

**AUSTRALIAN GOVERNMENT
ENVIRONMENT PROTECTION AND HERITAGE COUNCIL**

**Reducing Emissions From Non-Road)
Spark Ignition Engines and Equipment)
Consultation Regulation Impact Statement)**

**COMMENTS OF THE
ENGINE MANUFACTURERS ASSOCIATION**

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**Jed R. Mandel
Roger T. Gault
Engine Manufacturers Association
Two North LaSalle Street, Suite 2200
Chicago, Illinois 60602
(312) 929-1974**

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I. Introduction

The Engine Manufacturers Association (“EMA”) hereby submits its comments regarding the Consultation Regulation Impact Statement published by the Non-Road Engines Working Group on behalf of the Environment Protection and Heritage Council, May 2010.

EMA is the trade association that represents the world’s leading manufacturers of internal combustion engines. The engines manufactured by EMA’s members include non-road spark ignition engines used in the gardening sector as designated in the subject document.

EMA’s comments and recommendations are based on EMA member company experience designing, certifying, and manufacturing a wide variety of engines utilized to power nonroad equipment operating on gasoline, propane, and natural gas.

II. Summary of Comments

EMA is generally supportive of the subject report and conclusions that recommend alignment between environmental requirements for products sold in Australia to the products certified to U.S. EPA regulatory requirements. The U.S. EPA regulations provide the most comprehensive requirements regarding both exhaust and evaporative emission controls for the subject engines. However, it is important to recognize that the U.S. EPA requirements and the products designed, certified, and built to comply with these requirements are a comprehensive package that cannot be bifurcated or selectively adopted without significant influence on product availability. It is also very important to recognize that fuels utilized to demonstrate compliance must be aligned in addition to product emission standard requirements.

Additionally, for electrical generators there is a potentially significant product differentiation between U.S. and Australian products. This difference is fundamentally related to the standardized electrical frequency prescribed for the two regions; 60 hertz for U.S. and 50 hertz for Australia. Depending on the generator technology employed, the influence of the frequency difference could serve to preclude marketing of a U.S. certified engine powered generator in Australia.

III. Overview and Background

The U.S. EPA regulations associated with non-road spark ignition engines are segregated into three general categories: (i) small spark ignition engines (≤ 19 kW) and large spark ignition engines ≤ 1.0 liter in displacement and ≤ 30 kW; (ii) large spark ignition engines (>30 kW or

>1.0 liter in displacement); and (iii) marine spark ignition engines. The small spark ignition (SSI) engine category is further divided to segregate handheld engines/equipment from non-handheld engines/equipment. It is important to recognize that with the expansion of regulations to include evaporative emission controls the product certification and compliance requirements potentially include not only engine manufacturers but also their equipment manufacturer customers and fuel system component manufacturers. EMA's comments are narrowly focused on the non-handheld SSI segment of the industry.

In the U.S. ethanol has recently become the primary oxygenate blend component for gasoline. Ethanol blends have been utilized in the marketplace for many years and, while there have been concerns; manufacturers have developed their products to be compatible with ethanol blends ranging from 0 to 10%. The ability to utilize U.S. EPA certified engines and equipment in Australia is dependent on the same gasoline and gasoline blends being available in the marketplace. Similarly, engines operating on propane or natural gas must have fuel with comparable gas properties for acceptable operation and emission control. U.S. EPA demonstration of compliance includes identification of the fuel utilized for testing.

The electrical generator market differences between the U.S. and Australia are linked directly to the difference in electrical frequency requirements. Depending on the generator technology employed engine operating speed may be directly related to the electrical frequency output of the generator. At a minimum, the frequency difference will require unique products not sold in the U.S. to be sold in Australia. It is very possible that the engine design and fuel system calibration may be entirely different to meet customer expectations for these products.

EMA requests that the Environment Protection and Heritage Council adopt U.S. EPA exhaust and evaporative emission standards for non-handheld SSI engines and equipment that are identical to U.S. EPA requirements with a special allowance for generator engines but using a different implementation schedule as outlined below.

