

Pursuant to the authority vested in the California Air Resources Board by Health and Safety Code Division 26, Part 5, Chapter 2; 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:** The engines and emission control systems produced by the manufacturer as described below are certified for use in on-road motor vehicles with a manufacturer’s Gross Vehicle Weight Rating (GVWR) over 14,000 pounds. Production engines shall be in all material respects the same as those for which certification is granted.

Model Year	Engine Family	Combustion Cycle	Fuel Operation	Fuel Type(s)	Intended Vehicle Service Class	Intended GHG Vehicle Type
2024	RPCRH12.9C21	Diesel	Dedicated	Diesel	Heavy Heavy-Duty	Vocational and Tractor

Emission Control Systems (ECS)	Special Features
[1]: Electronic Direct Injection (DDI), Turbocharger (TC), Charge Air Cooler (CAC), Electronic Control Module (ECM), Exhaust Gas Recirculation (EGR), Oxidation Catalyst (OC), Selective Catalytic Reduction - Urea (SRC-U), Periodic Trap Oxidizer (PTOX), Ammonia Oxidation Catalyst (AMOX)	None

The certified engine models are attached.

The listed engine models comply with the following: 1) emission standard limits (STD) as demonstrated on the Federal Test Procedure (FTP) and Supplemental Emission Test (SET) test cycles, and on the Low-Load Cycle (LLC) test cycle, as applicable, and 2) Not-To-Exceed limits (NTE) as demonstrated using the Not-To-Exceed test cycle, as applicable, for exhaust criteria pollutants non-methane hydrocarbons (NMHC), nitrogen oxides (NOx), carbon monoxide (CO), and particulate matter (PM), and exhaust greenhouse gas (GHG) pollutants carbon dioxide (CO2) for vocational (VOCV) and tractor (TRAC) vehicles, methane (CH4), and nitrous oxide (N2O) as set forth in 13 CCR 1956.8 and the applicable California test procedures for heavy-duty diesel cycle engines, and 3) family emission limits (FEL) and family certification levels (FCL) declared by the manufacturer as allowed by the applicable California test procedures, stated in units of gram per brake horsepower-hour (g/bhp-hr), except as noted, or designated as not applicable (\*).

Applicable Standard	STD	Criteria				GHG			
		NMHC	NOx	CO	PM	CO2 VOCV	CO2 TRAC	CH4	N2O
Heavy-Duty Diesel Cycle Optional Standard – below 525 bhp Heavy Heavy-Duty Vocational and Tractor Alternate Phase 2 CO2 Standard Clean Idle 30g	STD	0.14	0.050	15.5	0.005	510	442	0.10	0.10
	LLC	*	*	*	*	*	*	*	*
	FEL	*	0.20	*	0.01	505-531	458-460	0.10	0.10
	NTE	0.21	0.30	19.4	0.02	*	*	*	*

**BE IT FURTHER RESOLVED:** Any declared FEL or FCL is the emission limit to which all engines must comply in lieu of the standard limit for certification purposes, subject to the restrictions of averaging, banking, or trading (ABT) programs allowed by the applicable California test procedures.

**BE IT FURTHER RESOLVED:** For the listed engine models, the manufacturer has submitted materials to demonstrate certification compliance with 13 CCR 1965 (emission control labels), 13 CCR 1971.1 (on-board diagnostic full or partial compliance), and 13 CCR 2035 et seq. (emission control warranty).

**BE IT FURTHER RESOLVED:** That the listed engine family is certified to the optional standard for engines below 525 brake horsepower as specified in 13 CCR 1956.8(a)(2)(C)3 and section 11.B.5.3.5 of the applicable California test procedures.

**BE IT FURTHER RESOLVED:** That the listed engine family is certified on an interim basis pending CARB’s submission of the proposed amendments to the California Heavy-Duty Engine and Vehicle Omnibus regulation to the Office of Administrative Law (OAL), and OAL’s approval of such amendments. Upon OAL approval of such amendments this Executive Order becomes final.

