

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3. Insert fuel chamber into nozzle casting.
 - a. Poppet stem with spring goes through poppet hole in the fuel chamber (center hole)
 - b. Push fuel chamber until it is flush with casting.
 - c. Vacuum sensing tube hole in the fuel chamber should be oriented at the top.
 4. If the fuel chamber is not pulled out of the nozzle casting:
 - a. Use pliers to carefully pull the fuel chamber flush with the nozzle casting for easier insertion of the vacuum sensing tube
 5. Lightly lubricate **ALL** O-rings on spout assembly.
- NOTE** Do not block vacuum sensing tube hole with lubricant
6. Align vacuum sensing tube with mating hole in the fuel chamber.
 7. Align anti-rotation bump on the spout with the casting notch. Be careful not to damage spout O-rings
 8. Firmly insert spout assembly into the nozzle casting.
 9. Thread spout nut onto the nozzle casting and tighten firmly. Torque to 30 foot-pounds. Spout should be tight and not able to rotate. Do not over tighten the spout nut.
 10. Once the spout is replaced, re-install the vapor collection assembly per Vapor Collection Kit Replacement instructions.

FUNCTIONAL TEST

1. Follow the VST Installation Procedures for each hanging hardware component. (Procedures: 9500-510, 9500-515, and 9500-520).
2. Purge air from the system by pumping one-tenth (1/10) to two-tenths (2/10) of a gallon of fuel into an approved container. Inspect nozzle connection for liquid leaks and make proper adjustments at hose connection if necessary.
3. Check the nozzle shut-off action by dispensing fuel into an approved container at least three times to assure proper automatic operation. To test, operate the nozzle and submerge the spout tip in fuel until the fuel level covers the vent hole. The main valve of the nozzle automatically shuts off when liquid covers the vent hole at the end of the spout. The nozzle is not designed to operate on gravity flow. The dispenser should deliver a minimum of 3 gpm. Hold open latch will disengage automatically when liquid covers the vent hole in the spout.

4. Measure the resistance between the dispenser outlet casting and the tip of the nozzle spout. Use an electronic multimeter set on the high range of the ohmmeter function. Resistance should not indicate more than 70,000 ohms per foot of the hose. Example: The measured resistance for a 12-foot hose must not exceed 840,000 ohms (840 kilohms).

MAINTENANCE

Inspect nozzles regularly for damaged component parts: vapor collection sleeve, face seal, spout, lever, lever lock, etc. Damaged components must be replaced. Vent hole at the end of the spout should be clear of debris. The nozzle will not operate properly if vent hole becomes clogged. Keep hose connections tight.

Subject to customer abuse, follow the initial inspection instructions found in the VST Installation Procedure 9500-520. The nozzle should be replaced when damaged.

The nozzle is designed and constructed to give lasting service if properly handled and maintained. If for any reason it should need attention, contact your VST distributor for proper disposition.

NOTE

Due to abuse, misuse, changing gasoline formulas, variation in maintenance practices, environmental conditions, and/or conditions beyond the manufacturer's control, dispensing equipment may need replacement before five (5) years. Inspections and proper maintenance procedures should be followed by the station manager to determine if replacement is required before five (5) years.

WARNING

Unauthorized rebuilding or modifying of nozzles voids ALL approvals and warranties. VST products must be used in compliance with applicable federal, state, and local laws and regulations. If local regulatory codes prohibit use of the nozzle's hold-open clip, it must be removed prior to nozzle installation. Remove the nozzle to a safe work area. Place the nozzle on a flat surface. Locate the alloy rivet securing the hold-open clip and spring in the nozzle's handle. Use a drill with a 3/16" (5mm) drill bit, drill out the rivet securing the hold-open clip, and discard the clip, spring, and all other rivet debris.

