

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-45-9;

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)
2002	2DWXL05.8ARN	5.8	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Direct Diesel Injection, Smoke Puff Limiter			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
37 ≤ KW < 75	Tier 1	STD	N/A	9.2	N/A	N/A	N/A	20	15	50
75 ≤ KW < 130	Tier 1	STD	N/A	9.2	N/A	N/A	N/A	20	15	50
		CERT	--	8.6	--	--	--	9	12	12

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 4TH day of March 2002.


 Allen Lyons, Chief
 New Vehicle/Engine Programs Branch

Engine Model Summary Form

Manufacturer: **Daewoo Heavy Industries & Machinery Ltd.**

Engine category: **Nonroad CI**

EPA Engine Family: **2DWXL05.8ARN**

Mfr Family Name: **DB58**

Process Code: **New Submission**

Attachment 1091

ED# U-R-019-0053

1. Engine Code	2. Engine Model (kg)	3. BHP@RPM (SAE Gross)	4. Fuel Rate: mm ³ /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 ³ /stroke@peak torque	8. Fuel Rate: (lbs/hr)@peak torque	9. Emission Control Device Per SAE J1930
DB58 RLA	81109@2200	59	43.0	277@1600	62	36.2	DBE N/A	✓
DB58 RDA	89@1800	52	31.0	254@1600	53	28.2	N/A	✓
DB58 RPA	85114@2800	52	48.0	259@1600	54	28.3	N/A	✓
DB58 RFG	7499@2200	50	36.4	268@1600	55	29.3	N/A	✓
DB58 RFJ	91@2200	46	33.5	247@1600	53	27.8	N/A	✓
DB58 RFH	91@2200	46	33.5	247@1600	53	27.8	N/A	✓
DB58 RFI	91@2200	46	33.5	247@1600	53	27.8	N/A	✓
DB58 RGA	94@1800	59	35.2	N/A	N/A	N/A	N/A	✓
DB58 RGA	86@1800	53	31.6	N/A	N/A	N/A	N/A	✓
DB58 RGA	75@1500	55	27.3	N/A	N/A	N/A	N/A	✓
DB58 RGA	69@1500	50	24.8	N/A	N/A	N/A	N/A	✓
DB58 ROA	94@1800	59	35.2	N/A	N/A	N/A	N/A	✓
DB58 ROA	86@1800	53	31.6	N/A	N/A	N/A	N/A	✓
DB58 ROA	75@1500	55	27.3	N/A	N/A	N/A	N/A	✓
DB58 ROA	68@1500	50	24.8	N/A	N/A	N/A	N/A	✓
DB58 RFA	51	51	51	51	51	51	51	✓
DB58 RFA	99@2200	50	36.4	268@1600	55	29.3	N/A	✓