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) 8000			
2010	AKLXL11.0DD6	11.0	Diesel				
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION				
Direct Dies Exhaust	el Injection, Turbocharg Gas Recirculation, Eng	er, Charge Air Cooler, ine Control Module	Loader, Dozer, Generator and Other 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	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)				OPACITY (%)			
POWER CLASS			нс	NOx	NMHC+NOx	со	PM	ACCEL	LUG	PEAK
130 <u>&lt;</u> kW < 225	Tier 3	STD	N/A	N/A	4.0	3.5	0.20	20	15	50
225 <u>&lt;</u> kW < 450	Tier 3	STD	N/A	N/A	4.0	3.5	0.20	20	15	50
		CERT	-		3.6	1.3	0.17	10	4	15

**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 \_\_\_\_

\_\_\_ day of December 2009.

24 th

Annette Hebert, Chief Mobile Source Operations Division

Attachment 1 ab 1 12-16-2009

**Engine Model Summary Template** 

EM, TC, CAC, EGR, DFI, ECM EM,TC,CAC,EGR,DFI,ECM EM, TC, CAC, EGR, DFI, ECM EM, TC, CAC, EGR, DFI, ECM EM,TC,CAC,EGR,DFI,ECM EM, TC, CAC, EGR, DFI, ECM EM, TC, CAC, EGR, DFI, ECM 8.Fuel Rate: 9.Emission Control (lbs/hr)@peak torqueDevice Per SAE J1930 120 9 120 89 96 96 A 7.Fuel Rate: mm/stroke@peak torque (I 256 213 196 204 256 191 ¥ 4.Fuel Rate: 5.Fuel Rate: mm/stroke @ peak HP (Ibs/hr) @ peak HP 6.Torque @ RPM (for diesel only) (for diesels only) (SEA Gross) 1003@1400 1258@1400 1258@1400 1049@1400 938@1400 964@1450 ¥ 125 156 107 111 121 95 86 150 146 159 262 168 181 197 3.BHP@RPM (SAE Gross) 267@1900 420@1800 341@2000 353@1900 274@2000 301@2000 311@2000 2.Engine Model SA46D125E-5 SAA6D125E-5 SAA6D125E-5 SAA6D125E-5 SA46D125E-5 SA46D125E-5 SA46D125E-5 Engine Family 1.Engine Code 3C05 3C02 3C03 3C04 3G01 3C01 3C07 AKLXL11.0DD6 AKLXL11.0DD6 AKLXL11.0DD6 AKLXL11.0DD6 AKLXL11.0DD6 AKLXL11.0DD6 AKLXL11.0DD6

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