EXECUTIVE ORDER U-R-030-0007 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)			
2003	3DHXL.9532D1	0.953, 0.850	Diesel				
SPECIAL	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION				
	Indirect Diesel Inje	ection	Riding Mower				

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			E	XHAUST (g/kw-h	OPACITY (%)				
POWER CLASS	STANDARD		НС	NOx	NMHC+NOx	6.6 N/A	9M 0.80 N/A	ACCEL 20 N/A	15 N/A	<b>PEAK</b> 50 N/A
8 < KW < 19	Tier 1	STD	N/A	N/A	9.5					
0 1100	1101	FEL	N/A	N/A	7.5					
		CERT			6.2	3.6	0.62	10	12	14

**BE IT FURTHER RESOLVED**: That the family emission limit(s) (FEL) is an emission level declared by the manufacturer for use in any averaging, banking and trading program and in lieu of an emission standard for certification. It serves as the applicable emission standard for determining compliance of any engine within this engine family under 13 CCR Sections 2423 and 2427.

**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 July 2002.

Allen Lyons, Chief

Mobile Source Operations Division

## **Engine Model Summary Form**

Manufacturer: DAIHATSU Motor Co., Ltd.
Engine category: Nonroad CI

EPA Engine Family. 3DHXL.9532D1

Mfr Family Name: DM950D, DM850D

Process Code: New Submission

ATTACHMENT EO#U-K-030-0007

J.Monor	DM950E	DM950E	DM950E	DM9501	DM9501	DM9501	★ DM9500	CASS DM9501	DM9501	DM9501	DM9501	DM9501	DM9501	DM9501	1.Engine Code
) DM850D-E	DM850D-D	DM850D-C1	DM850D-C	) DM850D-B	DM850D-A	DM850D	DM950D-K	DM950D-J	DM950D-H	DM950D-G	DM950D-F	DM950D-E	DM950D-D	DM950D-C	ode 2.Engine Model
20.1@2900	16.1@2500	18.0@2600	(14.8)@2600	18.1@3100	16.9@2600	21.9@3600	(25.2) <u>0</u> 3600	23.0@3150	23.1@3250	24.7@3600	20.4@3350	21.5@3000	18.0@3100	24.7Hp@3600	3.BHP@RPM (SAE Gross)
18.2@2900	15.9@2500	18.2@2600	14.7@2600	16.2@3100	17.0@2600	17.5@3600	19.4@3600	17.4@3150	18.7@3250	18.4@3600	16.6@3350	19.5@3000	15.7@3100	18.4@3600	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)
9.1@2900	6.8@2500	8.2@2600	6.5@2600	8.6@3100	7.7@2600	10.9@3600	12.1@3600	9.5@3150	10.4@3250	11.4@3600	9.6@3350	10.1@3000	8.4@3100	11.4@3600	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)
36.2@2800	33.3@2500	36.2@2600	30.6@2500	32.1@2600	34.5@2500	36.2@2800	44.4@2800	41.3@2800	38.5@2800	41.3@2800	33.9@2800	40.1@2800	31.8@2800	41.3ft-lbs@2800	6.Torque @ RPM (SEA Gross)
18.2@2800	15.9@2500	18.2@2600	14.9@2500	16.2@2600	17.3@2500	18.2@2800	21.7@2800	20.6@2800	19.6@2800	20.6@2800	17.3@2800	19.6@2800	15.5@2800	20.6@2800	7.Fuel Rate: mm/stroke@peak torque
8.8@2800	6.8@2500	8.2@2600	6.5@2500	7.3@2600	7.5@2500	8.8@2800	10.5@2800	10.0@2800	9.5@2800	10.0@2800	8.3@2800	9.5@2800	7.4@2800	10.0@2800	8.Fuel Rate: (lbs/hr)@peak torque
	m S	m S	<u>m</u>	E M	m M		E S	TOT MB	<u>m</u>			M	m S	⊞M →	8.Fuel Rate: 9.Emission Control (lbs/hr)@peak torque Device Per SAE J1930