MERCURY MARINE

EXECUTIVE ORDER U-W-001-0543
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-19-095:

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		
2021	MM9XM08.2AS2	Gasoline 8200		Super Ultra Low Emission ("Four Stars")		
EQUIPMENT APPLICATION		ECS & SPECIA	L FEATURES	ENGINE TYPE		
Inboard & Sterndrive		Sequential Multipo Heated Oxyg Dual Three-way Ca On-Board Diagnosti	gen Sensor, atalytic Converter.	4-Stroke		
ENGINE MODELS (rated power in kilowatts, kW)	See Attachment					

BE IT ORDERED AND RESOLVED: That the listed engines are certified to a hydrocarbon plus oxides of nitrogen (HC+NOx) family emission limit (FEL) and carbon monoxide (CO) direct standard in accordance with a plan submitted by the manufacturer to, and approved by, the Executive Officer for compliance with the exhaust emission standards on a corporate average basis pursuant to Title 13, California Code of Regulations, (13 CCR) Section 2442(b). The HC+NOx FEL and the CO standard shall be the applicable emission standards for this engine family for determining compliance of any engine within this engine family pursuant to 13 CCR Sections 2444.1 (in-use compliance). The standards and certification emission levels in grams per kilowatt-hour (g/kW-hr) for this engine family are as follows. Engines in this engine family shall discharge no crankcase emissions into the ambient atmosphere in conformance with 13 CCR Section 2442(b).

*=not applicable	HC+NOx (g/kW-hr)	CO (g/kW-hr)		
STANDARD	5.0	75.0		
FAMILY EMISSION LEVEL	2.0	*		
CERTIFICATION LEVEL	1.1	38.8		

Compliance with the emission standards on a corporate average basis shall be determined pursuant to 13 CCR Section 2442(b) based on the sales-weighted average 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), Section 2444.2 (on-board engine malfunction detection system), 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 on this 6th day of January 2021.

Allen Lyons, Chief

Emissions Certification and Compliance Division

Date: <u>11/18/2020</u>.

Engine Family: <u>MM9XM08.2AS2</u>.

Model Summary

For CARB Use Only Executive Order: U-W-001-0543 Attachment 1 of 1

		S14. Sales Codes (Check all appropriate)		T					
S12. Engine Model	S13. Engine Code	CA Only	49-State	50-State	S15. Engine Displacement (cc)	S16. Rated Power (kW)	S17. Rated Speed (RPM)	S18. Peak Torque (N-m)	S19. Peak Torque Speed (RPM)
8.2 MAG H.O. ECT mech				X	8200	313	5000	669	3500
8.2 MAG H.O. ECT DTS				Х	8200	316	5000	674	4000
8.2 H.O. ECT (inboard)				Х	8200	313	4800	665	4000
8.2 MAG ECT mech (5000RPM)				Х	8200	280	5000	627	3250
8.2 ECT (inboard)				Х	8200	276	4800	666	3500
8.2 MAG ECT DTS (5000RPM)				X	8200	276	5000	666	3500