California Environmental Protection Agency AIR RESOURCES BOARD	DOOSAN INFRACORE CO., LTD.	EXECUTIVE ORDER U-R-019-0100 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 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)
2007	7DWXL05.8UTA	5.89	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Direct Diesel Injection, Turbocharger, Charge Air Cooler, Engine Control Module	Loader, Compressor, Generator Set, Other OEM Products

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
56 ≤ kW < 75	Tier 2	STD	N/A	N/A	7.5	5.0	0.40	20	15	50
75 ≤ kW < 130	Tier 3	STD	N/A	N/A	4.0	5.0	0.30	20	15	50
130 ≤ kW < 225	Tier 3	STD	N/A	N/A	4.0	3.5	0.20	20	15	50
		CERT	--	--	3.8	0.8	0.13	14	3	26

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 19 day of January 2007.

Annette Hebert, Chief
Mobile Source Operations Division

Engine Model Summary Form

Manufacturer: **Doosan Infracore Co., Ltd.**
Engine category: **Nonroad CI**
EPA Engine Family: **7DWXL05.8UTA**
Mfr Family Name: **DL06**
Process Code: **New Submission**

Attachment
EC#u-R-019-0100

1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm³/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm³/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
	DL06 TST	166 222 @ 2200	116	84	622 @ 1400	134	62	DDI, TC, CAC ECM
	DL06 TLC	163 @ 2100	84	58	593 @ 1400	121	56	
	DL06 TEF	173 @ 1900	96	60	564 @ 1400	114	53	
	DL06 TEH	170 @ 2000	90	60	542 @ 1400	108	50	
	DL06 TLD	143 @ 2100	73	51	506 @ 1400	106	49	
	DL06 TEI	163 @ 1900	93	58	521 @ 1400	102	47	
	DL06 TEG	155 @ 1900	88	55	506 @ 1400	101	47	
	DL06 TFC	158 @ 2100	83	58	485 @ 1400	95	44	
	DL06 TFD	138 @ 2100	73	51	427 @ 1400	83	38	
	DL06 TEK	134 @ 2000	70	46	398 @ 1400	74	34	
	DL06 TEJ	122 @ 1950	67	43	340 @ 1400	70	32	
	DL06 TEL	13 99 @ 1850	56	34	289 @ 1400	66	31	