California Environmental Protection Agency	VOLVO POWERTRAIN CORPORATION	EXECUTIVE ORDER A-242-0047		
		New On-Road Heavy-Duty Engines		

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

IT IS ORDERED AND RESOLVED: 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 SIZES (L)	FUEL TYPE	STANDARDS & TEST PROCEDURE	SERVICE	ECS & SPECIAL FEATURES EMISSIONS
2008	0)/DTL140.01100		Discol		CLASS	DDI, TC, CAC, ECM, EGR, PTOX
2008	8VPTH10.8H03	10.8	Diesel	Diesel	HHDD	30g
ENGINE (I	_)		ENGINE MODE	LS / CODES (rate	d power, in h	np)
10.8			See attachmen			
CNG/LN	IG=compressed/liquefied natu	-nous, ral gas; LPG≖liquefie		anol fuel; MF≃multi f		86.abc=Title 40, Code of Federal Regulations, Section 86.abc; bi fuel; DF=dual luel; FF=flexible fuel;

ECS=emission control system; TWC/OC=hree-way/coid zing catalyst; NAC=NOX adsorption catalyst; SCR-U / SCR-N=selective catalytic reduction – urea / -- ammonia; WU (prefix) =warmup catalyst; DPF=diese/ particulate filter; PTOX=periodic trap oxidizer; HO2S/O2S=heated/oxygen sensor; HAFS/AFS=heated/air-fuel-ratio sensor (a.k.a., universal or linear oxygen sensor); TBI=hrottle body fuel injection; SFI/MFI=sequential/multi port fuel injection; Del-direct gasoline injection; GCARB=gaseous carburetor; IDVDDI=indirect/direct diese/injection; TC/SC=turbo/ super charger; CAC=charge air cooler; EGR / EGR-c=exhaust gas recirculation / cooled EGR; PAIR/AIR=pulsed/secondary air injection; SPL=smoke puff limiter; ECM/PCM=engine/powertrain control module; EM=engine modification; 2 (prefix)=parallel; (2) (suffx)=in series;

ESS=engine shutdown system (per 13 CCR 1956.8(a)(6)(A)(1); 30g=30 g/hr NOx (per 13 CCR 1956.8(a)(6)(C); ALT=alternative method (per 13 CCR 1956.8(a)(6)(D); Exempt=exempted per 13 CCR 1956.8(a)(C); ALT=alternative method (per 13 CCR 1956.8(a)(6)(D); Exempt=exempted per 13 CCR 1956.8(a)(C); ALT=alternative method (per 13 CCR 1956.8(a)(6)(D); Exempt=exempted per 13 CCR 1956.8(a)(C); ALT=alternative method (per 13 CCR 1956.8(a)(C)); Exempt=exempted per 13 CCR 1956.8(a)(C); ALT=alternative method (per 13 CCR 1956.8(a)(C)); Exempt=exempted per 13 CCR 1956.8(a)(C); ALT=alternative method (per 13 CCR 1956.8(a)(C)); Exempt=exempted per 13 CCR 1956.8(a)(C); ALT=alternative method (per 13 CCR 1956.8(a)(C)); Exempt=exempted per 13 CCR 1956.8(a)(C); ALT=alternative method (per 13 CCR 1956.8(a)(C)); Exempt=exempted per 13 CCR 1956.8(a)(C); ALT=alternative method (per 13 CCR 1956.8(a)(C)); Exempt=exempted per 13 CCR 1956.8(a)(C); ALT=alternative method (per 13 CCR 1956.8(a)(C)); Exempt=exempted per 13 CCR 1956.8(a)(C); ALT=alternative method (per 13 CCR 1956.8(a)(C)); Exempt=exempted per 13 CCR 1956.8(a)(C); ALT=alternative method (per 13 CCR 1956.8(a)(C)); ALT=Alternative method (per 13 CCR 1956.8(a)(C)); Exempt=exempted per 13 CCR 1956.8(a)(C); ALT=Alternative method (per 13 CCR 1956.8(a)(C)); Alternative method (per 13 CCR 1956.8(a)(C)); A

