

Pursuant to the authority vested in California 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-19-095;

**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)
2023	PJDXL09.0308	9.0	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Charge Air Cooler, Oxidation Catalyst, Electronic Direct Injection, Electronic Control Module, Exhaust Gas Recirculation, Periodic Trap Oxidizer, Turbocharger, Selective Catalyst Reduction-Urea, Ammonia Oxidation Catalyst			Crane, Loader, Tractor, Dozer, Pump, Compressor, 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	<b>STD</b>	0.19	0.40	N/A	3.5	0.02	N/A	N/A	N/A
		<b>FEL</b>	N/A	N/A	N/A	N/A	0.01	--	--	--
		<b>CERT</b>	0.001	0.07	--	0.1	0.003	--	--	--

**BE IT FURTHER RESOLVED:** That the family emission limit(s) (FEL) is an emission level declared by the manufacturer for use in any averaging, banking and trading program and in lieu of an emission standard for certification. It serves as the applicable emission standard for determining compliance of any engine within this engine family under 13 CCR Sections 2423 and 2427.

**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).

**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.

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 on this 12<sup>th</sup> day of December 2022.



Robin U. Lang, Chief  
Emissions Certification and Compliance Division

Model	Code	Trim	Config	Displacement	Displacement -		Peak Power	Peak Power -	Peak Power -	Peak Power -	Peak Power - Fuel		Peak Torque -	Peak Torque -	Peak Torque - Fuel		OBD	GHG	Special	Notes
					Units	Liters					Units	Speed (rpm)			Fueling	Units				
6090	6090CG550A		I-6	9	Liters		345	kilowatt	1800	258.6	mm3/stroke	1830	N-m	1800	258.6	mm3/stroke	N/A	N/A		
6090	6090CG550B		I-6	9	Liters		304	kilowatt	1500	270.6	mm3/stroke	1935.2	N-m	1500	270.6	mm3/stroke	N/A	N/A		
6090	6090CG550C		I-6	9	Liters		326	kilowatt	1800	242.6	mm3/stroke	1730	N-m	1800	242.6	mm3/stroke	N/A	N/A		
6090	6090CG550D		I-6	9	Liters		304	kilowatt	1500	270.4	mm3/stroke	1935.2	N-m	1500	242.6	mm3/stroke	N/A	N/A		
6090	6090CG550E		I-6	9	Liters		273	kilowatt	1800	227.7	mm3/stroke	1448	N-m	1800	227.7	mm3/stroke	N/A	N/A		
6090	6090CG550F		I-6	9	Liters		273	kilowatt	1500	241.9	mm3/stroke	1738	N-m	1500	241.9	mm3/stroke	N/A	N/A		
6090	6090CI550A		I-6	9	Liters		317	kilowatt	2200	202.4	mm3/stroke	1685	N-m	1600	239.9	mm3/stroke	N/A	N/A		
6090	6090CI550B		I-6	9	Liters		298	kilowatt	2200	188.4	mm3/stroke	1685	N-m	1600	239.1	mm3/stroke	N/A	N/A		
6090	6090CI550C		I-6	9	Liters		316	kilowatt	2000	221.6	mm3/stroke	1685	N-m	1600	240.1	mm3/stroke	N/A	N/A		
