| California Environmental Protection Agency AIR RESOURCES BOARD | MERCURY MARINE | EXECUTIVE ORDER U-W-001-0215 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 |
|---|---|---|---|---|
| 2009 | 9M9XM.3512G0 | Gasoline | 351 | Ultra Low Emission ("Three Stars") |

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

| | |
|---|---|
| **ENGINE MODELS (rated power in kilowatts, kW)** | See Attachments |

**BE IT ORDERED AND RESOLVED:** That the listed engines are certified to a hydrocarbon plus oxides of nitrogen (HC+NOx) family emission limit (FEL) in accordance with a plan submitted by the manufacturer to, and approved by, the Executive Officer for compliance with the exhaust emission standard on a corporate average basis pursuant to Title 13, California Code of Regulations, (13 CCR) Section 2442(a). The FEL shall be the applicable emission standard for this engine family for determining compliance of any engine within this engine family pursuant to 13 CCR Sections 2444.1 (in-use compliance) and 2446 (audit testing). The FEL and certification emission level in grams per kilowatt-hour (g/kW-hr) for this engine family are as follows. 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."

| | FAMILY EMISSION LIMIT (g/kW-hr) | CERTIFICATION LEVEL (g/kW-hr) |
|---|---|---|
| HC+NOx | 20.00 | 18.38 |

Compliance with the emission standard on a corporate average basis shall be determined pursuant to 13 CCR Section 2442(a) based on the sales-weighted average power of all engines produced for sale in California that are included in the approved corporate average compliance plan for the model-year.

**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.

Quarterly reports of engines produced in this engine family for sale in California shall be submitted to the Executive Officer no later than 45 days after the end of each calendar quarter pursuant to 13 CCR Sections 2442(a)(2)(B) and 2446.

**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 20th day of November 2008.

J. Lawrence

Annette Hebert, Chief
Mobile Source Operations Division

# ATTACHMENT 1 of 2

**Model Year:** ____2009____
**Manufacturer Name:** ____Mercury Marine____
**Engine Family:** _____9M9XM.3512G0
**SI MARINE ENGINE SUPPLEMENT INFORMATION**

**Page:** _____
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S10. MODEL SUMMARY (Use asterisk to identify worst-case engine model used for certification testing)

| S11 Model Designation | S12 Engine Code | S13 Sales Codes (Check all appropriate codes) | | | S14 Eng. Disp. (cc) | S15 Rated Power (kW) | S16 Rated Speed (RPM) | S17 Peak Torque (N-m) | S18 Peak Torque Speed (RPM) |
|---|---|---|---|---|---|---|---|---|---|
| | | Calif. Only | 49 State | 50-State | | | | | |
| 7F20311ZK | | | | X | 351 | 14.71 | 5750 | 25.84 | 4000 |
| 7F20302ZK | | | | X | 351 | 14.71 | 5750 | 25.84 | 4000 |
| 7F20312ZK | | | | X | 351 | 14.71 | 5750 | 25.84 | 4000 |
| 7F20411ZK | | | | X | 351 | 14.71 | 5750 | 25.84 | 4000 |
| 7F20412ZK | | | | X | 351 | 14.71 | 5750 | 25.84 | 4000 |
| 1F20211HM | | | | X | 351 | 14.71 | 5750 | 25.84 | 4000 |
| 1F20311HM | | | | X | 351 | 14.71 | 5750 | 25.84 | 4000 |
| 7F20201ZK | | | | X | 351 | 14.71 | 5750 | 25.84 | 4000 |
| 7F20211ZK | | | | X | 351 | 14.71 | 5750 | 25.84 | 4000 |
| 1F15201HK | | | | X | 351 | 11.03 | 5500 | 24.77 | 3250 |
| 7F15211ZK | | | | X | 351 | 11.03 | 5500 | 24.77 | 3250 |
| 1F20311HK | | | | X | 351 | 14.71 | 5750 | 25.84 | 4000 |
| 1F15201HM | | | | X | 351 | 11.03 | 5500 | 24.77 | 3250 |
| 1F15211HM | | | | X | 351 | 11.03 | 5500 | 24.77 | 3250 |
| 1F15311HM | | | | X | 351 | 11.03 | 5500 | 24.77 | 3250 |
| 1F20201HK | | | | X | 351 | 14.71 | 5750 | 25.84 | 4000 |
| 1F20211HK | | | | X | 351 | 14.71 | 5750 | 25.84 | 4000 |
| 7F15201ZK | | | | X | 351 | 11.03 | 5500 | 24.77 | 3250 |
| 7F15312ZK | | | | X | 351 | 11.03 | 5500 | 24.77 | 3250 |
| 1F20302HK | | | | X | 351 | 14.71 | 5750 | 25.84 | 4000 |
| 1F20312HK | | | | X | 351 | 14.71 | 5750 | 25.84 | 4000 |
| 1F20411HK | | | | X | 351 | 14.71 | 5750 | 25.84 | 4000 |
| 1F20412HK | | | | X | 351 | 14.71 | 5750 | 25.84 | 4000 |
| 1F20301HK | | | | X | 351 | 14.71 | 5750 | 25.84 | 4000 |

# ATTACHMENT 2 of 2

**Model Year:** ____2009____
**Manufacturer Name:** ____Mercury Marine____
**Engine Family:** _____9M9XM.3512G0
**SI MARINE ENGINE SUPPLEMENT INFORMATION**

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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1F15301HK | | | | X | 351 | 11.03 | 5500 | 24.77 | 3250 |
| 1F15412HK | | | | X | 351 | 11.03 | 5500 | 24.77 | 3250 |
| 1F15311HK | | | | X | 351 | 11.03 | 5500 | 24.77 | 3250 |
| 1F15302HK | | | | X | 351 | 11.03 | 5500 | 24.77 | 3250 |
| 1F15312HK | | | | X | 351 | 11.03 | 5500 | 24.77 | 3250 |
| 1F15211HK | | | | X | 351 | 11.03 | 5500 | 24.77 | 3250 |
| 1F20201HM | | | | X | 351 | 14.71 | 5750 | 25.84 | 4000 |
| 1F20411HM | | | | X | 351 | 14.71 | 5750 | 25.84 | 4000 |
| 1F15462HK | | | | X | 351 | 11.03 | 5500 | 24.77 | 3250 |
| 1F15461HK | | | | X | 351 | 11.03 | 5500 | 24.77 | 3250 |
| 1F15451HK | | | | X | 351 | 11.03 | 5500 | 24.77 | 3250 |
| 1F20402HK | | | | X | 351 | 14.71 | 5750 | 25.84 | 4000 |
| 1F15301HM | | | | X | 351 | 11.03 | 5500 | 24.77 | 3250 |
| 1F15452HK | | | | X | 351 | 11.03 | 5500 | 24.77 | 3250 |