

Q: How would I go about replacing the hot section of my "wet" exhaust system?

A: The piping between the back of the manifold and the inlet to the water lift muffler is called the "hot section", or "dry section", due to the fact that this section of the exhaust system is not cooled by engine cooling water.

The most common approach is to construct the hot section of the exhaust out of regular inch and a quarter pipe (black iron, stainless, brass, etc.). The exhaust flange, which bolts to the back of the manifold, is threaded to accommodate inch and a quarter pipe thread. This pipe is available at most local plumbing supply shops.

The hot section should basically extend as high as possible, and then down to the inlet of the water lift muffler which should be mounted as low as possible. This vertical dimension affords protection against water backing up into the exhaust manifold.

When possible, it's very convenient to take the entire hot section in to the local plumbing shop and simply have them match the same nipples and elbows that were used in the original system.

Engine cooling water should be introduced just ahead of the water lift muffler. You can drill and tap a quarter inch pipe threaded hole directly into the piping of the hot section, or check out the two types of water entry fittings in our online catalog at [moyermarine.com](http://moyermarine.com) (product numbers: CSOT\_01.1\_324 and CSOT\_01.2\_334).

Manufacturers of plastic or fiber glass water lift mufflers like to see 8 inches (or so) between the water entry point and the muffler, but many boats do not have the luxury of that kind of vertical space. The Catalina 30 fleet, for example, has barely a foot to work with due to their center cabin mounted engines. Water lift mufflers constructed of stainless steel are much more forgiving of locating water entry fittings close to their inlet. We designed a water lift muffler made out of stainless steel so that the water entry fitting can be installed as close to the muffler inlet as necessary in cases where space is limited. The mufflers are located in our online catalog with a product number of EXHT\_01.0\_377.

While the engine is at idle, it's common for cooling water to "batch" out the back of the boat as water within the muffler sequentially builds up enough head to overpower the exhaust pressure. After a second or two, exhaust back-pressure builds sufficiently to move that amount of water out of the muffler, and out with the exhaust. At RPM above idle, there is enough exhaust pressure (and volume) to keep the water moving through the system, so no head of solid water ever builds up within the muffler.