

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	RDDXH07.7MDC	Diesel	Dedicated	Diesel	Medium Heavy-Duty	Vocational and Tractor

Emission Control Systems (ECS)	Special Features
[1]: Electronic Direct Injection (DDI), Charge Air Cooler (CAC), Exhaust Gas Recirculation (EGR), Electronic Control Module (ECM), Turbocharger (TC), Oxidation Catalyst (OC), Periodic Trap Oxidizer (PTOX), Selective Catalyst Reduction - Urea (SCR-U), 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		Criteria				GHG			
		NMHC	NOx	CO	PM	CO2 VOCV	CO2 TRAC	CH4	N2O
Heavy-Duty Diesel Cycle Optional Standard – below 525 bhp Clean Idle 30g Alternate Phase 2 CO2 Standard Medium Heavy-Duty Vocational and Tractor	STD: FTP / SET	0.14	0.050	15.5	0.005	542	467	0.10	0.10
	STD: LLC	*	*	*	*	*	*	*	*
	FEL: FTP / SET	*	0.20	*	*	559	493	0.10	0.10
	FEL: LLC	*	*	*	*	*	*	*	*
	NTE	0.21	0.30	19.4	0.008	*	*	*	*

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 35.B.4 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: 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.

Executed on this 26th day of December 2023.



Robin U. Lang, Chief
Emissions Certification and Compliance Division

ATTACHMENT: ENGINE MODELS

Family: RDDXH07.7MDC EO Number: A-290-0189 Date Applicable: 12/13/2023

Model	Code	Trim	Config	Displacement	Peak Power			Peak Torque			ECS Num	GHG	Notes
					Power	Speed	Fueling	Torque	Speed	Fueling			
-	-	-	-	Liters	horsepower	rpm	lb/hr	lb-ft	rpm	lb/hr	-	-	-
DD8-DS-F	IV		I6	7.7	330	2200	111.9	1000	1400	84.9	1	Both	
DD8-DS-F	V		I6	7.7	350	2200	120.4	1050	1400	89.9	1	Both	
DD8-DS-F	VI		I6	7.7	375	2200	131.2	1050	1400	89.9	1	Both	
DD8-DS-F	VII		I6	7.7	350	2200	120.4	1050	1400	89.9	1	Both	
DD8-SS-F	VIII		I6	7.7	260	2200	87.4	720	1400	61.1	1	Both	
DD8-SS-F	IX		I6	7.7	280	2200	94	800	1400	67.2	1	Both	
DD8-SS-F	X		I6	7.7	300	2200	101.9	860	1400	72.2	1	Both	
DD8-SS-F	XI		I6	7.7	260	2200	87.4	660	1400	56	1	Both	
DD8-SS-R	XIII		I6	7.7	260	2200	87.4	720	1400	61.1	1	Both	
DD8-SS-R	XIV		I6	7.7	280	2200	94	800	1400	67.2	1	Both	
DD8-SS-R	XV		I6	7.7	300	2200	101.9	860	1400	72.2	1	Both	
DD8-SS-R	XVI		I6	7.7	260	2200	87.4	660	1400	56	1	Both	
DD5	XVII		I4	5.1	200	2200	64.9	560	1400	46.2	1	Both	
DD5	XIX		I4	5.1	240	2200	79	660	1400	55.4	1	Both	
DD5	XVIII		I4	5.1	220	2200	72.4	560	1400	46.2	1	Both	
DD5	XXVI		I4	5.1	200	2200	74.9	620	1400	52	1	Both	
DD5	XXVII		I4	5.1	220	2200	72.4	660	1400	55.4	1	Both	
DD5	XXVIII		I4	5.1	240	2200	79	660	1400	55.4	1	Both	