INSTALLATION INSTRUCTIONS FOR QUALIFIED TECHNICIANS FOR VENT-LINE BREAKAWAY DEVICES (NGVLB)

207732
December 2025, Rev C

ANSI NGVLB

SECTION A: INTRODUCTION

- ***How to use this Manual:***

  This manual has been prepared as a step by step users guide for the OPW NGVLB series of CNG Vent-Line Breakaway valves. This information is intended as a general outline to familiarize the installer/end user with the techniques and procedures used to install, reconnect and maintain the Breakaway device.

- ***General:***

  The NGVLB series of breakaways ("Breakaways") are intended for use as a safety device in high pressure compressed natural gas (CNG) fueling applications, in the temperature range of -40°C to 85°C (-40°F to 185°F). The vent-line breakaway is a safety device that will allow the hose to separate from the dispenser in the event of a drive away incident. Installation shall conform to the requirements of the authorities having jurisdiction or, in the absence of requirements, with the Standards *NFPA 52*, *Compressed Natural Gas (CNG) Vehicular Fuel Systems, or CAN/CSA-B108, NGV Fueling Stations Installation Code*, as applicable.

SECTION B: INSTALLATION

Customer Connections: The Inlet & Outlet Connections and Seals for the FLB's are as follows:

BREAKAWAY	INLET/OUTLET	SEAL
NGVLB	SAE J1926-6 O-Ring boss Port, 9/16" -18 UNF	OPW P/N 001146

Tape O-Ring Here

Tape O-Ring Here

CAUTION: THE BREAKAWAYS MUST BE CONNECTED BETWEEN THE DISPENSER AND THE NOZZLE SO IT IS FREE TO ALIGN ITSELF IN A STRAIGHT MANNER BETWEEN THE TWO HOSES (FIG.1).

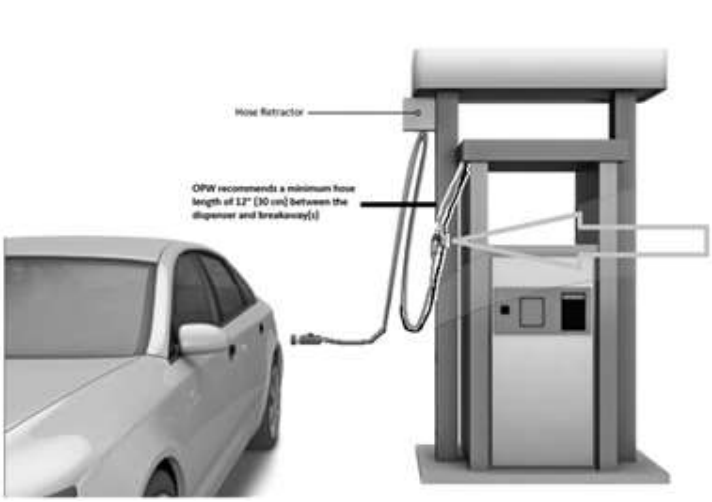

FIGURE: 1

FIGURE: 2

NOTE: OPW RECOMMENDS THE BREAKAWAY(S) BE CONNECTED TO THE DISPENSER WITH A HOSE OF APPROPRIATE LENGTH TO PROHIBIT THE BREAKAWAY(S) FROM CONTACTING THE GROUND. DURING A DRIVE OFF, THE HOSE ASSEMBLY SHALL PROMOTE A STRAIGHT LINE ALINGMENT ALLOWING THE BREAKAWAYS TO OPERATE PROPERLY. SHOULD A HOSE RETRACTOR BE REQUIRED, THE HOSE CLAMP PLACEMENT AND DESIGN SHOULD NOT INTERFERE WITH THE OPERATION OF THE BREAKAWAYS(S).

All Breakaways require special installation precautions to ensure safe and reliable operation. The proper installation will conform to the requirements of authorities having jurisdiction or in the absence of requirements with the NFPA 52 standard, *Compressed Natural Gas (CNG) Vehicular Fuel Systems*, or *CAN/CSA-B108, NGV fueling stations installation code* as applicable.

