



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 ¹	STANDARDS & TEST PROCEDURE	INTENDED SERVICE CLASS ²	ECS & SPECIAL FEATURES ³	DIAGNOSTIC ⁶
2010	AVPTH10.8S01	10.8	Diesel	Diesel	HHDD	DDI, TC, CAC, ECM, EGR, OC, DPF, SCR, SPL	EMD
PRIMARY ENGINE'S IDLE EMISSIONS CONTROL ⁵		ADDITIONAL IDLE EMISSIONS CONTROL ⁵					
30g		N/A					
ENGINE (L)	ENGINE MODELS / CODES (rated power, in hp)						
10.8	See attachment for engine models and ratings (clean idle engines are labeled as 50-State compliant engines)						
<small> ¹ =not applicable; GVWR=gross vehicle weight rating; 13 CCR xyz=Title 13, California Code of Regulations, Section xyz; 40 CFR 86.abc=Title 40, Code of Federal Regulations, Section 86.abc; l=liter; hp=horsepower; kw=kilowatt; hr=hour; ² CNG/LNG=compressed/liquefied natural gas; LPG=liquefied petroleum gas; E85=85% ethanol fuel; MF=multi fuel a.k.a. BF=bi fuel; DF=dual fuel; FF=flexible fuel; ³ L/M/H HDD=light/medium/heavy heavy-duty diesel; UB=urban bus; HDO=heavy duty Otto; ⁴ ECS=emission control system; TWC/OC=three-way/oxidizing catalyst; NAC=NOx adsorption catalyst; SCR-U / SCR-N=selective catalytic reduction - urea / - ammonia; WU (prefix) =warm-up catalyst; DPF=diesel 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=throttle body fuel injection; SFI/MFI=sequential/multi port fuel injection; DGI=direct gasoline injection; GCARB=gaseous carburetor; IDI/DDI=indirect/direct diesel 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) (suffix)=in series; SCR = Selective Catalytic Reduction system ⁵ 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)); APS =internal combustion auxiliary power system; ALT=alternative method (per 13 CCR 1956.8(a)(6)(D)); Exempt=exempted per 13 CCR 1956.8(a)(6)(B) or for CNG/LNG fuel systems; N/A=not applicable (e.g., Otto engines and vehicles); ⁶ EMD=engine manufacturer diagnostic system (13 CCR 1971); OBD=on-board diagnostic system (13 CCR 1971.1); </small>							

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 heavy-duty diesel engines and vehicles (Test Procedures); and 3) the corresponding certification levels, for this engine family. "Diesel" 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 g/bhp-hr	NMHC		NOx		NMHC+NOx		CO		PM		HCHO	
	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO
STD	0.14	0.14	0.20	0.20	*	*	15.5	15.5	*	*	*	*
FEL	*	*	*	*	*	*	*	*	0.00	0.00	*	*
CERT	0.02	0.01	0.13	0.09	*	*	*	*	0.001	0.002	*	*
NTE	0.21		0.30		*		19.4		0.02		*	

⁴ g/bhp-hr=grams per brake horsepower-hour; FTP=Federal Test Procedure; EURO=Euro III European Steady-State Cycle, including RMCSET=ramp 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=formaldehyde;

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: 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).

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

This Executive Order hereby supersedes Executive Order A-242-0056 dated, November 9, 2009.

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

Executed at El Monte, California on this 17th day of December 2009.

Annette Hebert
for
Annette Hebert, Chief
Mobile Source Operations Division

Volvo Powertrain Corporation

ATTACHMENT

A-242-0056-1

Engine Family	1. Engine Code	2. Engine Model	3. BHP @ RPM (SAE Gross)		4. Fuel Rate: (for diesel only)		5. Fuel Rate: (for diesels only)		6. Torque @ RPM (SEA Gross)		7. Fuel Rate: mm ³ /stroke @ peak torque		8. Fuel Rate: (lbs/hr) @ peak torque		9. Emission Control Devices Per SAE J1930
			mm ³ /stroke @ peak HP	RPM	mm ³ /stroke @ peak HP	RPM	mm ³ /stroke @ peak torque	RPM	mm ³ /stroke @ peak torque	mm ³ /stroke @ peak torque	RPM	mm ³ /stroke @ peak torque	(lbs/hr) @ peak torque		
PTH10.8S01	N/A	MP7-325E	325 @ 1850	188.1	116.2	1282.0 @ 1200	241.3	96.7	1282.0 @ 1200	241.3	96.7	EM, EC, TC, CAC, DI, EGF			
PTH10.8S01	N/A	MP7-355E	355 @ 1800	212.4	127.6	1393.2 @ 1200	262.9	105.3	1393.2 @ 1200	262.9	105.3	EM, EC, TC, CAC, DI, EGF			
PTH10.8S01	N/A	MP7-405E	405 @ 1800	247.6	148.8	1492.6 @ 1200	282.5	113.2	1492.6 @ 1200	282.5	113.2	EM, EC, TC, CAC, DI, EGF			
PTH10.8S01	N/A	MP7-345C	345 @ 1500	236.2	118.3	1391.9 @ 1200	261.7	104.9	1391.9 @ 1200	261.7	104.9	EM, EC, TC, CAC, DI, EGF			
PTH10.8S01	N/A	MP7-365C	365 @ 1450	259.7	125.7	1491.0 @ 1200	280.8	112.5	1491.0 @ 1200	280.8	112.5	EM, EC, TC, CAC, DI, EGF			
PTH10.8S01	N/A	MP7-395C	395 @ 1500	274.7	137.6	1596.6 @ 1200	304.0	121.8	1596.6 @ 1200	304.0	121.8	EM, EC, TC, CAC, DI, EGF			
PTH10.1S01	N/A	MP7-325M	325 @ 1900	186.1	118.1	1215.3 @ 1200	228.5	91.6	1215.3 @ 1200	228.5	91.6	EM, EC, TC, CAC, DI, EGF			
PTH10.1S01	N/A	MP7-365M	365 @ 1900	211.7	134.3	1360.5 @ 1200	257.3	103.1	1360.5 @ 1200	257.3	103.1	EM, EC, TC, CAC, DI, EGF			
PTH10.1S01	N/A	MP7-405M	405 @ 1900	239.8	152.2	1512.6 @ 1200	286.2	114.7	1512.6 @ 1200	286.2	114.7	EM, EC, TC, CAC, DI, EGF			
PTH10.1S01	N/A	D11H-325	325 @ 1700	201.4	114.3	1235.6 @ 1050	234.7	82.3	1235.6 @ 1050	234.7	82.3	EM, EC, TC, CAC, DI, EGF			
PTH10.1S01	N/A	D11H-355	355 @ 1700	221.3	125.6	1228.5 @ 1050	235.2	82.5	1228.5 @ 1050	235.2	82.5	EM, EC, TC, CAC, DI, EGF			
PTH10.1S01	N/A	D11H-365	365 @ 1700	225.9	128.2	1379.4 @ 1100	260.9	95.8	1379.4 @ 1100	260.9	95.8	EM, EC, TC, CAC, DI, EGF			
PTH10.1S01	N/A	D11H-385	385 @ 1700	240.8	136.7	1508.0 @ 1200	284.3	113.9	1508.0 @ 1200	284.3	113.9	EM, EC, TC, CAC, DI, EGF			
PTH10.1S01	N/A	D11H-405	405 @ 1800	248.9	149.6	1493.6 @ 1200	284.1	113.8	1493.6 @ 1200	284.1	113.8	EM, EC, TC, CAC, DI, EGF			

Ric connects PM NTE