| California Environmental Protection Agency AIR RESOURCES BOARD | VOLVO PENTA OF THE AMERICAS, INC. | EXECUTIVE ORDER U-W-012-0028 New Spark-Ignition Marine Engines |
|---|---|---|

Pursuant to the authority vested in the Air Resources Board by Health and Safety Code Sections 43013, 43018, 43101, 43102 and 43104; and

Pursuant to the authority vested in the undersigned by Health and Safety Code Sections 39515 and 39516 and Executive Order G-02-003;

**IT IS ORDERED AND RESOLVED:** That the following new spark-ignition marine engine and emission control systems (ECS) produced by the manufacturer are certified as described below. Production engines shall be in all material respects the same as those for which certification is granted.

| MODEL YEAR | ENGINE FAMILY | FUEL TYPE | DISPLACEMENT (cc) | LEVEL OF CLEANLINESS |
|---|---|---|---|---|
| 2006 | 6VPAM05.0GL0 | Gasoline | 5000 | Ultra Low Emission ("Three Stars") |

| EQUIPMENT APPLICATION | ECS & SPECIAL FEATURES | ENGINE TYPE |
|---|---|---|
| Sterndrive | Engine Modification | 4-Stroke |

| | |
|---|---|
| ENGINE MODELS (rated power in kilowatts, kW) | 5.0 GL-F (179 kW)<br>5.0 GL-FF (179 kW) |

The following are the hydrocarbon plus oxides of nitrogen (HC+NOx) exhaust emission standard (Title 13, California Code of Regulations, (13 CCR) Section 2442(b)) and certification emission level in grams per kilowatt-hour (g/kw-hr) for this engine family. Engines in this engine family shall have closed crankcases in conformance with Part I, Section 18.(h) of the "California Exhaust Emission Standards and Test Procedures for 2001 Model-Year and Later Spark-Ignition Marine Engines."

| | STANDARD (g/kw-hr) | CERTIFICATION LEVEL (g/kw-hr) |
|---|---|---|
| HC+NOx | 16.0 | 13.5 |

This engine family shall not be used to determine compliance through corporate averaging.

**BE IT FURTHER RESOLVED:** That for the listed engines, the manufacturer has submitted, and the Executive Officer hereby approves, the information and materials to demonstrate certification compliance with 13 CCR Sections 2443.1, 2443.2 and 2443.3 (emission control, consumer, and environmental labels), and Sections 2445.1 and 2445.2 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

**This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.**

Executed at El Monte, California on this 10TH day of May 2005.

Allen Lyons, Chief
Mobile Source Operations Division