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INSTALLATION PROCEDURE:

Step 1: Inspect the unit and ensure that both halves are fully connected. If you can easily pull the two halves apart then please refer to section D: re-assembly before continuing with the installation.

Step 2: Ensure that the threads on both the hose fitting as well as the inlet and outlet ports are clean and free of any debris, oil, grease or Teflon tape.

Step 3: Ensure that the proper sealing O-rings (provided above) are installed on the male hose fittings according to the fitting and O-ring manufacturer's instruction.
For additional O-rings contact OPW Customer Service. Order Part # 001146

Step 4: Only use the wrench flats when tightening the hose to the Breakaways.

Step 5: Ensure the flow direction arrow is pointing in the direction of gas flow. (toward the dispenser)

Step 6: Using a properly sized wrench, tighten the fitting to a torque 25 ft-lbs. (34 Nm) to 30 ft-lbs. (40 Nm).

Warning:

a. **Excessive over tightening will gall the threads and weaken the connection**
b. **Do not wrench across coupling**

Step 7: After installation, test the unit for leaks. Slowly pressurize and test the connection using a suitable leak detector (e.g. Snoop®). The test pressures should include both Low (100 psi /0.86 Mpa) and High (3,000-5,000 psi/20-35 Mpa). For safety reasons, always pressurize at the low pressure first.

SECTION B: OPERATION

The NGVLB will split into two parts upon disconnection when the force is within the range of 40± 15 lbf. (178±67 N) is applied axially to the breakaway coupling.

NOTE: UPON SEPARATION, A VERY LOUD NOISE MAY BE EXPECTED.
CAUTION: A HOSE BREAKAWAY EVENT IS INTENDED TO PROTECT THE FUELING DEVICE, DISPENSER, AND VEHICLE. HOSE STRETCH WILL CAUSE A WHIPPING ACTION AND MAY RESULT IN PERSONAL INJURY.

RECONNECTION PROCEDURE:

Step 1: Depressurize the dispenser system and hoses before attempting any work.

Step 2: Carefully inspect the two parts for any scratches, damage, and permanent contamination that may have occurred when the hose separated from the dispenser. If any damage is visible or any parts are missing, promptly call a qualified technician and have it replaced with a new unit.

Step 3: Carefully inspect the o-rings and canted coil spring to ensure they are present and not damaged. If any damage is visible or any parts are missing, promptly call a qualified technician and have it replaced with a new unit. Please contact OPW customer service for replacement kits. Order the 207563 replacement kit.

Step 4: If the parts can be reused, simply clean the two pieces first. Then insert the breakaway adaptor into the stationary housing with enough force (12 lbf / 54 N) until a click is felt. This click is the result of the canted spring falling into the locking groove.

Step 5: If any problems arise with reconnection, please contact a qualified repair technician to have the unit replaced.

Step 6: After re-assembly, test the unit for leaks. Slowly increase the system pressure in steps of 500psi and test the connection using a suitable leak detector (e.g. Snoop®). The test pressure should start at low (100psi /0.86MPa) first and finish at fill line pressure (3000-5000psi/ 20-35MPa). For safety reasons, always apply the pressure slowly and take your time checking for leaks to ensure a good connection.

CAUTION: ANY ATTEMPT TO REPAIR PERSISTENT LEAKS WILL VOID WARRANTY. CONTACT OPW CUSTOMER SERVICE FOR REPAIR OPTIONS

SECTION C: MAINTENANCE

After One Year of Service:

- The unit should be routinely checked for leaks while under service pressure.
- This should be carried out by local service representative.

After Four Year of Service:

- The unit should be returned to OPW for rebuilding and replacement of all seals.
- This period should be reduced to twenty-four (24) months if the potential exists for misuse, abuse, if the FLB is used in an extreme environment, or if the breakaway has more than 20 separations.

PLEASE CONTACT OPW CUSTOMER SERVICE FOR TRAINING AND REPLACEMENT PARTS.

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