

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)
2004	4DWXL05.8COA	5.8	Diesel	8000
<b>SPECIAL FEATURES &amp; EMISSION CONTROL SYSTEMS</b>			<b>TYPICAL EQUIPMENT APPLICATION</b>	
Direct Diesel Injection, Turbocharger, Charge Air Cooler			Loader, Compressor, Generator Set, 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):

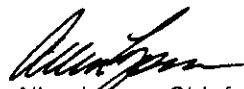
RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kW-hr)					OPACITY (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
75 ≤ kW < 130	Tier 2	STD	N/A	N/A	6.6	5.0	0.30	20	15	50
		CERT	--	--	4.6	1.2	0.17	18	5	46

**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 13<sup>TH</sup> day of July 2004.



Allen Lyons, Chief  
 Mobile Source Operations Division

# Engine Model Summary Form

Manufacturer: Daewoo Heavy Industries & Machinery Ltd.

Engine category: Nonroad CI

EPA Engine Family: 4DWXL05.8COA

Mfr Family Name: DB58TIS

Process Code: New Submission

*Attachment 1 of 1  
U-19-0079*

1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
	DB58TIS OEA	170 @ 2000	92	61	507 @ 1400	100	46	DDI,TC&CAC,SPL
	DB58TIS OEB	155 @ 1950	85	55	457 @ 1400	89	41	DDI,TC&CAC,SPL
	DB58TIS OEC	161 @ 2200	86	63	471 @ 1600	93	49	DDI,TC&CAC,SPL
	DB58TIS OED	133 @ 2200	73	53	399 @ 1600	80	42	DDI,TC&CAC,SPL
	DB58TIS OEE	153 @ 2000	85	56	457 @ 1500	91	45	DDI,TC&CAC,SPL
	DB58TIS OEF	122 @ 1950	70	45	370 @ 1450	75	36	DDI,TC&CAC,SPL
	DB58TIS OEG	156 @ 2100	84	58	449 @ 1500	91	45	DDI,TC&CAC,SPL
	DB58TIS OLA	163 @ 2200	88	64	533 @ 1400	103	48	DDI,TC&CAC,SPL
	DB58TIS OLB	143 @ 2200	77	56	464 @ 1600	92	49	DDI,TC&CAC,SPL
	DB58TIS OLC	143 @ 2200	77	56	464 @ 1600	92	49	DDI,TC&CAC,SPL