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January 21, 2003

MANUFACTURERS ADVISORY CORRESPONDENCE (MAC) 2003-01

TO: ALL SPARK-IGNITION MARINE ENGINE (SIME) MANUFACTURERS
ALL INBOARD AND STERNDRIVE SIME MANUFACTURERS
ALL OTHER INTERESTED PARTIES

SUBJECT: HANG TAG AND STAR LABELS FOR 2003 AND LATER MODEL YEAR
SPARK-IGNITION MARINE ENGINES

This letter transmits a Manufacturers Advisory Correspondence (MAC) to Spark-Ignition Marine Engine manufacturers specifying the hang tag format for 2003 and later model year marine engines. Although this MAC is primarily intended to impact the inboard and sterndrive categories, manufacturers of outboard and personal watercraft may also choose to follow the hang tag format specified in order to standardize the hang tag design for all Spark-Ignition Marine Engines.

Should you have any questions or require clarification regarding the star labels and hang tag format, please contact Mr. Kumar Muthukumar, Manager, Off-Road Certification and Audit Section at (626) 575-7040 or via E-mail at cmuthuku@arb.ca.gov.

Sincerely,

/s/

Allen Lyons, Chief
Mobile Source Operations Division

Attachments

*The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption.
For a list of simple ways you can reduce demand and cut your energy costs, see our Website: <http://www.arb.ca.gov>.*

California Environmental Protection Agency

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State of California
AIR RESOURCES BOARD

MANUFACTURERS ADVISORY CORRESPONDENCE (MAC) 2003-01

SUBJECT: Hang tag and star labels for 2003 and later model year Spark-Ignition Marine Engines

APPLICABILITY: 2003 and later model year Spark-Ignition Marine Engines

REFERENCES: Environmental Label/Consumer Notification Requirements, Title 13, California Code of Regulations, (13 CCR) Section 2443.3

BACKGROUND:

In 1998, the Air Resources Board (ARB) adopted emission regulations and test procedures applicable to outboard and personal watercraft (PWC) Spark-Ignition Marine Engines (SIMEs) produced on or after January 1, 2001. In July 2001, ARB amended the SIME standards and test procedures to include 2003 and later model year inboard and sterndrive SIMEs.

This Manufacturers Advisory Correspondence (MAC) clarifies ARB's policy for hang tag requirements, and the methodology for determining the appropriate star label for 2003 and later model year SIMEs. This MAC was developed in response to an official request by the National Marine Manufacturers Association (NMMA) on October 1, 2002. The SIME regulations (Title 13, California Code of Regulations (CCR), Section 2443.3) only discuss the application of 3-star and 4-star labels to inboard and sterndrive SIMEs. However, NMMA requested that manufacturers be allowed to use 1-star and 2-star labels for inboard and sterndrive SIMEs to provide additional flexibility in establishing compliance with the averaged standards. ARB staff from the Mobile Source Operations Division (MSOD) and Mobile Source Control Division (MSCD) jointly researched this issue, and concluded that NMMA's request was legitimate and well within the intent of the applicable regulations

POLICY:

For the 2003 and later model year engines, manufacturers of inboard and sterndrive SIMEs will be allowed to use either the design specified in Appendix A of this MAC or the design described in Title 13, CCR, Section 2443.3. The new design in Appendix A accommodates the application of 1-star and 2-star labels to 2003 and later model year inboard and sterndrive SIMEs.

Although not a requirement for outboard and PWC engines, manufacturers may also choose to use the new design provided in Appendix A in order to standardize the hang

tag design for all categories of SIMEs. For the purpose of consistency, a manufacturer must use the same hang tag design on all of its engine families.

In order to identify the appropriate star label for a specific engine family, SIME manufacturers must use the equations provided in Table 1 of this MAC. These equations are applicable to 2003 and later model year outboard, PWC, inboard, and sterndrive SIMEs. Additionally, manufacturers of 2003 and later model year SIMEs that opt to utilize corporate averaging must also demonstrate compliance with the corporate average standard. The corporate average standard is based on California sales or the projected California percentage of national sales.

Table 1

Hydrocarbon plus Oxides of Nitrogen Standards (in g/kW-hr)		
Star label	P < 4.3	P ≥ 4.3
1	81.00	$(0.25 \times (151+557/P^{0.9})) + 6.0$
2	64.80	$(0.20 \times (151+557/P^{0.9})) + 4.8$
3	30.00	$(0.09 \times (151+557/P^{0.9})) + 2.1$
4	5.0	5.0

Where P means the average power in kW (sales-weighted) of the subject engine family.

APPENDIX A

HANG TAG DESIGN FOR SPARK-IGNITION MARINE ENGINES

Front of Hang Tag:

This engine has been certified as a:



(<Check appropriate box.>)

The Symbol for Cleaner Marine Engines:

Cleaner Air and Water – for a healthier lifestyle and environment.

Better Fuel Economy – burns up to 30-40 percent less gas and oil than conventional carbureted two-stroke engines, saving money and resources.

Longer Emissions Warranty – protects consumer for worry free operation.

Back of Hang Tag:

<facsimile of the one_star label>

One Star – Low Emission

The one-star label identifies Personal Watercraft, Outboard, Sterndrive and Inboard engines that meet the Air Resources Board's Personal Watercraft and Outboard marine engine 2001 exhaust emission standards. Engines meeting these standards have 75% lower emissions than conventional carbureted two-stroke engines. These engines are equivalent to the U.S. EPA's 2006 standards for marine engines.

<facsimile of the two_star label>

Two Stars – Very Low Emission

The two-star label identifies Personal Watercraft, Outboard, Sterndrive and Inboard engines that meet the Air Resources Board's Personal Watercraft and Outboard marine engine 2004 exhaust emission standards. Engines meeting these standards have 20% lower emissions than One Star – Low-Emission engines.

<facsimile of the three_star label>

Three Stars – Ultra Low Emission

The three-star label identifies engines that meet the Air Resources Board's Personal Watercraft and Outboard marine engine 2008 exhaust emission standards or the Sterndrive and Inboard marine engine 2003 exhaust emission standards. Engines meeting these standards have 65% lower emissions than One Star – Low Emission engines.

<facsimile of the four_star label>

Four Stars – Super Ultra Low Emission

The four-star label identifies engines that meet the Air Resources Board's Sterndrive and Inboard marine engine 2009 exhaust emission standards. Personal Watercraft and Outboard marine engines may also comply with these standards. Engines meeting these standards have 90% lower emissions than One Star – Low Emission engines.

<White Space for dealer or manufacturer identification or additional information>

Cleaner Watercraft – Get the Facts
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