6090	6090CI550D		I-6	9	Liters		301	kilowatt	2000	228.7	mm3/stroke	1685	N-m	1600	238.3	mm3/stroke	N/A	N/A		
6090	6090CI550E		I-6	9	Liters		286	kilowatt	2000	195.5	mm3/stroke	1671	N-m	1600	235.6	mm3/stroke	N/A	N/A		
6090	6090CI550F		I-6	9	Liters		308	kilowatt	2000	213.7	mm3/stroke	1671	N-m	1600	235	mm3/stroke	N/A	N/A		
6090	6090CI550G		I-6	9	Liters		301	kilowatt	1800	227.6	mm3/stroke	1685	N-m	1600	237.4	mm3/stroke	N/A	N/A		
6090	6090CI550H		I-6	9	Liters		267	kilowatt	2000	178.1	mm3/stroke	1563	N-m	1600	215.6	mm3/stroke	N/A	N/A		
6090	6090CI550I		I-6	9	Liters		287	kilowatt	2000	195	mm3/stroke	1563	N-m	1600	216.2	mm3/stroke	N/A	N/A		
6090	6090CI550J		I-6	9	Liters		287	kilowatt	1800	213.5	mm3/stroke	1685	N-m	1600	236.4	mm3/stroke	N/A	N/A		
6090	6090CI550K		I-6	9	Liters		248	kilowatt	2000	168.9	mm3/stroke	1450	N-m	1500	204.3	mm3/stroke	N/A	N/A		
6090	6090CI550L		I-6	9	Liters		265	kilowatt	2000	177.3	mm3/stroke	1450	N-m	1500	203.1	mm3/stroke	N/A	N/A		
6090	6090CI550M		I-6	9	Liters		266	kilowatt	1800	198.3	mm3/stroke	1595	N-m	1500	224.8	mm3/stroke	N/A	N/A		
6090	6090CI550N		I-6	9	Liters		230	kilowatt	2000	152	mm3/stroke	1341	N-m	1500	186.9	mm3/stroke	N/A	N/A		
6090	6090CI550O		I-6	9	Liters		246	kilowatt	2000	163	mm3/stroke	1341	N-m	1500	187.2	mm3/stroke	N/A	N/A		
6090	6090CI550P		I-6	9	Liters		246	kilowatt	1800	180	mm3/stroke	1477	N-m	1500	207.3	mm3/stroke	N/A	N/A		
6090	6090CI550Q		I-6	9	Liters		210	kilowatt	2000	143.2	mm3/stroke	1228	N-m	1500	170.8	mm3/stroke	N/A	N/A		
6090	6090CI550R		I-6	9	Liters		225	kilowatt	2000	153.6	mm3/stroke	1228	N-m	1500	170.8	mm3/stroke	N/A	N/A		
6090	6090CI550S		I-6	9	Liters		226	kilowatt	1800	168.2	mm3/stroke	1351	N-m	1500	188.7	mm3/stroke	N/A	N/A		
6090	6090CI550T		I-6	9	Liters		192	kilowatt	2000	130.9	mm3/stroke	1120	N-m	1500	155.5	mm3/stroke	N/A	N/A		
6090	6090CI550U		I-6	9	Liters		205	kilowatt	2000	138.9	mm3/stroke	1120	N-m	1500	155.4	mm3/stroke	N/A	N/A		
6090	6090CI550V		I-6	9	Liters		205	kilowatt	1800	152.3	mm3/stroke	1232	N-m	1500	171.4	mm3/stroke	N/A	N/A		
6090	6090CP550A		I-6	9	Liters		345	kilowatt	1800	258.6	mm3/stroke	1830	N-m	1800	258.6	mm3/stroke	N/A	N/A		
6090	6090CP550B		I-6	9	Liters		304	kilowatt	1500	270.6	mm3/stroke	1935.2	N-m	1500	270.6	mm3/stroke	N/A	N/A		
6090	6090CP550C		I-6	9	Liters		326	kilowatt	1800	242.6	mm3/stroke	1730	N-m	1800	242.6	mm3/stroke	N/A	N/A		
6090	6090CP550D		I-6	9	Liters		304	kilowatt	1500	270.4	mm3/stroke	1935.2	N-m	1500	242.6	mm3/stroke	N/A	N/A		
6090	6090CP550E		I-6	9	Liters		273	kilowatt	1800	227.7	mm3/stroke	1448	N-m	1800	227.7	mm3/stroke	N/A	N/A		
