

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	HDZXL07.8051	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, Diesel Oxidation Catalyst, Continuous Trap Oxidizer, Selective Catalytic Reduction-Urea			Offroad Crane, Loader, Pump, Generator Set, 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	0.01	0.27	--	0.2	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-013-0540

Date: 9/21/2017

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 Nm @ 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
HDZXL07.8051	CFVI250	TCD7.8L6	335.2@2200	160	117.3	1400@1450	198	95.7	DDI,TC,CAC,ECM,EGR,DOC,CTOX,SCR-U
HDZXL07.8051	CFVI250A	TCD7.8L6	335.2@2100	168	117.5	1400@1450	198	95.7	DDI,TC,CAC,ECM,EGR,DOC,CTOX,SCR-U
HDZXL07.8051	CFVI245	TCD7.8L6	328.5@2000	167	111.3	1400@1450	198	95.7	DDI,TC,CAC,ECM,EGR,DOC,CTOX,SCR-U
HDZXL07.8051	CFVI240	TCD7.8L6	321.8@1900	167	105.7	1400@1450	198	95.7	DDI,TC,CAC,ECM,EGR,DOC,CTOX,SCR-U
HDZXL07.8051	CFVI230	TCD7.8L6	308.4@1800	173	103.7	1400@1450	198	95.7	DDI,TC,CAC,ECM,EGR,DOC,CTOX,SCR-U
HDZXL07.8051	CFVI240A	TCD7.8L6	321.8@2200	153	112.1	1330@1450	184	88.9	DDI,TC,CAC,ECM,EGR,DOC,CTOX,SCR-U
HDZXL07.8051	CFVI230A	TCD7.8L6	308.4@2000	156	103.9	1330@1450	184	88.9	DDI,TC,CAC,ECM,EGR,DOC,CTOX,SCR-U
HDZXL07.8051	CFVI210	TCD7.8L6	281.6@1800	151	90.5	1330@1450	184	88.9	DDI,TC,CAC,ECM,EGR,DOC,CTOX,SCR-U
HDZXL07.8051	CFVI225	TCD7.8L6	301.7@2200	144	105.5	1260@1450	175	84.6	DDI,TC,CAC,ECM,EGR,DOC,CTOX,SCR-U
HDZXL07.8051	CFVI225A	TCD7.8L6	301.7@2100	147	102.8	1260@1450	175	84.6	DDI,TC,CAC,ECM,EGR,DOC,CTOX,SCR-U
HDZXL07.8051	CFVI220	TCD7.8L6	295@2000	149	99.3	1260@1450	175	84.6	DDI,TC,CAC,ECM,EGR,DOC,CTOX,SCR-U
HDZXL07.8051	CFVI215	TCD7.8L6	288.3@1900	153	96.8	1260@1450	175	84.6	DDI,TC,CAC,ECM,EGR,DOC,CTOX,SCR-U
HDZXL07.8051	CFVI190	TCD7.8L6	254.7@1800	141	84.5	1260@1450	175	84.6	DDI,TC,CAC,ECM,EGR,DOC,CTOX,SCR-U
HDZXL07.8051	CFVI200	TCD7.8L6	268.2@2200	129	94.5	1050@1450	146	70.6	DDI,TC,CAC,ECM,EGR,DOC,CTOX,SCR-U
HDZXL07.8051	CFVI190A	TCD7.8L6	254.7@2000	130	86.6	1050@1450	146	70.6	DDI,TC,CAC,ECM,EGR,DOC,CTOX,SCR-U
HDZXL07.8051	CFVI180	TCD7.8L6	241.3@1900	129	81.6	1050@1450	146	70.6	DDI,TC,CAC,ECM,EGR,DOC,CTOX,SCR-U
HDZXL07.8051	CFVI170	TCD7.8L6	227.9@1800	126	75.5	1050@1450	146	70.6	DDI,TC,CAC,ECM,EGR,DOC,CTOX,SCR-U
HDZXL07.8051	CFVI180A	TCD7.8L6	241.3@2200	117	85.7	1000@1450	141	68.1	DDI,TC,CAC,ECM,EGR,DOC,CTOX,SCR-U
HDZXL07.8051	CFVI175	TCD7.8L6	234.6@2100	117	81.8	1000@1450	141	68.1	DDI,TC,CAC,ECM,EGR,DOC,CTOX,SCR-U
HDZXL07.8051	CFVI170A	TCD7.8L6	227.9@2000	117	77.9	1000@1450	141	68.1	DDI,TC,CAC,ECM,EGR,DOC,CTOX,SCR-U
HDZXL07.8051	CFVI165	TCD7.8L6	221.2@1900	121	76.6	1000@1450	141	68.1	DDI,TC,CAC,ECM,EGR,DOC,CTOX,SCR-U
HDZXL07.8051	CFVI160	TCD7.8L6	214.5@1800	120	71.9	1000@1450	141	68.1	DDI,TC,CAC,ECM,EGR,DOC,CTOX,SCR-U
HDZXL07.8051	CFVI260	TCD7.8L6	348.6@2200	168	123.1	1390@1450	196	94.7	DDI,TC,CAC,ECM,EGR,DOC,CTOX,SCR-U
HDZXL07.8051	CFVI170S	TCD7.8L6	227.9@2300	110	84.3	1304@1450	185	89.4	DDI,TC,CAC,ECM,EGR,DOC,CTOX,SCR-U
* HDZXL07.8051	CFVI230C	TCD7.8L6	308.4@1800	173	103.7	1400@1450	198	95.7	DDI,TC,CAC,ECM,EGR,DOC,CTOX,SCR-U

\* new engine code