California Environmental Protection Agency AIR RESOURCES BOARD	CUMMINS INC.	EXECUTIVE ORDER A-021-0332-1 New On-Road Heavy-Duty Engines

Pursuant to the authority vested in the Air Resources Board (ARB) by Health and Safety Code (HSC) Division 26, Part 5, Chapter 2; and pursuant to the authority vested in the undersigned by HSC Sections 39515 and 39516 and Executive Order (EO) G-02-003; and

Pursuant to the December 15, 1998 Settlement Agreement (SA) between ARB and the manufacturer, and any modifications thereof to the Settlement Agreement;

IT IS ORDERED AND RESOLVED: That the engine and emission control systems produced by the manufacturer are certified as described below for use in on-road motor vehicles with a manufacturer's GVWR over 14,000 pounds. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	ENGINE SIZE (liter)	FUEL TYPE (CNG/LNG=compressed/liquefied natural gas; LPG=liquefied petroleum gas)	STANDARDS & TEST PROCEDURE	INTENDED SERVICE CLASS (L/M/H HDD=light/medium/heavy heavy-duty [HD] diesel; UB=urban bus; HDO=HD Otto)
2002	2CEXH0540LAC	8.8	Diesel	Diesel	MHDD

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	ENGINE MODELS / CODES (rated power in horsepower, hp)
DDI, TC, CAC, PCM	ISL: 400 / 8106 (400 hp), 370 / 8106 (370 hp), 350 / 8106 (350 hp), 330 / 8158 (339 hp), 310 / 8158 (319 hp)

* =not applicable; GVWR=gross vehicle weight rating; TWC/OC=three-way/oxidizing catalyst; WU (prefix) =warm-up catalyst; O2S (HO2S)=oxygen sensor (heated); AFS (HAFS)=air-fuel ratio sensor (heated); TBI=throttle body fuel injection; MFI (SFI)=multi port fuel injection (sequential); DDI (IDI)=direct (indirect) diesel injection; TC (SC)=turbo (super) charger; CAC=charge air cooler; EGR=exhaust gas recirculation; AIR (PAIR)=(pulsed) secondary air injection; SPL=smoke puff limiter; ECM (PCM)=engine (powertrain) control module; EM=engine modification; 2 (prefix)=parallel; (2) (suffix)=in series; CH4=methane; HC=hydrocarbon; NMHC=non-CH4 HC; NOx=oxides of nitrogen; CO=carbon monoxide; PM=particulate matter; HCHO=formaldehyde; g/bhp-hr=grams per brake horsepower-hour; STD=emission standard; CERT=certification level; FEL=family emission limit; FTP=federal test procedure; EURO=Euro III procedure; NTE=Not-to-Exceed Limit; TNTE=Transient Load-Response NTE Limit; 13 CCR=Title 13, California Code of Regulations; 40 CFR=Title 40, Code of Federal Regulations; ABT=averaging, banking and trading

The following are the exhaust STDs, or FEL(s) as applicable, and CERTs, in g/bhp-hr, for this engine family under FTP [13 CCR Section 1956.1 (urban bus) or 1956.8 (other than urban bus)] and under EURO in the SA, including the EURO's NTE(s). "Diesel" CO certification compliance may have been demonstrated pursuant to 40 CFR Section 86.091-23(c)(2)(i) in lieu of testing. {For flexible- and dual-fueled engines, the CERTs in brackets [ ] are those when tested on conventional test fuel. For multi-fueled engines, the STDs and CERTs for default operation permitted in 13 CCR Section 1956.1 or 1956.8 are in parentheses.}

EURO'S NOx NTE LIMIT: 5.0	HC		NMHC		NOx		NMHC+NOx		CO		PM		HCHO	
	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO
STD	1.3	1.3	*	*	4.0	4.0	*	*	15.5	15.5	0.10	0.10	*	*
FEL	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CERT	0.1	0.1	*	*	3.7	3.6	*	*	1.4	0.7	0.10	0.09	*	*

BE IT FURTHER RESOLVED: That certification to the FEL(s) listed above, as applicable, is subject to the following terms, limitations and conditions. The FEL(s) is the emission level declared by the manufacturer and serves in lieu of an emission standard for certification purposes in any ABT programs. It will be used for determining compliance of any engine in this family and compliance with such ABT programs.

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the materials to demonstrate certification compliance with 13 CCR Sections 1965 (emission control labels), and 2035 et seq. (emission control warranty).

BE IT FURTHER RESOLVED: That production of any engine within this engine family after October 1, 2002 and before January 1, 2003 shall conform to the provisions in paragraph 22 and all other applicable provisions under the SA, including TNTE limit for NOx and/or NTE and TNTE limits for PM, if any, applicable to engines that are produced on or after October 1, 2002. Within 45 days after the last such engine is produced, the manufacturer shall submit to ARB a production report in the format to be specified by ARB of such engines and of the credit-generating engines.

BE IT FURTHER RESOLVED: That the listed engine models are conditionally certified subject to the following conditions: (**1**) The Settlement Agreement is in effect; and (**2**) The manufacturer is in compliance with all applicable certification requirements of the Settlement Agreement and any modifications thereof.

Engines certified under this Executive Order shall conform to all applicable California emission regulations and all requirements under the Settlement Agreement and any modifications thereof.

The Bureau of Automotive Repair will be notified by copy of this Executive Order.
This Executive Order hereby supersedes Executive Order A-021-0332 dated December 17, 2001.

Executed at El Monte, California on this 4TH day of November 2002.

Allen Lyons, Chief
Mobile Source Operations Division