

June 30, 2014

Mr. Manjit Ahuja, Chief

California Air Resources Board

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Dear Manjit:

Thank you for the opportunity to provide comments regarding the CARB Draft Final Regulatory Order titled “Evaporative Emission Requirements for Spark-Ignition Marine Watercraft with Gasoline Fueled Engines” (Title 13 CCR Article 4 Chapter 15 Division 3) dated May 23, 2014. Also included are the National Marine Manufacturers Association’s (NMMA) comments regarding the test procedures TP-1501, TP-1502, TP-1503, TP-1504 and TP-1505. NMMA has not offered comments at this time regarding the draft certification application process and templates until the NMMA receives the final report from the ARB / NMMA / ABYC certification task force and have the opportunity to review them with industry stakeholders.

NMMA appreciates the efforts of the ARB staff to develop a rule that closely harmonizes with the Federal requirements while at the same time addressing California’s specific air quality needs. NMMA offers the following comments regarding the draft final order and may have additional comments to offer after these recommendations have been considered and our members have had the opportunity to review the next draft.

1. **Regulatory Comments**

**Section 2851 Applicability**

2851 (b) (2) The reference to 40 CFR Subpart J section 90.908 and 40 CFR Part 91, subpart B has been eliminated by EPA and replaced with a new section 40 CFR 1068.225. NMMA recommends that this and all references to the EPA rule reflect the current sections and where appropriate the current language.

**Section 2853 Definitions**

2853 (a) (9) Fuel hose: For clarity NMMA recommends that the definition read; ”Fuel Hose” is defined as the length of fuel line connecting the **watercraft** fuel tank to the first attachment point on each engine as indicated by the engine manufacturer.

2853 (a) (10) Fuel Injection: Due to the wide variety of fuel injection technologies used in marine applications NMMA recommends that the definition read; “Fuel Injection” is defined as any mechanical or electrical fuel system in which pressurized fuel is sprayed or injected into the intake system or combustion chamber of an internal combustion engine. NMMA also recommends removing the statement “only when the engine is running” as we know of no application where fuel would be applied to an engine that is not running.

2853 (a) (14) Under Cowl Fuel Lines: The definition needs to clarify that the under the

cowl fuel lines includes the manufacturers fuel feed line in addition to those fuel lines

that are entirely contained under the cowl. NMMA recommends that the definition read;

“Under the Cowl Fuel Lines” refers to a fuel line that is entirely contained under the cowl

of an outboard engine including the engine manufacturers supplied fuel feed line that

may extend outside of the cowl for connection to the watercraft fuel system.

**Section 2855 Spark-ignition Marine Watercraft Standards for >30 kW Engines**

2855 Table 1: The diurnal requirement for non-canister applications refers the reader to

note # 3. This note states that to determine the venting control efficiency, a venting

control test must be performed according to 40 CFR 1060.525 (or TP-1503, if

applicable). NMMA is concerned that this table may be confusing because Table 1 only

references TP-1503 with a note that allows for an alternative test procedure of TP-1505

for non-canister pressure relief valve applications. NMMA recommends that 40 CFR

1060.525 be acceptable for certification but that it also be included in the table, perhaps with a note that directs the reader to its application.

2855 Tables 1 and 2: These two tables are inconsistent because Table 2 does not provide an option for non-canister diurnal control. NMMA requests that Table 1 and 2 have consistent technology applications

2855 Table 1 and 2: Under the diurnal requirement using non-canister application, NMMA recommends the following footnote

 “A watercraft using a sealed system to a positive pressure of at least 7.35kPa (1.05PSI) will be deemed compliant with 65% reduction. The PRV must also be tested and pass the TP-1505 durability requirements.” This change is consistent with 40 CFR 1060.240 (e) and 1060.240 (e) (1)

2855 Table 3: For clarification does certifying to the requirements in Table 3 titled

“Alternate Evaporative Emission Performance Standards for >30 kW Spark- Ignited

Marine Watercraft” replace the need for component certification? NMMA believes that

it is performed in lieu of component certification.

2855 (a) (1) Deck Fill Compatibility Standard Table 4- NMMA strongly recommends that

this section be struck from the marine watercraft regulation. It is an automotive standard

that creates safety and major redesign challenges for PWCs and many boats. It would

require a complete redesign of the deck fill to require the fuel dispenser nozzle to be

latched in place and allow for the full insertion of the fuel nozzle.

