

# Centek Industries

## Vernatone Installation Sheet

Please follow these installation instructions carefully for safe operation and to avoid damage to your muffler system or your engine.



Correct installation and use of your VERNATONE Muffler is essential for safe operation and will promote its longevity, trouble-free operation and performance.

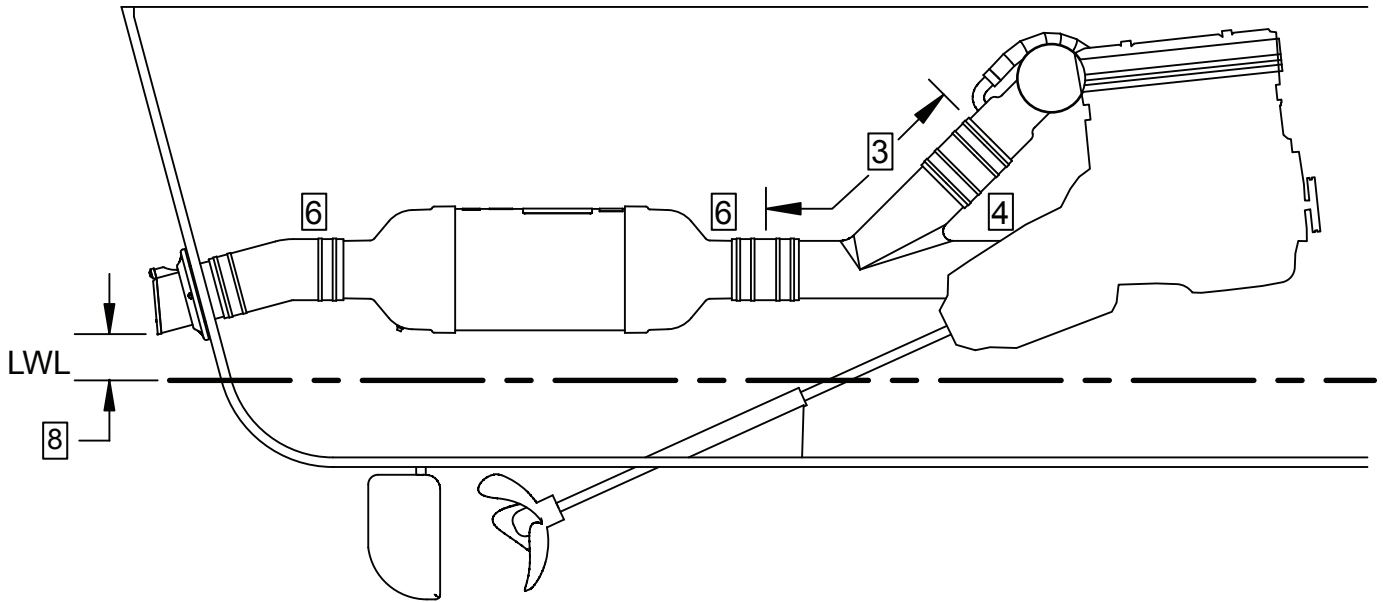
1. The VERNATONE is a wet marine exhaust muffler. It is designed for use in an exhaust system as appropriately recommended by ABYC (American Boat & Yacht Council) Standard P-1.
2. The VERNATONE is designed for proper flow in one direction only. Carefully note the flow direction as indicated on the muffler.
3. There must be sufficient distance between the water injection point and placement of the VERNATONE to allow adequate cooling of the exhaust gases. This distance will be dependent on the manner of the water injection. Maximum continuous operation of the VERNATONE is limited to 280° F. normally, in a properly designed system; the temperature at the muffler will be within the range of 120° F to 185° F. Such operation will result in longer exhaust system life.
4. The diagram shows a backwash surge chamber as protection against back flow of water up and into the exhaust manifold. Such designs are desirable and can help to reduce risk of engine damage. See our Catalog or Website for the different size/dimensions of the surge chambers available.
5. The muffler should be installed in a level position or tipped slightly toward the outlet, with the body rotated so that the installation label is directly on top and the direction of flow arrow points aft. The internal baffle openings should be placed in the lowest possible position for the most efficient muffler operation.
6. Use rubber exhaust hose of an approved type. A minimum of two stainless steel clamps should be used at each connection at each end. Wetting the inside of the hoses with water will make them slip more easily over the muffler and exhaust pipe ends, do not use oil or grease. Using a screwdriver only, securely tighten, but don't over tighten all hose clamps.
7. Although the muffler itself is very light, the water content is significant in weight. Therefore, 3" and larger sizes should be firmly supported and strapped at the major diameter of both end bells.
8. It is recommended that the exhaust outlet be placed above the loaded water line by a dimension equal to its diameter. Limiting to a minimum the number of hull penetrations near or below water line is always good practice

The VERNATONE is recommended for both gasoline and diesel propulsion & generator engines. It is designed to withstand many, many times the normal operating pressures. This does not mean that it can withstand the extreme instantaneous pressures associated with back-fire.

**WARNING!** A back-fire is caused by an untuned or difficult starting engine and the use of starting fluids. Should a back-fire occur, an immediate and thorough inspection of the entire exhaust system is recommended, and the engine must be checked for the cause of the back-fire.

### Warranty

Centek Industries, Inc. (Centek) warrants its standard products; Vernatone, Vernalift, Mini-Max, Verna-ski, Vernatube, Gen-Sep, Combo-Sep, (Products) for a period of five years from the date of original sale. Since Centek cannot exercise control over the installation and application of the Products, this limited warranty is in lieu of all other expressed or implied warranties or warranty of merchantability or fitness for a particular use or the results or effects of such use. Under no circumstance will Centek be liable for any consequential damages, damage by improper handling, damage during installation or damage in shipping. Centek's liability is limited to the replacement or repair of the Products and such liability will not exceed the original purchase price. Centek must authorize the return of any alleged defective Product, and such return must be made within 30 days of the receipt of that authorization. A reasonable proof of purchase date must accompany all returned Products.



THIS DIAGRAM IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. INSTALLATION INSTRUCTIONS ARE SET FORTH PER THE NUMBERS ON THE DIAGRAM WHICH CORRESPOND TO THE NUMBERED PARAGRAPHS IN THE INSTRUCTIONS.