

VST Installation Procedure for Stage II Vacuum Assist and Diesel Safety Breakaway Devices

NON-Reattachable Breakaway Part Number Series: VST-ISE

- OR -

Reattachable Breakaway Part Number Series:
VST-IS, VST-ISA, VST-H, VST-DS



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APPLICATION

These VST Safety Breakaway devices are intended to prevent damage to the dispenser and hose in the event of a vehicle drive off. These devices separate at pull forces up to 350 lbs. Prior to installation, (see Installation Preparation) you will need to determine that 350 lbs. pull force will not damage the dispenser. After verifying that the dispenser is securely bolted to the island, it can be tested by using a spring scale and a length of rope. The rope must be connected at the dispenser outlet casting, which may require a threaded bushing with a hole for attaching the rope. Attach the scale to the rope and pull to 350 lbs. in several directions. Be sure to avoid damaging the dispenser.

NOTE:

- The whip hose **ALWAYS** attaches to the dispenser. If a retractor is being used, the retractor clamp **MUST** be between the breakaway and dispenser.
- VST hoses are made to withstand 350 pounds tensile pull without damage. If another brand of hose is present at the dispenser, VST recommends that you contact the hose manufacturer regarding the compatibility with this breakaway device.

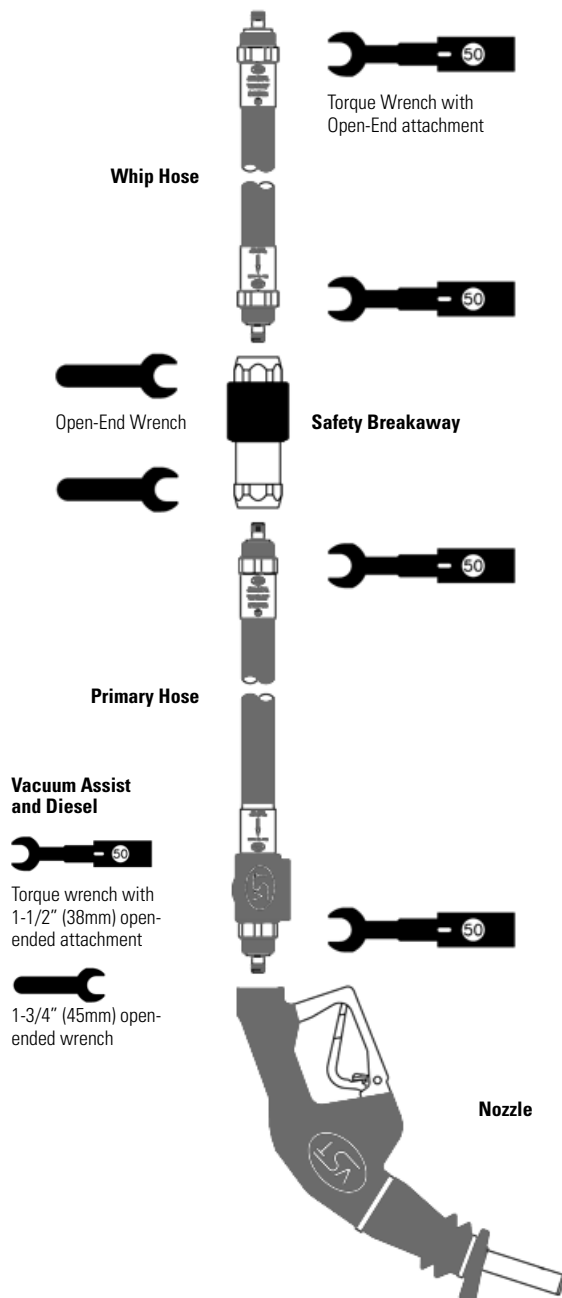
INSTALLATION PREPARATION

These procedures must be followed to insure leak-proof installation and operation of these safety breakaway products.

- Turn off and tag the power to the dispenser. Dispenser must be de-energized prior to service to avoid personal injury.
- Barricade work area to block vehicle access to the dispenser.
- Close dispenser shear valve prior to removing hanging hardware (hoses, safety breakaways, and nozzles).
- Drain liquid product from the hanging hardware set into an approved container prior to replacing any hanging hardware component.
- Remove hanging hardware from the dispenser prior to making replacement component assembly connections. VST recommends connecting the whip hose to dispenser as the last connection during hanging hardware assembly.

Figure 1.

Hanging Hardware Assembly



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INSTALLATION

1. Initial inspection:
 - a. Carefully unpack safety breakaway from shipping carton.
 - b. Inspect safety breakaway for any damage to threads, O-Rings, exterior, etc.
2. Stage II Safety Breakaways:

Lightly lubricate **ALL** O-rings on mating connections with petroleum jelly or other suitable lubricant. **DO NOT USE** pipe dope or thread sealant.

- OR -

Diesel Safety Breakaways:

These are pipe thread couplings. Use of thread sealant may be necessary.