Following are: 1) the FTP exhaust emission standards, or family emission limit(s) as applicable, under 13 CCR 1956.8; 2) the EURO and NTE limits under the applicable California exhaust emission standards and test procedures for heavyduty diesel engines and vehicles (Test Procedures); and 3) the corresponding certification levels, for this engine family. "Diese!" CO, EURO and NTE certification compliance may have been demonstrated by the manufacturer as provided under the applicable Test Procedures in lieu of testing. (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 1956.8 are in parentheses.).

in	NMHC		NOx		NMHC+NOx		со		PM		нсно	
g/bhp-hr	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO
STD	0.14	0.14	*			+	15.5	15.5	0.01	0.01		*
FEL	*	+	1.16	1.16	1.3	1.3		*	*	*	*	*
CERT	0.11	0.06	0.92	0.92	1.0	1.0	*	*	0.002	0.000	*	+
NTE	0.	21	1	.74		2.0	19	9.4	0.	02		*

g/bhp-hr=grams per brake horsepower-hour; FTP=Federal Test Procedure; EURO=Euro III European Steady-State Cycle, Including RMCSET=ram mode cycle supplemental emissions testing; NTE=Not-to-Exceed; STD=standard or emission test cap; FEL=family emission limit; CERT=certification level; NMHC/HC=non-methane/hydrocarbon; NOx=oxides of nitrogen; CO=carbon monoxide; PM=particulate matter; HCHO=formaldebyde;

**BE IT FURTHER RESOLVED:** 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**: Except in vehicle applications exempted per 13 CCR 1956.8(a)(6)(B), engines in this engine family certified under 13 CCR 1956.8(a)(6)(C) [30 g/hr NOX] and section 35.B.4 of the incorporated "California Exhaust Emissions Standards and Jest Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles" (HDDE Test Procedures) adopted Dec. 12, 2002, as last amended Sep. 1, 2006, shall be provided with an approved "Certified Clean Idle" label that shall be affixed to the vehicle into which the engine is installed.

BE IT FURTHER RESOLVED: The listed engine models have been certified to the split engine family standards under 13 CCR 1956.8(b) [diesel engines] or 13 CCR 1956.8(d) [Otto engines] and the incorporated 40 CFR 86.007-15(m)(9).

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

**BE IT FURTHER RESOLVED:** The listed engine models are conditionally certified pending final approval of "Certified Clean Idle" vehicle label. The manufacturer has until March 31, 2008 to resolve concerns on this conditional certification. This Executive Order is effective through March 31, 2008; engines produced after this date are not covered by this Executive Order.

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 Executive Order.

Executed at El Monte, California on this \_\_\_\_\_\_\_ day of February 2008.

Annette Hebert, Chief Mobile Source Operations Division

**Engine Model Summary Form** 

8.Fuel Rate: 9.Emission Control (lbs/hr)@peak torque Device Per SAE J1930 EM, EC, TC, CAC, **DDI,EGR,DPF** 8.Fuel Rate: 115.4 100.0 109.9 108.2 96.7 88.7 mm/stroke@peak 7.Fuel Rate: torque 317.8 297.9 275.4 302.5 266.3 244.3 6.Tongue @ RPM 1489 @ 1100 1387 @ 1100 1510 @ 1100 1367 @ 1100 224 @ 1100 1591 @ 1100 (SEA Gross) (Ibs/hr) @ peak HP (for diesels only) 5.Fuel Rate: 139.6 124.8 130.3 120.5 114.5 153.9 mm/stroke @ peak HP (for diesel only) 4.Fuel Rate: Volvo Powertrain North America, a division of 182.4 173.3 233.0 211.3 189.0 197.3 319 @ 2000 301 @ 2000 408 @ 2000 369 @ 2000 330 @ 2000 3.BHP@RPM (SAE Gross) 345 @ 2000 **On-highway HDDE New Submission** 8VPTH10.8H03 8VPTH10.8H03 2.Engine Model MP7-395C MP7-365C MP7-345C MP7-405M MP7-365M MP7-325M EPA Engine Family: Mfr Family Name: 1. Engine Code Engine category: Process Code: Manufacturer: AN A A A N N N A/A N/A

ATTACHMONT

A-242-0047