IV. U.S. EPA Exhaust and Evaporative Standard Requirements

The U.S. EPA exhaust emission requirements currently in process of being implemented include very stringent control of exhaust emissions for non-handheld SSI engines. The U.S. regulations include a unique production testing requirement that demonstrate production emission levels are compliant. These stringent emission control levels are only possible when taken in their entirety, including the use of historical manufacturer credits and future averaging, banking, and trading provisions. The latest EPA exhaust standard levels are being implemented over a multiple year period, beginning with the 2011 model year. The phase-in of product complying with these standard levels continues through the 2013 model year with use of averaging continuing forward. The concern that U.S. manufacturers would sell their high emitting engines in Australia is not based on any facts or survey information regarding market differences between the U.S. and Australia but rather the premise that engines exported to Australia would not be accounted for in the U.S. AB&T system. While it is true that exports are not included in the U.S. AB&T calculations, it is not reasonable to expect a disproportionately higher number of high versus low emission products would be provided to the Australian market. Additionally, U.S. EPA regulations (40 CFR Part 1068.230(a)) preclude manufacturers from claiming a product is exempt from regulation due to exportation if the country that the engine is

being exported to has emission standards that are identical to U.S. EPA regulations. If Australia would adopt U.S. EPA regulations including standard levels and AB&T this provision would protect Australia from any concerns. Australia could adopt an approach, as adopted by Canada, which requires all U.S. certified products that are marketed in U.S. to be offered in Australia to assure equal access to both credit generating and credit using engines. As mentioned previously, engines that power electrical generators cannot be universally marketed in both the U.S. and Australia because of the difference in frequency requirements. It is not reasonable to expect engine manufacturers to certify engines that are destined for use in 50 hertz electrical generators with U.S. EPA because the engines will not be sold or operated in the U.S. For this unique product segment EMA recommends that Australia allow manufacturers to certify engines for use in 50 hertz generators based on a combination of U.S. certification of a 60 hertz generator engine and a demonstration of compliance utilizing the calibration for 50 hertz operation.

The evaporative requirements for U.S. EPA share a number of common attributes between the various nonroad spark-ignition categories but there are also a number of differences that must be recognized to ensure the expected alignment between U.S. and Australian products. For the non-handheld SSI engine powered equipment segment, the U.S. EPA evaporative emission requirements currently in process of being implemented include different component compliance requirements being implemented over time. Permeation and running loss emissions are controlled but not diurnal emissions. The permeation control was implemented initially for fuel lines and is in process of being implemented for fuel tanks over time with several flexibility provisions, including an AB&T system. Similar to the exhaust program described above the evaporative program is expected to be fully implemented in the 2013 model year with averaging continuing forward. Also, significantly different than the exhaust program, the evaporative program relies significantly on component manufacturer certification to allow engine and equipment manufacturers to certify compliance by design. It is important for Australia to recognize that adoption of the U.S. EPA evaporative requirements would require adoption of the complete program, including the flexibility provisions, the component certification provisions, and engine/equipment certification by design.

We understand that Australia is interested in achieving emission reductions from this industry segment as soon as practical. To facilitate the earliest implementation of reductions EMA recommends that Australia consider adoption of the EPA exhaust emission standards beginning with Phase 2 standards, possibly as early as the 2012 model year, with implementation of EPA Phase 3 exhaust and evaporative standards beginning in the 2016 model year. Emission compliance would be demonstrated by either compliance with applicable U.S. EPA standards, including product labeling, or a certification submission process established in Australia to approve any products not certified by U.S. EPA, such as 50 hertz electrical generators.

V. Conclusions and Recommendations

EMA recommends that the Environment Protection and Heritage Council adopt exhaust and evaporative emission standards for Australia based on the U.S. EPA regulatory compliance requirements including: (i) all of the flexibility provisions included in the U.S. standards including AB&T; (ii) alignment of certification fuels between the U.S. and Australia; (iii) a special provision for electrical generators to recognize that the 50 hertz operation required will preclude marketing of common products between the U.S. and Australia; and (iv)

implementation of EPA Phase 2 exhaust standards beginning with the 2012 model year and EPA Phase 3 exhaust and evaporative standards with the 2016 model year.

EMA looks forward to working with the Environment Protection and Heritage Council as emission requirements for non-handheld SSI engines are considered and/or adopted for Australia.

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