

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-14-012;

**IT IS ORDERED AND RESOLVED:** That the following compression-ignition engines and emission control systems produced by the manufacturer are certified as described below 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	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)
2017	HDZXL07.8046	7.755	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Common Rail Direct Injection, Turbocharger, Charge Air Cooler, Electronic Control Module, Exhaust Gas Recirculation, Continuous Trap Oxidizer, Diesel Oxidation Catalyst, Selective Catalytic Reduction-Urea			Excavator, Grader, Crawler and Other Industrial Equipment	

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for non-methane hydrocarbon (NMHC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kw-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):


RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			NMHC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
130 ≤ kW ≤ 560	Tier 4 Final	STD	0.19	0.40	N/A	3.5	0.02	N/A	N/A	N/A
		CERT	0.002	0.33	--	0.3	0.02	--	--	--

**BE IT FURTHER RESOLVED:** That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (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 at El Monte, California on this 23<sup>rd</sup> day of March 2017.

  
 Annette Hebert, Chief  
 Emissions Compliance, Automotive Regulations and Science Division

**Engine Model Summary Template**

Attachment page 1 of 1

EO# U-R-013-0535

Date: 3/7/2017

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@pe ak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
HDZXL07.8046	CFVI160	D8J	214.5@1800	124	74.4	1110@1350	157	70.6	DDI,TC,CAC,ECM,EGR,DOC,CTOX,SCR-U
HDZXL07.8046	CFVI210	D8J	281.5@1800	160	96.0	1360@1350	192	86.4	DDI,TC,CAC,ECM,EGR,DOC,CTOX,SCR-U
HDZXL07.8046	CFVI180	D8J	241.3@1800	136	81.6	1238@1350	173	77.8	DDI,TC,CAC,ECM,EGR,DOC,CTOX,SCR-U
HDZXL07.8046	CFVI180A	D8J	241.3@1800	136	81.6	1238@1350	173	77.8	DDI,TC,CAC,ECM,EGR,DOC,CTOX,SCR-U
HDZXL07.8046	CFVI175	D8J	234.6@1800	133	79.8	1230@1500	172	86.0	DDI,TC,CAC,ECM,EGR,DOC,CTOX,SCR-U
HDZXL07.8046	CFVI175A	D8J	234.6@1800	133	79.8	1230@1500	172	86.0	DDI,TC,CAC,ECM,EGR,DOC,CTOX,SCR-U
HDZXL07.8046	CFVI200	D8J	268.1@2000	140	93.3	1273@1500	180	90.0	DDI,TC,CAC,ECM,EGR,DOC,CTOX,SCR-U
HDZXL07.8046	CFVI187	D8J	250.7@2100	127	88.9	1096@1500	155	77.5	DDI,TC,CAC,ECM,EGR,DOC,CTOX,SCR-U
HDZXL07.8046	CFVI209	D8J	280.2@2100	140	98.0	1236@1500	174	87.0	DDI,TC,CAC,ECM,EGR,DOC,CTOX,SCR-U
HDZXL07.8046	CFVI176	D8J	236@2100	118	82.6	1250@1450	178	86.0	DDI,TC,CAC,ECM,EGR,DOC,CTOX,SCR-U
HDZXL07.8046	CFVI180B	D8J	241.3@2100	122	85.4	1330@1450	187	90.4	DDI,TC,CAC,ECM,EGR,DOC,CTOX,SCR-U
HDZXL07.8046	CFVI165	D8J	221.2@2100	110	77.0	1076@1500	167	83.5	DDI,TC,CAC,ECM,EGR,DOC,CTOX,SCR-U
HDZXL07.8046	CFVI176A	SD80F	236@2100	118	82.6	1250@1450	178	86.0	DDI,TC,CAC,ECM,EGR,DOC,CTOX,SCR-U
HDZXL07.8046	CFVI180S	SD80F	241.3@2100	122	85.4	1330@1450	187	90.4	DDI,TC,CAC,ECM,EGR,DOC,CTOX,SCR-U