6090	6090CP550F		I-6	9	Liters		273	kilowatt	1500	241.9	mm3/stroke	1738	N-m	1500	241.9	mm3/stroke	N/A	N/A		
6090	6090HDW33		I-6	9	Liters		289	kilowatt	1900	202	mm3/stroke	1655	N-m	1500	226.9	mm3/stroke	N/A	N/A		
6090	6090HDW41		I-6	9	Liters		286	kilowatt	1800	207	mm3/stroke	1655	N-m	1500	226.9	mm3/stroke	N/A	N/A		
6090	6090HDW42		I-6	9	Liters		289	kilowatt	1900	202	mm3/stroke	1655	N-m	1500	226.9	mm3/stroke	N/A	N/A		
6090	6090HDW43		I-6	9	Liters		327	kilowatt	1900	240.2	mm3/stroke	1749	N-m	1600	251.7	mm3/stroke	N/A	N/A		
6090	6090HDW44		I-6	9	Liters		289	kilowatt	1900	202	mm3/stroke	1655	N-m	1500	226.9	mm3/stroke	N/A	N/A		
6090	6090HH029		I-6	9	Liters		335	kilowatt	2200	204.4	mm3/stroke	1817	N-m	1600	220	mm3/stroke	N/A	N/A		
6090	6090HN020		I-6	9	Liters		335	kilowatt	2000	242.2	mm3/stroke	1749	N-m	1600	252.7	mm3/stroke	N/A	N/A		
6090	6090HN021A		I-6	9	Liters		289	kilowatt	1900	204	mm3/stroke	1655	N-m	1500	233.9	mm3/stroke	N/A	N/A		
6090	6090HN021B		I-6	9	Liters		335	kilowatt	2000	187.9	mm3/stroke	1749	N-m	1600	252.7	mm3/stroke	N/A	N/A		
6090	6090HPRNT6		I-6	9	Liters		341	kilowatt	2200	216.5	mm3/stroke	1886	N-m	1600	266.8	mm3/stroke	N/A	N/A		
6090	6090HT013		I-6	9	Liters		289	kilowatt	2000	195.9	mm3/stroke	1654	N-m	1500	233.5	mm3/stroke	N/A	N/A		
6090	6090HT013A		I-6	9	Liters		289	kilowatt	2000	179.8	mm3/stroke	1655	N-m	1500	233.5	mm3/stroke	N/A	N/A		
6090	6090HT014A		I-6	9	Liters		280	kilowatt	1700	221	mm3/stroke	1654	N-m	1500	233.5	mm3/stroke	N/A	N/A		
6090	6090HT019		I-6	9	Liters		289	kilowatt	2000	196.5	mm3/stroke	1655	N-m	1500	236.9	mm3/stroke	N/A	N/A		
6090	6090HT020		I-6	9	Liters		289	kilowatt	2000	196.5	mm3/stroke	1655	N-m	1500	236.9	mm3/stroke	N/A	N/A		Emergency Vehicle
6090	6090HT809		I-6	9	Liters		335	kilowatt	2000	236	mm3/stroke	1749	N-m	1600	251.7	mm3/stroke	N/A	N/A		
6090	6090HTJ30		I-6	9	Liters		289	kilowatt	1800	211.7	mm3/stroke	1655	N-m	1500	229.6	mm3/stroke	N/A	N/A		
6090	6090HTJ31		I-6	9	Liters		289	kilowatt	1800	211.7	mm3/stroke	1655	N-m	1500	229.6	mm3/stroke	N/A	N/A		
6090	6090HTJ32		I-6	9	Liters		286	kilowatt	1800	212.7	mm3/stroke	1654	N-m	1500	233.5	mm3/stroke	N/A	N/A		
6090	6090HTJ35		I-6	9	Liters		286	kilowatt	1800	212.7	mm3/stroke	1654	N-m	1500	233.5	mm3/stroke	N/A	N/A		
6090	6090HZ027		I-6	9	Liters		289	kilowatt	1900	202	mm3/stroke	1655	N-m	1500	226.9	mm3/stroke	N/A	N/A		
6090	6090HZ028		I-6	9	Liters		335	kilowatt	2200	204.4	mm3/stroke	1817	N-m	1600	220	mm3/stroke	N/A	N/A		
6090	6090HZ030		I-6	9	Liters		327	kilowatt	1900	240.2	mm3/stroke	1749	N-m	1600	251.7	mm3/stroke	N/A	N/A		