

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-02-003;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engine and emission control system 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)
2009	9SIDL08.4H5B	8.4	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Direct Diesel Injection, Turbocharger, Charge Air Cooler, Engine Control Module and Smoke Puff Limiter			Tractor and Industrial Equipment	

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for hydrocarbon (HC), 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 (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
225 ≤ KW < 450	Tier 3	STD	N/A	N/A	4.0	3.5	0.20	20	15	50
		CERT	--	--	3.8	0.9	0.14	12	2	43

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 24th day of December 2009.

for 
 Annette Hebert, Chief
 Mobile Source Operations Division

ATTACHMENT 1 OF 1

Engine Model Summary Template

U-R-050-0020

12/23/09

Engine Family	1. Engine Code	2. Engine Model	3. BHP@RPM (SAE Gross)	4. Fuel Rate:		5. Fuel Rate:		6. Torque @ RPM (SEA Gross)	7. Fuel Rate:		8. Fuel Rate: (lbs/hr)/@peak torque	9. Emission Control Device Per SAE J1930
				mm/stroke @ peak HP (for diesel only)	mm/stroke @ peak HP (for diesels only)	mm/stroke @ peak torque	mm/stroke @ peak torque					
9SIDL08.4H5B	84.381	CTA-4V	308@2200	167	122.5	1154@1500	228	114.0	DI, EGY, SPL, TC, CAC			
9SIDL08.4H5B	84.397	CTA-4V	330@2100	180	126.0	896@1575	183	96.1	DI, EGY, SPL, TC, CAC			
9SIDL08.4H5B	84.396	CTA-4V	379@2100	202	141.4	896@1575	183	96.1	DI, EGY, SPL, TC, CAC			
9SIDL08.4H5B	84.395	CTA-4V	410@2100	217	151.9	896@1575	183	96.1	DI, EGY, SPL, TC, CAC			
9SIDL08.4H5B	84.385	CTA-4V	289@2200	149	109.3	984@1500	193	96.5	DI, EGY, SPL, TC, CAC			
9SIDL08.4H5B	84.399	CTA-4V	264@2200	137	100.5	919@1500	180	90.0	DI, EGY, SPL, TC, CAC			
9SIDL08.4H5B	84.404	CTA-4V	269@2000	152	101.3	1000@1500	194	97.0	DI, EGY, SPL, TC, CAC			
9SIDL08.4H5B	84.426	CTA-4V	379@2100	202	141.4	896@1575	183	96.1	DI, EGY, SPL, TC, CAC			
9SIDL08.4H5B	84.427	CTA-4V	330@2100	180	126.0	896@1575	183	96.1	DI, EGY, SPL, TC, CAC			
9SIDL08.4H5B	84.445	CTA-4V	264@2200	136	99.7	984@1500	193	96.5	DI, EGY, SPL, TC, CAC			
9SIDL08.4H5B	84.446	CTA-4V	289@2200	150	110.0	1077@1500	213	106.5	DI, EGY, SPL, TC, CAC			
9SIDL08.4H5B	84.460	CTA-4V	399@2100	220	154.0	923@1575	181	95.0	DI, EGY, SPL, TC, CAC			
9SIDL08.4H5B	84.459	CTA-4V	350@2100	190	133.0	923@1575	181	95.0	DI, EGY, SPL, TC, CAC			
9SIDL08.4H5B	84.419	CTA-4V	295@2200	167	122.5	1000@1500	194	97.0	DI, EGY, SPL, TC, CAC			
9SIDL08.4H5B	84.461	CTA-4V	289@2200	150	110.0	1077@1500	213	106.5	DI, EGY, SPL, TC, CAC			
9SIDL08.4H5B	84.456	CTA-4V	289@2200	149	109.3	984@1500	193	96.5	DI, EGY, SPL, TC, CAC			
9SIDL08.4H5B	84.449	CTA-4V	330@2200	173	126.9	1147@1500	224	112.0	DI, EGY, SPL, TC, CAC			
9SIDL08.4H5B	84.531	CTA-4V	251@2200	135	99.0	911@1500	188	94.0	DI, EGY, SPL, TC, CAC			
9SIDL08.4H5B	84.532	CTA-4V	275@2200	146	107.1	996@1500	197	98.5	DI, EGY, SPL, TC, CAC			
9SIDL08.4H5B	84.533	CTA-4V	300@2200	158	115.9	1077@1500	213	106.5	DI, EGY, SPL, TC, CAC			
9SIDL08.4H5B	84.495	CTA-4V	379@2100	202	141.4	896@1575	183	96.1	DI, EGY, SPL, TC, CAC			