3. Attach breakaway on mating connection and tighten by hand. **NOTE FLOW DIRECTION ARROW** (where applicable). Use the hex on the breakaway body to tighten. **DO NOT USE** the breakaway body to tighten the unit.
4. Tighten breakaway connection to 50 foot-pounds of torque. **DO NOT OVER TIGHTEN**. Use the hex on the breakaway body to tighten. Use a torque wrench with an open-end attachment to fit the hose couplings and an open-end wrench to properly tighten breakaway connections. **DO NOT USE** channel-locks or pliers to tighten connections. Proper ft./lb. torque may not be achieved with these tools.
5. 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 each hose joint connection for liquid leaks and make proper adjustments if necessary.
6. 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.
7. 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 hose. Example: The measured resistance for a 12-foot hose must not exceed 840,000 ohms (840 kilohms).

MAINTENANCE

Inspect safety breakaways regularly for damage, loose connections or leaks. Replace as necessary. Subject to customer abuse, safety breakaway should be replaced when damaged.

The safety breakaway 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 safety breakaways voids ALL approvals and warranties.

VST products must be used in compliance with applicable federal, state and local laws and regulations.

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REATTACHABLE BREAKAWAYS ONLY

1. Follow **INSTALLATION PREPARATION** steps 1 – 5.
2. Inspect both safety breakaway halves for damage that may have incurred during separation. Include looking for external damage to the product, damaged threads, damaged O-rings, proper placement of O-rings, etc. **If damage is detected, replace with new product.**
3. Prior to reassembling, be sure that the mating parts are undamaged and clean.
4. Stage II Safety Breakaways:
Lightly lubricate **ALL** O-rings on mating connections with petroleum jelly or other suitable lubricant. **DO NOT USE** pipe dope or thread sealant.

- OR -

Diesel Safety Breakaways:

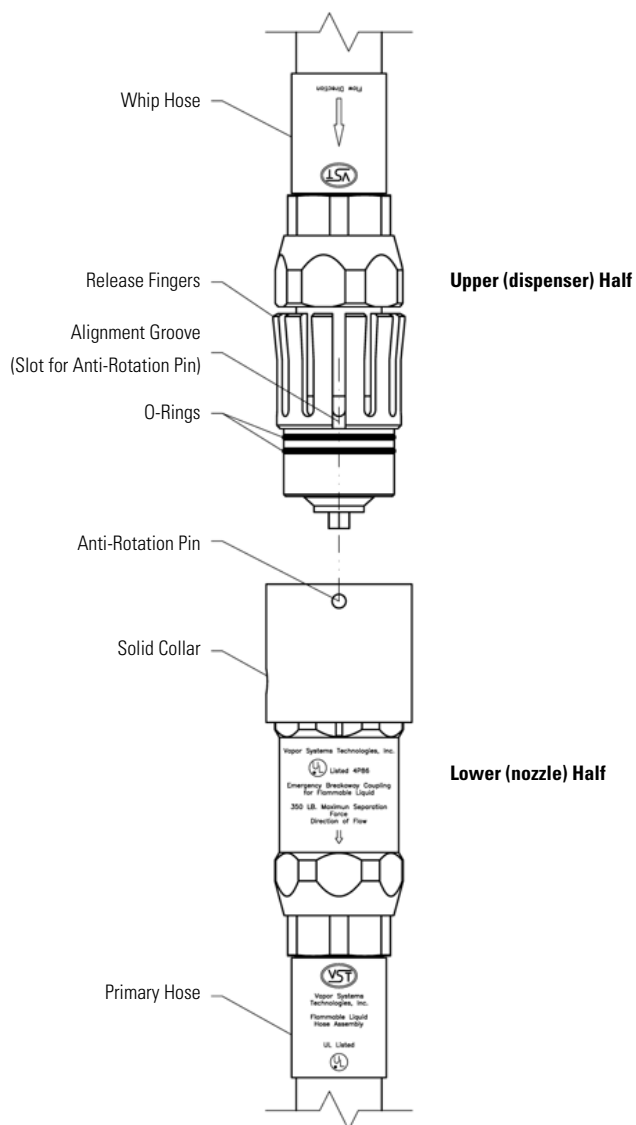
Lightly lubricate **ALL** O-rings on mating connections with petroleum jelly or other suitable lubricant.

These are pipe thread couplings. Use of thread sealant may be necessary.

5. Carefully align the two breakaway halves.
 - a. Align the anti-rotation pin (inside the nozzle end half) with the slot on the dispenser half of the breakaway.
6. Push the two aligned halves together concentrically until they snap into place. Listen for a “click” to indicate that the two halves have been properly reattached. If the parts become cocked or otherwise do not snap together easily, pull them apart and repeat steps 5 and 6.
7. After the two breakaway halves are snapped together, give the reassembled breakaway a strong pull to verify that it is properly connected.
8. Follow **INSTALLATION** steps 3 – 7.

Figure 2.

Connecting the Reattachable Breakaway



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