

Testimony of Leon Joyner, Hatteras Yachts, Inc., before the United States Environmental Protection Agency regarding the Control of Emissions from Nonroad Large Spark Ignition Engines and Recreational Engines (Marine and Land Based)

Good afternoon. My name is Leon Joyner. I am the Manager of Safety and Regulatory Compliance for Hatteras Yachts. I am testifying on behalf of Hatteras Yachts and the members of the National Marine Manufacturers Association.

Hatteras Yachts is a manufacturer of recreational boats that include motor yachts and sport fishing yachts currently ranging in size from 50 feet to 100 feet in length. We have built motor yachts as large as 130 feet in length. Our boats utilize a planing hull design, they are built of fiberglass, and they are powered by compact (low profile), high power-to-weight ratio recreational marine diesel engines.

As builders of recreational boats, our comments are directed toward the portions of the proposed rule dealing with recreational marine diesel engines. First we have comments on the EPA's definition of a recreational vessel. We also have concerns, shared by our engine suppliers and the Engine Manufacturers Association, that the EPA proposed test procedures are not applicable to the demands of a recreational marine diesel engine, and will require marine diesel engine manufacturers to reduce available engine power to keep emissions within the proposed not-to-exceed zone. To obtain a given level of performance, the boat manufacturers will have to go to a larger, heavier, more expensive, similarly de-tuned engine to be able to market the boat. At the upper end of a specific boat's performance range, there may not be an engine package available that will physically fit in the engine room.

Regarding our first issue, we recommend that a recreational vessel be defined as one (1) which by design and construction is intended by the manufacturer to be operated primarily for pleasure, or leased, rented, or chartered to another for the latter's pleasure: and (2) whose major structural components are fabricated and assembled in an indoor production-line manufacturing plant or similar land side operation and not in a dry dock, graving dock, or marine railway on the navigable waters of the United States.

We are concerned with EPA's recommended language that the definition of a recreational boat be based on the boat builder's determination that the vessel is built and used for recreational purposes. All of Hatteras Yachts' products, and most recreational yachts, are sold through dealers. At the time engines are installed in the boat, we may not know which dealer will eventually purchase the

boat, much less who the owner will be. If the dealer is purchasing the boat for stock, he does not know who the owner will be. We can agree with a definition that relies on our intent to build a boat for recreational purposes, but not on one that requires us to accept the administrative and financial burden of determining that the boat will only be used for recreational purposes.

This raises our second and more serious issue of how EPA's proposal could compromise the performance of recreational diesel powered boats and yachts.

The recreational boat builders support EPA's efforts to regulate recreational marine diesel engines. As manufacturers of a recreational product that depends on clean air and clean water, we not only support, but applaud efforts to push technology in the marine diesel engine industry to produce cleaner, better performing, more efficient engines.

We do, however, have one serious concern that was raised when EPA first proposed to regulate recreational marine engines in the commercial rule. That is, will this rule negatively affect the weight, size, or performance of the boat's engine? In order for this rule to be economically feasible, it must be transparent to boat builders.

If the requirements are not transparent and US yacht builders are forced to install inferior engines, then the US yacht builders will be at a competitive disadvantage with foreign manufacturers when offering their boats to both the domestic and the international market. Hatteras Yachts and other builders of large yachts not only sell to an international market, our customers shop in an international market. Performance is a big factor in the customer's decision to buy a particular boat, and if we build an inferior product, we not only lose our international customers, we also lose our domestic customers. The issue is not just the loss of sales for the manufacturer; it is also the loss of thousands of jobs from the US economy and the loss of millions of dollars in export sales. US boat builders provide hundreds of thousands of good manufacturing jobs, and last year alone over \$145 million dollars worth of US manufactured boats over 25 ft. in length were exported outside the US.

How can a regulation be developed that will provide cleaner air, cleaner water, better performing and more efficient engines, while at the same time preserve the current power rating, size and weight of the engine? As boat builders we do not have an answer to that question, but we do not believe that adequate information exists to establish the boundaries of a not-to-exceed zone for recreational engines. There are too many variables that affect the performance of a given engine: the length and beam of the boat, the hull design, the weight, and even the depth of the water the boat runs in to name a few. We strongly urge that EPA not require the burdensome unsupported off-cycle emission testing proposed in the rule. Requiring marine diesel engine manufacturers to guarantee that these engines maintain emission levels at points inside this zone could have

a devastating effect on the performance of the boat. Several boat builders, including Hatteras, have already experienced this situation with emission-controlled engines in the past year. In our case, with the throttles wide open and the boat still in the hole and trying to come up on plane, the engines would only turn about 1100 rpm. The engine management system refused to supply additional fuel to the engines to increase rpm because there was not enough air available to satisfy some pre-programmed control parameter. There was not adequate air available because the low exhaust energy at that rpm did not allow the turbos to spool up and supply the air needed. It was Catch-22: no air, no additional fuel; no fuel, no additional air. In a commercial boat equipped with a controllable pitch prop, the pitch can be adjusted to allow the engine speed to increase. In a land-based vehicle, the driver can select a lower gear to get the same result. In a recreational boat with one gear ratio and no controllable pitch prop, the solution involves pulling the boat out of the water and making a very expensive and time-consuming change to the drive train. At some point, this is not even a solution because of the increased size and weight of the components required to overcome the problem.

Another factor to consider is the experience and training required to narrow down the many choices that have to be made to reach a drive train solution. If an engineer with this experience and training is not available to a manufacturer, the trial and error method quickly becomes prohibitively expensive. This is the situation that will be faced by many small builders.

Recreational boat builders are concerned that the cost of this proposal will far outweigh the environmental benefit. We are appealing to the EPA not to force our engine suppliers to over design for emissions and compromise the performance of the engines on our boats.

Again, as I stated earlier, Hatteras Yachts and NMMA can support this proposed regulation minus the not-to-exceed certification testing. Eliminate this provision from the final rule and we will still have cleaner boats, cleaner engines, a cleaner environment, and a regulation that we can all support and be proud of.

Thank you