State of California AIR RESOURCES BOARD

EXECUTIVE ORDER A-21-186

Relating to Certification of New Heavy-Duty Motor Vehicle Engines CUMMINS ENGINE COMPANY, INC.

Pursuant to the authority vested in the Air Resources Board by Sections 43100, 43102 and 43103 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 Cummins Engine Company, Inc. 1997 model diesel engines are certified for use in motor vehicles with a manufacturer's gross vehicle weight rating (GVWR) over 14,000 pounds:

Fuel Type: Diesel

Engine Family	Liters (Cu	ıbic Inches)	Exhaust Emission Control Systems and Special Features
VCE661EJDASA (353D)	10.8	661	Charge Air Cooler Turbocharger Powertrain Control Module

Engine models and codes are listed on attachments.

The following are the certification exhaust emission standards for this engine family in grams per brake-horsepower-hour:

Total Hydrocarbons	,		<u>Particulates</u>	
1.3	15.5	5.0	0.10	

The following are the certification exhaust emission values for this engine family in grams per brake-horsepower-hour:

Engine	Total	Carbon	Nitrogen	Particulates
Family	<u>Hydrocarbons</u>	<u>Monoxide</u>	Oxides	
VCE661EJDASA (353D)	0.2	0.9	4.8	0.06

BE IT FURTHER RIG. AFD: That for the listed engine models, the manufacturer has submitted the materials to demonstrate certification compliance with the Board's emission control system warranty provisions (Title 13, California Code of Regulations, Section 2035 et seq.).

CUMMINS ENGINE COMPANY, INC.

Engines certified under this Executive Order must conform to all applicable California emission regulations.

The Bureau of Automotive Repair will be notified by copy of this order and attachments.

Executed at El Monte, California this ______ day of January 1997.

Ropharl Summerfield, Chief

Mobile Source Operations Division

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1997 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET HEAVY-DUTY DIESEL-STANDARD ENGINES

Manufacturer	Cummins Engi	ne Company, Inc	c. Engine	. Family (3531) VCE661EJI	ASA
Displacement:	/	10.8 Lite:	rs _		661C	ubic Inches
Maximum Rated	Power:	400 HP @	1800 RPM	Engine Con	figuration:	<u> </u>
Tanition: Co.	mpression X	Comp	ression with	Glow Plug		Spark
Fuel Type(s):	Dedicated X	Flex-Fuel	Dual-Fuel	Diesel_:	к_ м100	м85
Diesel Cert F	uel: 13 CCR	2282	40 CFR 86.1313	1-90	40 CFR 86.	1313-94 <u>X</u>
		lass: LHD		HHD_X	_ Ur)	oan Bus
Exhaust ECS (include.MFI,	TC. CAC):	PCM	(TC, CAC)	- 71 0 1 0 G B D	715
			(use abbreviat	ions per SA	E 01750 OEL	
7 Nadal	Rated HP	Fuel Rate @ Rated HP	Fuel Pump & Injector	ECM/PCM	EGR Valve	PTOX / Catalytic
Engine Model (Eng Code)	@ RPM	mm3 / stroke	Part No.	Part No.	Part No.	Converter
		(lbs/hr)				Part No.
M11-400E (1885)	400 @ 1800	213 (129)	3084589 3087557	3084473	N/A	A\n
(1973)						
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1997 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET HEAVY-DUTY DIESEL STANDARD ENGINES

