DOOSAN INFRACORE CO., Ltd

EXECUTIVE ORDER U-R-019-0117 New Off-Road Compression-Ignition Engines

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)		
2011	BDICL07.6HPA	7.64	Diesel	8000		
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION			
Coole	c Control Module, Turbo r, Electronic Direct Inject tion, Diesel Oxidation Ca Oxidizer	ion. Exhaust Gas	Loaders, Compressor and Other Industrial Equipment			

The engine models and codes are attached.

The following are the exhaust certification standards (STD), or family emission limit(s) (FEL) as applicable, 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	co	P M	ACCEL	LUG	PEAK
130 ≤ kW ≤ 560	Tier 4 Interim / ALT NOx	STD	0.19	2.0	N/A	3.5	0.02	N/A	N/A	N/A
		CERT	0.01	1.8		0.1	0.004			

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 September 2011.

Annette Hebert, Chief

Mobile Source Operations Division

4-1-2011

Engine Model Summary Template

E0#: U-R-019-0117

Engine Family	1.Engine Code	2.Engine Model	3.kW@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak kW (for diesel only)	5.Fuel Rate: (kg/hr) @ peak kW (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: 9.Emission Control (kg/hr)@peak torqueDevice Per SAE J1930
BDICL07.6HPA	DL08-LDE01	DL08K	213.3@1800	165	43	1275Nm@1300	189	36 EGR,DOC,DPF,DID,TC,CAC,ECM
BDICL07.6HPA	DL08-LDE00	DL08K	209.6@1800	160	42	1275Nm@1300	189	36 EGR,DOC,DPF,DID,TC,CAC,ECM
BDICL07,6HPA	EHPEA	DL08K	158.9@1800	125	33	971Nm@1300	137	26 EGR,DOC,DPF,DID,TC,CAC,ECM