

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)
2013	DSZXL05.2MXA	5.2	Diesel	8000
<b>SPECIAL FEATURES &amp; EMISSION CONTROL SYSTEMS</b>			<b>TYPICAL EQUIPMENT APPLICATION</b>	
Electronic Control Module, Turbocharger, Charge Air Cooler, Electronic Direct Injection, Exhaust Gas Recirculation, Diesel Oxidation Catalyst, Periodic Trap Oxidizer			Excavator, Crane, Loader	

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
75 ≤ kW < 130	Interim Tier 4 Alt NOx	<b>STD</b>	0.19	3.4	N/A	5.0	0.02	N/A	N/A	N/A
		<b>CERT</b>	0.06	2.8	--	0.01	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   2   day of October 2012.

  
 Annette Hebert, Chief  
 Mobile Source Operations Division

ATTACHMENT

Engine Model Summary Template

Engine Family	Engine Code	Engine Model	BHP@RPM (SAE Gross)	Fuel Rate: mm/stroke @ peak HP (for diesel only)	Fuel Rate: lbs/hr @ peak HP (for diesels only)	Torque @ RPM (SEA Gross)	Fuel Rate: mm/stroke @peak torque	Fuel Rate: lbs/hr @peak torque	Emission Control Device Per SAE J1930
DSZXL05.2MXA	4HK1XDMAA-01	AM-4HK1X	172.2@2000	138.0@2000	61.4@2000	497.1@1500	151.7@1500	50.6@1500	ECM, TC, CAC, DFI, EGR, <del>EE</del> , PTOX DOC
DSZXL05.2MXA	4HK1XDMAA-02	AM-4HK1X	166.3@1800	147.9@1800	59.2@1800	494.2@1500	150.5@1500	50.2@1500	ECM, TC, CAC, DFI, EGR, <del>EE</del> , PTOX DOC
DSZXL05.2MXA	4HK1XDMAA-03	AM-4HK1X	154.2@2200	116.6@2200	57.0@2200	458.8@1500	135.0@1500	45.0@1500	ECM, TC, CAC, DFI, EGR, <del>EE</del> , PTOX DOC
DSZXL05.2MXA	4HK1XDMAA-04	AM-4HK1X	131.4@2200	100.7@2200	49.3@2200	405.7@1500	121.0@1500	40.4@1500	ECM, TC, CAC, DFI, EGR, <del>EE</del> , PTOX DOC