

Pursuant to the authority vested in the California Air Resources Board by Health and Safety Code Division 26, Part 5, Chapters 1 and 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 off-road equipment. 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)	Engine Operation
2024	RYDXL04.6HDA	Diesel	Dedicated	Diesel	Variable and Constant Speed

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

The certified engine models are attached.

The listed engine models comply with the following: 1) emission standard limits (STD) and Not-To-Exceed (NTE) limits, as applicable, for criteria pollutants non-methane hydrocarbons (NMHC), nitrogen oxides (NOx), carbon monoxide (CO), and particulate matter (PM), and for smoke opacity as demonstrated during the Acceleration (ACL) and Lugging (LUG) modes, and the peak value (PEAK) in either mode of the Smoke Opacity cycle, as set forth in 13 CCR 2423 and the applicable California test procedures for off-road compression-ignition engines, and 2) family emission limits (FEL) declared by the manufacturer as allowed by the applicable California test procedures, stated in units of gram per kilowatt-hour (g/kWh-hr) and percent opacity (%opacity), respectively, except as noted, or designated as not applicable (*).

Applicable Standard		Criteria				Smoke Opacity		
		NMHC	NOx	CO	PM	ACL	LUG	PEAK
Tier 4 Final 75 ≤ kW ≤ 560	STD	0.19	0.40	3.5	0.02	*	*	*
	FEL	*	*	*	*	*	*	*
	NTE	0.28	0.60	4.4	0.03	*	*	*

BE IT FURTHER RESOLVED: Any declared FEL 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: That the manufacturer has elected to combine engines from the 75 ≤ kW ≤ 560 power categories into a single engine family. The listed engine models comply with the more stringent set of standards of the 130 ≤ kW ≤ 560 power category in accordance with Section 1039.230(e) of 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 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control warranty).

BE IT FURTHER RESOLVED: The listed engine models may only be installed in or on equipment such that engine operation is consistent with off-road compression-ignition engines as defined in 13 CCR 2421(a)(39).

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

Executed on this 4th day of December 2023.



Robin U. Lang, Chief
Emissions Certification and Compliance Division

ATTACHMENT: ENGINE MODELS

Family: RYDXL04.6HDA EO Number: U-R-028-1129 Date Applicable: 11/27/2023

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	-	-	-
4XDSPC	N/A		I4	4.571	214.9	2200	150.9	610.0	1500	172.5	1	N/A	
4XDSAC	N/A		I4	4.571	207.8	2200	150.0	593.5	1500	171.1	1	N/A	
4XDWAC	N/A		I4	4.571	188.9	2000	145.1	593.5	1500	171.1	1	N/A	
4XDYCC	N/A		I4	4.571	170.3	1900	136.4	593.5	1500	171.1	1	N/A	
4XDSCC	N/A		I4	4.571	170.3	2200	123.3	593.5	1500	171.1	1	N/A	
4XDWCC	N/A		I4	4.571	170.3	2000	129.5	593.5	1500	171.1	1	N/A	
4XHSAC	N/A		I4	4.571	147.5	2200	106.9	443.9	1500	133.3	1	N/A	
4XHWAC	N/A		I4	4.571	134.1	2000	105.7	443.9	1500	133.3	1	N/A	
4XHSCC	N/A		I4	4.571	127.4	2200	92.2	443.9	1500	133.3	1	N/A	
4XHWCC	N/A		I4	4.571	127.4	2000	100.3	443.9	1500	133.3	1	N/A	
4XHYXC	N/A		I4	4.571	135.8	1900	112.9	443.9	1500	133.3	1	N/A	
4XHS1C	N/A		I4	4.571	140.8	2200	102.2	443.9	1500	133.3	1	N/A	
4XHS2CM	N/A		I4	4.571	154.2	2200	110.5	443.9	1500	133.3	1	N/A	
4XDSCCM	N/A		I4	4.571	170.3	2200	123.3	593.5	1500	171.1	1	N/A	
4XDSACM	N/A		I4	4.571	207.8	2200	150.0	593.5	1500	171.1	1	N/A	
4XDS3C	N/A		I4	4.571	154.2	2200	109.7	593.5	1350	170.1	1	N/A	