2855 (a) (1) Refueling Requirements: NMMA recommends that in addition to 40 CFR

1060.101 (f) (3) (ii) that 40 CFR 1060.101(f) (3) (i) also be included. Equipment that is

commonly refueled by a portable gasoline container should have a tank inlet that is

larger than a typical dispensing spout. The fuel tank inlet should be located so the

operator can place the nozzle directly into the fuel tank inlet and see the fuel level in the

tank while pouring fuel from an appropriate sized fuel container (either the tank wall or

fuel tank inlet). We will deem you to be in compliance with the requirements of this

paragraph (f) (3) (i)if you design your equipment to meet applicable industry standards

related to fuel tank inlets.

EPA provided this section primarily for PWC watercraft as they are mainly filled by

portable fuel containers.

**2856 Evaporative Component Testing and Certification Requirements**

2856 (a) (1) (A) (6) Carbon Canister Component Testing: The draft regulation requires that if a carbon canister is used it must meet the requirements for **marine** carbon specified in 40 CFR 1060.240 (d) (1) as incorporated by reference here. NMMA believes that a carbon canister system should be measured by performance specifications. Specifying carbon will lead to limiting technologies that could be used to achieve equal or better results. The characteristics of carbon, such as diameter and hardness are directionally correct for robustness, but the method of designing that canister and its pack integrity are equally or more important. NMMA recommends that the regulation specify that a carbon canister system meets the durability and performance requirements specified in TP-1503, which takes into consideration vibration, humidity etc. NMMA recommends the language in 2856 (a)(1)(A) (6) be replaced with “If a carbon canister is used, it must meet the requirements as specified in TP-1503, 5.1 Carbon Canister Durability Requirements.”

2856 (c) (1)(A) 7- Performance Based Certification for Carbon Canisters: The same language “If a carbon canister is used, it must meet the requirements for marine carbon specified in 40 CFR 1060.240 (d) (1) as incorporated by reference here.” NMMA recommends that the language used above for component testing replace the language in this section as they both pertain to performance and durability testing for carbon canisters.

2856 (c) (1) (a) Performance Based Spark-Ignition Marine Watercraft Certification:

NMMA does not see where the draft regulation tells the reader how many tests need to

be performed. NMMA recommends that the rule allow for one test procedure per evaporative family and language be included to clarify and document for future interpretation.

2856 (d) Tampering / Tamper Resistance: The US Coast Guard regulation 33 CFR 183.558 9b) (2) (c) requires: all connections must be secured by (1) a swaged sleeve, (2) A sleeve or threaded insert or (3) a hose clamp. 33 CFR 183.563 for fuel fill systems the US Coast guard requires both accessibility and readily accessible “without the use of tools of removing of the boat structure” 33 CFR 183.556. The tamper resistance requirements in the draft regulation clearly conflict with the US Coast Guard regulations.

Based on comments and the experience of the component manufacturers there would be no performance gain by tampering with a watercrafts evaporative emission system. NMMA strongly urges that these requirements be removed from the final regulation.

**2859 Component Labeling**

2859 (b) Applicability: NMMA recognizes that the overwhelming majority of watercraft manufacturers will use design based certification. One manufacturer stated that it was not clear if component label applied only to component certification 2855 Table I and 2 and those products that complied with 2855 Table 3 performance based certification did not have to label components. EPA currently accepts the manufacturer part number as sufficient for compliance with 2859(c)(2)(B) if listed on the application. NMMA believes that the intent of this draft regulation was to harmonize with the EPA and to not require component executive orders for each component when a manufacturer choses to certify using a performance based standard.

**2860 Spark-Ignition Marine Labeling**

2860 (4) (d): The following language is not clear. As stated in the draft regulation, ”The date of spark-ignition marine vessel manufacturer (month and year) for evaporative emission control systems certified by the evaporative emission system builder.” NMMA recognizes ARB’s intent, but the only party that will accept the liability for “installing” a fuel system will be the boat builder. Even in cases where the dealer installs the engine, if the boat has a permanently installed tank the boat builder would never delegate the design or installation of its fuel system to a dealer or third party. This would be too much liability for the boat builder to accept. NMMA discussed this issue at length during the EPA rulemaking and we came to the following agreeable language in 1060.135 (b) (3).” State the date of manufacture (Month and Year) of the equipment; however you may omit this from the label if you stamp or engrave it on the equipment.” The US Coast Guard requires that all boats sold in the US affix a Hull Identification Number (HIN) on the vessel. The last three digits of the HIN clearly state the date of manufacture of the vessel. The month is one of the first twelve letters of the alphabet which directly coincides with the month; for example the letter A is January followed by the last two digits which is the model year.

