

 <b>AIR RESOURCES BOARD</b>	<b>VM Motori S.p.A.</b>	<b>EXECUTIVE ORDER U-R-047-0029</b> New Off-Road Compression-Ignition Engines
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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 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)
2009	9V5XL03.0S4L	3.0	Diesel	8000
<b>SPECIAL FEATURES &amp; EMISSION CONTROL SYSTEMS</b>			<b>TYPICAL EQUIPMENT APPLICATION</b>	
Direct Diesel Injection, Charge Air Cooler, Smoke Puff Limiter, Turbocharger			Loader, Tractor, Dozer, Pump, and Other Industrial Equipment	

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for hydrocarbons (HC), oxides of nitrogen (NO<sub>x</sub>), or non-methane hydrocarbons plus oxides of nitrogen (NMHC+NO<sub>x</sub>), 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	NO <sub>x</sub>	NMHC+NO <sub>x</sub>	CO	PM	ACCEL	LUG	PEAK
37 ≤ kW < 75	Tier 3	STD	N/A	N/A	4.7	5.0	0.40	20	15	50
		CERT	--	--	4.4	1.0	0.28	6	5	14

**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 27 day of February 2009.



Annette Hebert, Chief  
 Mobile Source Operations Division

# Engine Model Summary Template

ATTACHMENT  
EC#U-R-047-0029

Engine Family	1.Engine Code	2.Engine Model	4.Fuel Rate:		5.Fuel Rate:		7.Fuel Rate:		8.Fuel Rate:		9.Emission Control Device Per SAE J1930
			3.BHP@RPM (SAE Gross)	mm/stroke @ peak HP (for diesel only)	mm/stroke @ peak HP (for diesels only)	mm/stroke@peak torque	(lbs/hr) @ peak HP (SEA Gross)	(lbs/hr)@peak torque	(lbs/hr)@peak torque	(lbs/hr)@peak torque	
9V5XL03.0S4L	82C/3	D754IE3	93.9@ 2600	69.5	40.2	309.8@ 1000	104.5	23.3	SPL, DI, TC, <del>CAC</del>		
9V5XL03.0S4L	82C/4	D754IE3	89.8@ 2300	69.5	40.2	309.8@ 1000	104.5	23.3	SPL, DI, TC,		
9V5XL03.0S4L	82C/8	D754IE3	85.8@ 2600	69.5	40.2	280.3@ 1000	92.8	20.6	SPL, DI, TC,		
9V5XL03.0S4L	82C/9	D754IE3	84.5@ 2300	69.5	40.2	280.3@ 1000	92.8	20.6	SPL, DI, TC, ↓		