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## State of California AIR RESOURCES BOARD

# EXECUTIVE ORDER U-R-30-2 Relating to Certification of New Off-Road Compression-Ignition Equipment Engines

#### DAIHATSU MOTOR CO., LTD.

Pursuant to the authority vested in the Air Resources Board (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 engine and exhaust emission control system produced by the manufacturer are certified as described below for use in off-road equipment:

Model Year: 2001

Typical Equipment Usage: Riding mower, tractor

Fuel Type: Diesel

Engine Family 1DHXL.9532D1	Engine Displacements (liters) 0.953 and 0.850	Useful Life ( <u>Hours)</u> 3000	Exhaust Emission Control Systems and Special Features Indirect Diesel Injection
	0.000	3000	indirect Diesel Injection

Engine models and codes are listed on attachments. Production engines shall be in all material respects the same as those for which certification is granted.

The exhaust emission certification standards and certification values for non-methane hydrocarbons plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) (units are expressed in grams per kilowatt-hour (g/kw-hr)), and the opacity-of-smoke certification standards and certification values in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family are as follows (Title 13, California Code of Regulations, Sections 2423 and 2423(b)(3)(B) as amended by Board approval on January 28, 2000):

Engine Power	Emission Standard		Exhaust Emissions (g/kw-hr)			Smoke Opacity (%)			
Rating (kw)	Category		NMHC+NOx	<u>CO</u>	<u>PM</u>	Accel	<u>Lug</u>	<u>Peak</u>	
8 <u>&lt;</u> KW<19	Tier 1	Standard Certification	9.5 6.0	6.6 4.4	0.80 0.42	<sup>2</sup> 20	15 9	50 11	

BE IT FURTHER RESOLVED: That the listed engine models are **conditionally certified** to, and shall be required to comply with, all amendments to Title 13, California Code of Regulations, Sections 2420 through 2429 adopted by the Board on January 28, 2000 at its hearing "TO CONSIDER AMENDMENTS TO OFF-ROAD COMPRESSION-IGNITION ENGINE REGULATIONS: 2000 AND LATER EMISSION STANDARDS, COMPLIANCE REQUIREMENTS AND TEST PROCEDURES." The listed engine models comply with all such amendments, including, but not limited to:

- the amended "Emission Control Labels—1996 and Later Off-Road Compression-Ignition Engines" (Title 13, California Code of Regulations, Section 2424) for the aforementioned model-year;
- the Board's amended emission control system warranty provisions (Title 13, California Code of Regulations, Sections 2425 and 2426) for the listed engine models, as demonstrated by materials submitted by the manufacturer; and
- new California requirements for the Selective Enforcement Audit (SEA) for the listed engine models, as demonstrated by the manufacturer's submission of materials.

BE IT FURTHER RESOLVED: That the conditional certification described in the paragraph above is conditioned on the amendments being approved by the California Office of Administrative Law (OAL) pursuant to Government Code Section 11349.3, and where necessary, authorized by the Administrator of the U. S. Environmental Protection Agency (USEPA) pursuant to Section 209(e)(2) of the Federal Clean Air Act. In the event that the OAL disapproves the amendments or the USEPA decides not to authorize them, the ARB shall notify the manufacturer that the listed engine models must comply with the "California Exhaust Emission Standards and Test Procedures for 1995 and Later Small Off-Road Engines" (Title 13, California Code of Regulations, Sections 2400 through 2409) last amended on March 23, 1999, as applicable. Failure to demonstrate compliance within 45 days after notification by the Air Resources Board shall be cause for the Board to revoke the Executive Order and deem the listed engine models uncertified.

The conditional certification described herein is not conditioned on further USEPA action on amendments determined by the Board to be within the scope of an existing USEPA authorization.

Engines certified under this Executive Order must conform to the above requirements under Title 13, California Code of Regulations, Chapter 9, Article 4, and all other applicable California emission laws and regulations.

Executed at El Monte, California this

day of December 2000.

R. B. Summerfield, Chief

Mobile Source Operations Division

Model Year: Manufacturer:

Engine Family:

2001

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1DHXL.9532D1

DAIHATSU MOTOR Co., Ltd.

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Issued:

Revised:

2000/09/25

E.O. Number:

U-R-30-2

### Small Off-Road Engine Model Summary Form

Units for Table: hp

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Worst Case?	nation	48. Sales Code	49. Dispi (cc)	50. Bore/ Stroke	51. Ignition Timing	52. Max P ower	53. Rated Speed (RPM)	54. Rated Torque	55. Torque Speed (RPM)	56. Emiss Control Sys
X	DM950D-C	50-State	953	72/78 mm	(8)	24.7	3600	56.0 Nm	2800	101
	DM950D-D	50-State	953	72/78	(35		3100	43.1	2800	ומו בא
	DM950D-E	50-State	953	72/78	(16.1		3000	54.3	2900	IDI EM
	DM950D-F	50-State	953	72/78	(15) 3		3350	46.0	2800	IDI EM
	DM950D-G	50-State	953	72/78	(18)		3600	56.0	2800	IDI EW
	DM950D-H	50-State	953	72/78	(173)		3250	52.2	<del></del>	(0) <u>EM</u>
	DM950D-I	50-State	953	72/78	(17.3)	23.0	3250	52.2	2800	ומן <del>"בוא</del>
	DM850D	50-State	850	68/78		21.9	3600			ioi <del>em</del>
	DM850D-A	50-State	850	68/78	(1641) (12.7		+	49.1		ID) EM
	DM850D-B	50-State	850	68/78			2600	46.7		ומן 👭
	DM850D-C	50-State	850	68/78		5)18.1	3100	43.5	2600	DI <del>EM-</del>
				00// 0	(11)	14.8	2600	41.5	2500	IDI EM-
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Model Year:

Engine Family:

2001 Manufacturer.

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1DHXL.9532D1

Revised:

2000/09/25

E.O. Number:

U-R-30-a

## Small Off-Road Engine Model Summary Form

Units for Table:

47. Model Designation	48. Sales Code	49. Displ (cc)	50. Bore/ Stroke	Ignition Timing KW	Max P ower	53. Rated Speed (RPM)	54. Rated Torque	55. Torque Speed (RPM)	56. d Emiss Control Sys
		<del> </del>	68/78mm	(34)	17.9	2600	49.1Nm	2600	<del></del>
DM850D-D	50-State	850	68/78		15.1	2500			DIEM DIEM
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	Model Desig	Model Desig Sales Code  DM850D-C1 50-State	Model Desig Sales Displ nation Code (cc)  DM850D-C1 50-State 850	Model Desig nation         Sales Code         Displ Code         Bore/Stroke           DM850D-C1         50-State         850         68/78mm	Model Desig Sales Displ Bore/ Ignition Timing KW  DM850D-C1 50-State 850 68/78mm (BW)  DM850D-D 50-State 850 68/78 (II.B	Model Desig nation         Sales Code         Displement (cc)         Bore/Stroke         Ignition Timing         Max Power           DM850D-C1         50-State         850         68/78mm         (3H) 17.9           DM850D-D         50-State         850         68/78         (II.) 15.1	Model Desig   Sales   Displ   Bore/ Stroke   Ignition   Max P ower (RPM)	Model Designation	Model Designation