## QUANTUM TECHNOLOGIES, INC.

EXECUTIVE ORDER A-328-0036

New Diesel or Incomplete
Medium-Duty Vehicles Using Certified Engines

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-02-003;

IT IS ORDERED AND RESOLVED: That the diesel or incomplete medium-duty vehicles with a manufacturer's gross vehicle weight rating (GVWR) from 8,501 to 14,000 pounds are certified as described below. Production vehicles shall be in all material respects the same as those for which certification is granted.

		ENGIN	E DESCRIPTION	NC			
MODEL YEAR	EXECUTIVE ORDER	ENGINE FAMILY	EMISSION STANDARD CATEGORY	ENGINE SIZE (liter)	I CEL IIFE		STANDARDS & TEST PROCEDURE
		3TJXH06.0583	ULEV	6.0	Dual Fu		Otto
Alcohol Vehi	cles Only	<b>VEHICLE MODEL YEAR</b>	ON-BC	ARD DIAG	NOSTIC		
		2003				ENGINE MODELS / CODES	
FAMILY CAPACITY (		VEHICLE MAKE & MODELS				(rated power in horsepower, hp)	
3(	6	Chevrolet Silverado C Fuel); GMC Sierra C2500	2500 HD 2WD/K2500 HD 4WD (Dual 00 HD 2WD/K2500 HD 4WD (Dual Fuel)			LQ4-CNG / 1 (286 hp for CNG,	
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	YEAR 2003 Alcohol Veh FUEL CAPACITY	YEAR ORDER 2003 A-328-0035	MODEL YEAR ORDER ENGINE FAMILY 2003 A-328-0035 3TJXH06.0583  Alcohol Vehicles Only VEHICLE MODEL YEAR CAPACITY (gallons) VEHICL 2003 VEHICL Chevrolet Silverado C	MODEL YEAR ORDER ENGINE FAMILY STANDARD CATEGORY  2003 A-328-0035 3TJXH06.0583 ULEV  Alcohol Vehicles Only VEHICLE MODEL YEAR ON-BC CAPACITY (gallons) VEHICLE MAKE & MO  Chevrolet Silverado C2500 HD 2WD//	MODEL YEAR ORDER ENGINE FAMILY EMISSION SIZE (liter)  2003 A-328-0035 3TJXH06.0583 ULEV 6.0  Alcohol Vehicles Only VEHICLE MODEL YEAR ON-BOARD DIAC Partial Comply CAPACITY (gallons)  VEHICLE MAKE & MODELS  Chevrolet Silverado C2500 HD 2WDK2500 HD.	MODEL YEAR CAPACITY (gallons)  EXECUTIVE ORDER  ENGINE FAMILY  ENGINE FAMILY  ENGINE STANDARD CATEGORY  STANDARD CATEGORY  CATEGORY  ENGINE SIZE ((iter)  CATEGORY  CATEGORY  CATEGORY  CATEGORY  ENGINE CATEGORY  CATEG	MODEL YEAR ORDER ENGINE FAMILY STANDARD CATEGORY (liter) FUEL TYPE (CNG/LNG=compressed/liquefied natural gas; LPG=liquefied petroleum gas)  2003 A-328-0035 3TJXH06.0583 ULEV 6.0 Dual Fuel CNG or Gasoline  Alcohol Vehicles Only VEHICLE MODEL YEAR ON-BOARD DIAGNOSTIC FUEL TANK 2003 Partial Compiliance ENGINE MODELS (rated power in horse  CAPACITY (gallons) VEHICLE MAKE & MODELS  Chevrolet Silverado C2500 HD 2WD/K2500 HD 4WD /Dual

The following are the exhaust emission standards (STD), 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 non-methane hydrocarbon (NMHC) plus oxides of nitrogen (NOx) (NMHC+NOx), NMHC, carbon monoxide (CO) [except that "diesel" CO certification compliance may have been demonstrated pursuant to Code of Federal Regulations, Title 40, Section 86.091-23(c)(2)(i) in lieu of testing], particulate matter (PM), and formaldehyde (HCHO) (Title 13, California Code of Regulations, (13 CCR) Section 1956.8): (For flexible- and dual-fueled engines, the CERT values in brackets [] are those when tested on conventional test fuel.)

* = not applicable [g/bhp	o-hr] NMHC+NOx	NMHC	CO	PM	нсно
(DIRECT) STANDARD	1.5	*	14.4	*	0.050
CORPORATE AVERAGE STAN	DARD *	+	*		*
FAMILY EMISSION LIMIT (FEL)		*	*	* .	*
CERTIFICATION LEVEL	0.3 [0.6]	*	2.0 [2.0]	•	0.000 [0.002]

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 the listed engine models have been certified to the optional emission standards and test procedures in 13 CCR Section 1956.8 applicable to diesel or incomplete medium-duty vehicles with a GVWR from 8,501 to 14,000 pounds and, therefore, shall be subject to 13 CCR Section 2139(c) (in-use testing of engines certified for use in diesel or incomplete medium-duty vehicles with a 8,501-14,000 pound GVWR).

BE IT FURTHER RESOLVED: That the listed engine models have been certified to the Option 1 federal NMHC+NOx emission standard listed above pursuant to 13 CCR Section 1956.8.

BE IT FURTHER RESOLVED: That for the listed vehicle models, the manufacturer has submitted the materials to demonstrate certification compliance with 13 CCR Sections 1965 (emission control labels), 1968.1 (on-board diagnostic, full or partial compliance), 1976(b)(1)(B) and (C) {evaporative emission standards}, 2035 et seq. (emission control warranty), and 2235 [fill pipes and openings of motor vehicle fuel tanks]. (The braces {} } are for gasoline, LPG or alcohol fueled vehicles only.)

Vehicles 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 \_\_\_\_\_\_ day of December 2002.

Raphael Susnowith

Mobile Source Operations Division