**BE IT FURTHER RESOLVED:** For engines in this engine family certified under 13 CCR 1956.8(a)(6)(C) [30 g/hr NOx] and section 11.A.6.3 of the applicable California test procedures, except those in vehicle applications exempted per 13 CCR 1956.8(a)(6)(B), the engine manufacturer shall provide an approved "Certified Clean Idle" label to be affixed to the vehicle into which the engine is installed.

**BE IT FURTHER RESOLVED:** That the listed engine family is subdivided into subfamilies for CO2 emissions, and that for each subfamily the manufacturer has declared a separate FCL and associated FEL, and has submitted materials to demonstrate compliance with the applicable California test procedures.

**BE IT FURTHER RESOLVED:** That the manufacturer has elected to include engine models in this engine family which are identified for "emergency vehicle use only". These "emergency vehicle use only" engines are exempt from requirements imposed pursuant to California law and the regulations adopted pursuant thereto for motor vehicle pollution control devices per California Vehicle Code Section 27156.2. The manufacturer must clearly label these engines for "emergency vehicle use only" on the engines' emission control label.

**BE IT FURTHER RESOLVED:** The listed engine models are certified in accordance with 13 CCR Section 1971.1(k) (deficiency and fines provisions for certification of heavy-duty on-board diagnostic (HD OBD) systems with identified deficiencies) and Health and Safety Code Section 43154.

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

This Executive Order hereby supersedes and cancels Executive Order A-384-0176 dated October 30, 2023.

Executed on this 7<sup>th</sup> day of November 2023.



Robin U. Lang, Chief  
Emissions Certification and Compliance Division

**ATTACHMENT: ENGINE MODELS**

Family: RPCRH12.9C21 EO Number: A-384-0176-1 Date Applicable: 11/1/2023

Model	Code	Trim	Config	Displacement	Peak Power			Peak Torque			ECS Num	GHG	Notes
					Power	Speed	Fueling	Torque	Speed	Fueling			
-	-	-	-	L	hp	rpm	mm3/stroke	lb-ft	rpm	mm3/stroke	-	-	-
MX-13_510hp	510hp	N/A	I6	12.9	510	1600	286.6	1850	1000	319.6	1	Both	
MX-13_483hp_DA	483hp	N/A	I6	12.9	483	1600	269.7	1650	900	289.7	1	Both	DA= Delegated Assembly
MX-13_510hp_DA	510hp	N/A	I6	12.9	510	1600	286.6	1850	1000	319.6	1	Both	DA= Delegated Assembly
MX-13_483hp	483hp	N/A	I6	12.9	483	1600	269.7	1650	900	289.7	1	Both	
MX-13_456hp_MT1850	456hp	N/A	I6	12.9	456	1600	259.7	1850	900	314	1	Both	MT=Multi Torque Peak Torque = 1650 - 1850 lb-ft Peak Torque Fueling = 314.0 - 279.8 mm3/stroke
MX-13_510hp_FE	510hp	N/A	I6	12.9	510	1600	286.6	1850	1000	319.6	1	Both	FE= Fire and Emergency
MX-13_456hp_MT1750	456hp	N/A	I6	12.9	456	1600	259.3	1750	900	296.9	1	Both	MT=Multi Torque Peak Torque = 1550 - 1750 lb-ft Peak Torque Fueling =296.9 - 267.6 mm3/stroke
MX-13_406hp_MT1750	406hp	N/A	I6	12.9	406	1600	228.2	1750	900	296.8	1	Both	MT=Multi Torque Peak Torque = 1650 - 1750 lb-ft Peak Torque Fueling =296.9 - 279.8 mm3/stroke
MX-13_429hp	429hp	N/A	I6	12.9	429	1600	242.4	1550	900	263.9	1	Both	
MX-13_456hp	456hp	N/A	I6	12.9	456	1600	259.6	1650	900	279.8	1	Both	