



Centek Industries

Vernalift Installation Sheet



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

1. The Vernalift is a WET marine exhaust muffler.
2. The Vernalift is designed for flow in one direction only, please note labels on muffler carefully.
3. There must be sufficient distance between the water injection point and the Vernalift to adequately cool the exhaust gases. We recommend a minimum of two feet. Maximum operation temperature should not exceed 250°F. A normal, well designed system should run between 150-180°F.
4. If the exhaust manifold is near or below the waterline, a siphon break must be installed to prevent continued water flow after engine shut down (figures 2&3).
5. The Vernalift should be installed at the lowest point of the exhaust system with the top of the muffler at least 12" below the manifold outlet. The possibility of reverse flow of water increases if installed at less than 12". When space constraints do not allow for this height difference, it is strongly recommended that a riser (A gooseneck) be installed in the system (figure 3).
6. Install the Vernalift as close to the centerline of the vessel as possible. This will minimize the effects of heeling and is especially important on sailboats.
7. Making connections:
 - A. Use approved marine exhaust hose for all connections. This will help to isolate the muffler and other components from vibration. Do not connect other components to the muffler in a rigid fashion by using adhesives and/or FRP reinforcements.
 - B. Do Not coat hose or muffler with oil or grease, use water for lubrication.
 - C. Use minimum of two stainless steel hose clamps per end connection; tighten clamps with screwdriver or small wrench.
 - D. Do not use air wrenches.
8. Add a loop at outlet side of muffler that is 18" above waterline. This may not be necessary for above waterline installation (figures 1,2&3).
9. Outlet hose should run continuously downhill for self draining; a Centek Vernatone inline muffler can be installed in this line for further silencing.

The Vernalift 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.

FIG. 1 ENGINE INSTALLATION ABOVE WATERLINE

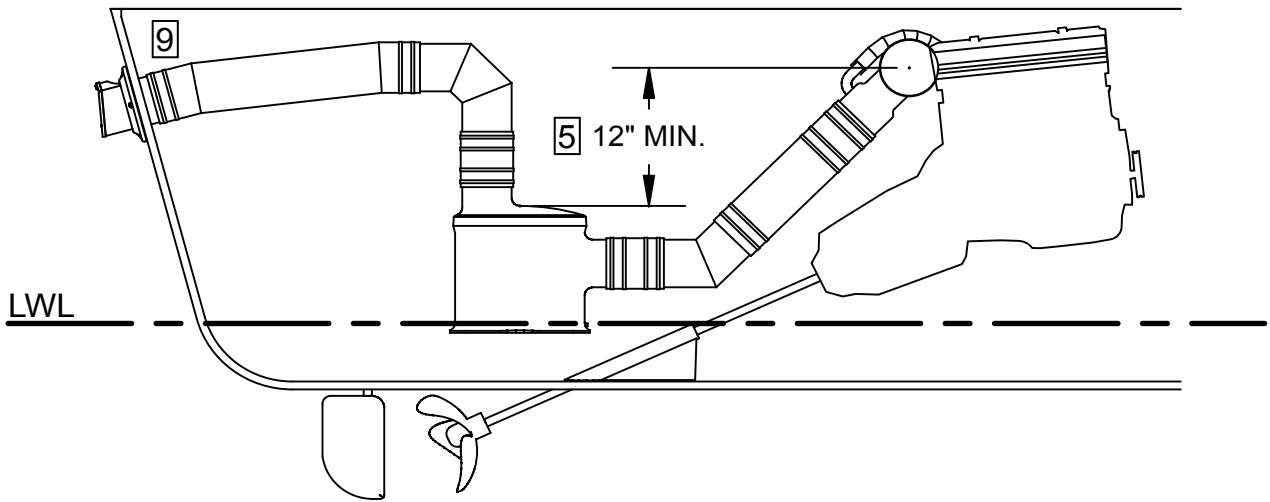


FIG. 2 ENGINE INSTALLATION BELOW WATERLINE WITH SPACE FOR MUFFLER BELOW ENGINE

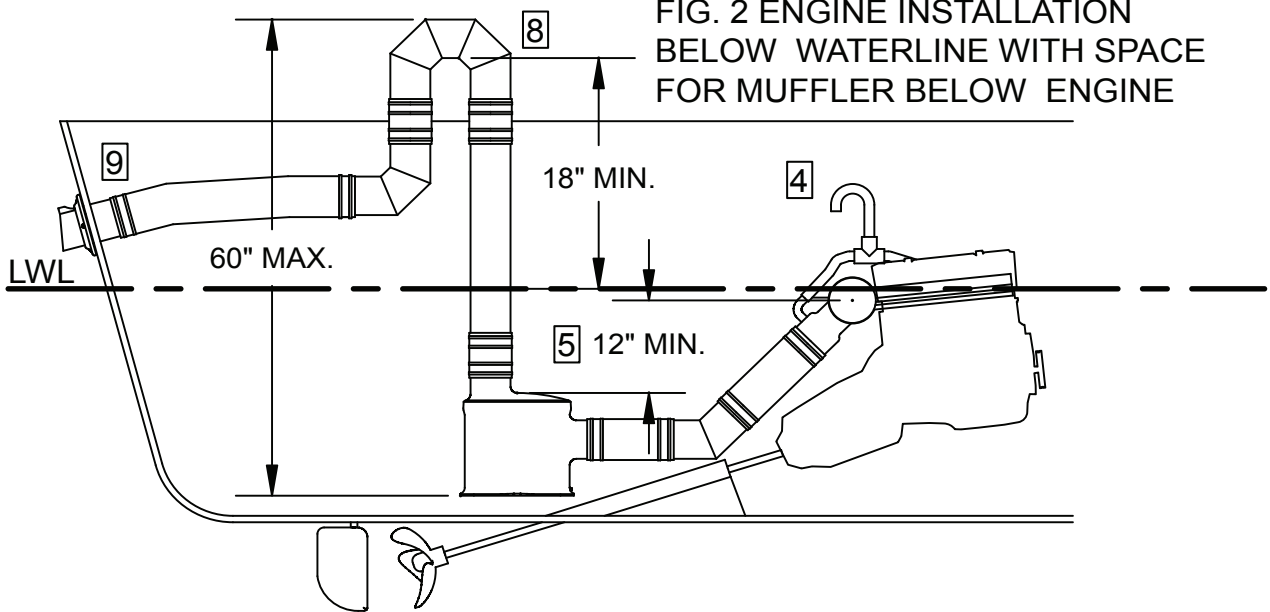


FIG. 3 ENGINE INSTALLATION BELOW WATERLINE WITH NO SPACE FOR MUFFLER BELOW ENGINE