Manufacturer Cur	mmins Engine	Company, Inc.	Engine F	amily <u>(353D</u>	VCE661EJDA	SA
Displacement:	/ 10).8 Lit	ters _		/ 661 Cu	pic Inches
Maximum Rated Po	wer: 40	0 HP	@ <u>1800</u> R	PM Engine	e Configurat	ion: <u>I-6</u>
Ignition: Compr	ession X	Compressi	on with Glow	Plug	Spa	rk
Fuel Type(s): D	edicated <u></u>	Flex-Fuel	Dual-Fuel_	Diesel	<u>x</u> M100_	M85
c	NGLNG_	LPG	Other (speci	fy)		
Diesel Cert Fuel	: 13 CCR 228	32 40 C	FR 86.1313-9	0	40 CFR 86.1	313-94 <u>X</u>
Primary Intended	Service Clas	ss: LHD	MHD	ннD <u>х</u>	Urban	Bus
Exhaust ECS (inc	lude.MFI, TC	, CAC): <u>PC</u> (u	M (TC .CAC) se abbreviat	ions per SA	E J1930 SEP	91)
Engine Model (Eng Code)	Rated HP @ RPM	Fuel Rate @ Rated HP mm3 / stroke (lbs/hr)	Fuel Pump & Injector Part No.	ECM/PCM Part No.	EGR Valve Part No.	PTOX / Catalytic Converter Part No.
M11-370E (1856)	370 @ 1800	194 (118)	3084589 3087557	3084473	N/A	N/A
M11-350E (1856)	350 @ 1800	183 (111)	3084589 3087557	3084473	N/A	N/A
M11-330E (1856)	330 @ 1800	172 (105)	3084589 3087557	3084473	N/A	N/A
M11-335E (1856)	335 @ 1800	176 (107)	3084589 3087557	3084473	N/A	A/N
M11 ESP III (1856)	330 @ 1800	172 (105)	3084589 3087557	3084473	N/A	N/A
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Date Issued:						
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1997 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET HEAVY-DUTY DIESEL-STANDARD ENGINES

Manufacturer _	Cumming Fnc	tine Company, I	nc.	Engine Famil	y (353D) VCE	661EJDASA
		/ 10.8 Li	ters		<u> </u>	Dic inone
Displacement: _ Maximum Rated	Davion	400	IP @ 1800	RPM Engin	e Configura	tion: <u>I-6</u>
Maximum Rated Ignition: Com	Power:	Compres	sion with Glo	w Plug	Spa	rk
<pre>Ignition: Com Fuel Type(s):</pre>	pressionx_	- Play-Fuel	Dual-Fuel	Diesel	x_ M100	м85
	T N	C IDC	Other (spec	city)		
	CNG EN	2282	10 CFR 86.131	3-90	40 CFR 86	.1313-94 <u>X</u>
Diesel Cert Fu	el: 13 CCR	lass: LHD	MHD	 х	Urba	n Bus
Primary Intend	led Service C		now and and			
Exhaust ECS (i	.nclude.MFI,	TC, CAC):	(use abbrevia	tions per SI	AE J1930 SEP	91)
		Fuel Rate	Fuel Pump		EGR	PTOX / Catalytic
Engine Model	Rated HP	• • • • • • • • • • • • • • • • • • • •	& Injector Part No.	ECM/PCM Part No.	Valve Part No.	Converter
(Eng Code)	€ RPM	mm3 / stroke (lbs/hr)	rait no.			Part No.
			3084589	3084473	N/A	N/A
M11-330E	330 @ 1800	172 (105)	3084585			
(1855)	-		3084589	3084473	N/A	N/A
M11-310E	310 @ 1800	161 (98)	3084369	300111		Ì
(1855)			2204520	3084473	A\N	N/A
M11-280E	280 @ 1800	146 (89)	3084589	50044.3	1.,	
(1855)			2204530	3084473	N/A	N/A
M11 ESP I	280 % 1800	146 (89)	3084589	3004473	1.7.	
(1855)			2004500	3084473	N/A	N/A
M11 ESP II	310 3 1800	161 (98)	3084589 3087557	3084473	II/ R	1
(1857)				2004473	N/A	N/A
M11-315ESP	315 3 1800	166 (101)	3084589 3087557	3084473	N/A	
(1857)				2201173	N/A	N/A
M11-320E	320 @ 2000	157 (106)	3084589 3087557	3084473	N/A	1,711
(1855)			300755		1	
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