

Full

Pursuant to the authority vested in the Air Resources Board 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 G-45-9;

**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 gross vehicle weight rating (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)
2003	3SZXH07.84RA	7.8	Diesel	Diesel	MHDD
<b>SPECIAL FEATURES &amp; EMISSION CONTROL SYSTEMS</b>		<b>ENGINE MODELS / CODES (rated power in horsepower, hp)</b>			
DDI, TC, CAC, ECM		6HK1XN / 784RA-1 (200 hp), 6HK1XR / 784RA-8 (200 hp), 6HK1XN / 784RA-7 (215 hp), 6HK1XC / 784RA-8 (230 hp), 6HK1XSL / 784RA-9 (250 hp), 6HK1XS / 784RA-10 (250 hp), 6HK1XHL / 784RA-11 (275 hp), 6HK1XH / 784RA-12 (275 hp)			
TWC/OC=three-way/oxidizing catalyst    WU (prefix) =warm-up cat.    O2S=oxygen sensor    HO2S=heated O2S    TBI=throttle body fuel injection    MFI=multi port fuel injection SFI=sequential MFI    DDI/DI=direct /indirect diesel injection    TC/SC=turbo/super charger    CAC=charge air cooler    EGR=exhaust gas recirculation    AIR=secondary air injection PAIR=pulsed AIR    SPL=smoke puff limiter    ECM/PCM=engine /powertrain control module    EM=engine modification    2 (prefix)=parallel    (2) (suffix)=in series					

The following are the exhaust emission standards (CERT), or family emission limit(s) (FEL) as applicable, and certification levels (CERT) in grams per brake horsepower-hour (g/bhp-hr) for this engine family for hydrocarbon (HC) or non-methane HC (NMHC), oxides of nitrogen (NOx), or NMHC+NOx, carbon monoxide (CO) [except that "diesel" CO certification compliance may have been demonstrated pursuant to Code of Federal Regulations, Title 40, Part 86, Subpart A, Section 86.091-23(c)(2)(i) in lieu of testing], particulate matter (PM), and formaldehyde (HCHO) under the "Federal Test Procedure" (FTP) (Title 13, California Code of Regulations, (13 CCR) Section 1956.1 (urban bus) or 1956.8 (other than urban bus)): (For flexible- and dual-fueled engines, the CERT values in brackets [ ] are those when tested on conventional test fuel. For multi-fueled engines, the STD and CERT values for default operation permitted in 13 CCR Section 1956.1 or 1956.8 are in parentheses.)

* = not applicable	[g/bhp-hr]	HC	NMHC	NOx	NMHC+NOx	CO	PM	HCHO
(DIRECT) STANDARD		1.3	*	4.0	*	15.5	0.10	*
CORPORATE AVERAGE STANDARD		*	*	*	*	*	*	*
FAMILY EMISSION LIMIT (FEL)		*	*	*	*	*	*	*
CERTIFICATION LEVEL		0.1	*	3.8	*	1.1	0.08	*

**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 averaging, banking, or trading (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).

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

The Bureau of Automotive Repair will be notified by copy of this Executive Order.

Executed at El Monte, California on this 23<sup>rd</sup> day of January 2002.



R. B. Summerfield, Chief  
Mobile Source Operations Division