1. **SI Marine Watercraft Evaporative Emission Test Procedure Comments**

General Comment: NMMA noticed that throughout the test procedures about half the temperatures are stated in degrees Celsius and the other half in Fahrenheit. NMMA recommends that the rule be consistent and all temperatures be in Celsius.

**TP- 1501: Determining Diurnal Evaporative Emissions from SI Marine Watercraft**

6.1 Fuel tank / Fuel System Preconditioning: NMMA assumes that most tank manufacturers are going to prefer to precondition tanks for less than 140 days. The problem is that there is no clear guidance regarding the “data documenting” that the tank has achieved equilibrium. The EPA rule allows for 70 days at 43 +/- 5 degrees C. NMMA and the EPA rule support 70 days as satisfactory and it is reasonable. Testing for 140 days, with an optimistic 30 day ARB review and 90 days to issue an executive order would take close to a year of testing and review prior to approval.

NMMA also recommends that TP-1501 include the EPA definition of slosh testing as found in 40 CFR 1060.520 (a) (3).

*Slosh testing- Perform a slosh by filling the tank to 40-50 percent of its capacity with fuel specified and rocking it at a rate of 15 cycles per minute until you reach one million total cycles. Use an angle deviation of +15° to -15° from level.*

**TP-1502: Determining Hot Soak Evaporative Emissions from SI Marine Watercraft**

NMMA has no comments on this test procedure

**TP-1503: Determining Diurnal Vented Emissions from Installed Marine Fuel Tanks**

1.2 Safety: spelling correction: “Appropriate safety precautions should be observed at all times while performing the test**(s)** sequences in this test procedure.

5.2 Pressure Relief Valve Durability and Reliability Requirements: The test procedure requires that all testing temperatures must be within +/- 2.5 °C of the required temperature. The pressure and vacuum test allows a test tolerance of +/- 3 °C. Unless there is a specific reason for the difference NMMA recommends that the test temperature tolerance be set at +/- 3°C for all three tests.

5.2.1 Thermal Cycle Test: NMMA requests that manufacturers be allowed to conduct a thermal stress test in lieu of having to conduct the test with humidity control. Controlling the humidity requires specialized equipment and can be very difficult. Also in this section the stabilizing and rising time is set at five minutes. Is there a time limit for stabilizing? Is there a time limit for the descent temperature?

5.2.3 and 5.2.4 Vibration and Dust Test: NMMA recommends that the test procedure cite the ambient conditions expected for the test. If the test allows for testing in whatever the ambient air temperature is that is fine.

6(a)(7)- Control Temperature: This is the same issue found in the summary of test procedure above where the fuel temperature is required to be lowered and raised, not the ambient air temperature.

**TP-1504: Determining Permeation Emissions from Installed Marie Fuel Tanks, Marine Fuel Hoses and Marine Fuel Caps**

1060.520 (d)(8): Permeation Test Run; Weight loss: NMMA recommends that the proposal be amended to include the following alternative method for the 95% correlation coefficient. This language should be taken from SAE J1737-2013 section 3.3.2.2.2.

“An alternative means to measure steady state value for permeation rate recognizes that there is inherent scattering of test results that make it more difficult to get an indication of steady state. Measure the permeation rate in the designated test fluid at the designated test temperature each day for a “10” day period. Value to be reported is an average of those data points“

This 1997 SAE procedure was updated in 2013 specifically to deal with the inability to establish permeation rates due to the extremely low emission rates of new materials.

**TP-1505: Determining Pressure Relief Valve performance: Durability Demonstration and Leak Test**

**NMMA has no comments on this section**

Thank you for the opportunity to provide comment regarding this draft regulation. NMMA looks forward to working with you and your staff as this rule is finalized.

Sincerely,



John McKnight, Vice- President

Government Relations