



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.

Table with columns: MODEL YEAR, ENGINE FAMILY, ENGINE SIZES (L), FUEL TYPE, STANDARDS & TEST PROCEDURE, INTENDED SERVICE CLASS, ECS & SPECIAL FEATURES, DIAGNOSTIC. Includes rows for 2012 CVPTH12.8S01 Diesel engine and emission control details.

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.

Table with columns: in g/bhp-hr, NMHC, NOx, NMHC+NOx, CO, PM, HCHO. Rows include STD, FEL, CERT, and NTE values for various pollutants.

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.

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 Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles" adopted Dec. 12, 2002, as last amended Sep. 27, 2010, 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: For the listed engine models the manufacturer has submitted the materials to demonstrate certification compliance with 13 CCR 1965 (emission control labels), 13 CCR 1971 (engine manufacturer diagnostic) and 13 CCR 2035 et seq. (emission control warranty).

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 23 day of December 2011.

Signature of Annette Hebert, Chief, Mobile Source Operations Division

Vulvo Powertrain Co.

ATTACHMENT 1 OF 2

A-242-0068

12/15/11

Engine Model Summary Template

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP(lbs/hr) (for diesel only)	5.Fuel Rate: @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke @peak torque	8.Fuel Rate: (lbs/hr) @peak torque	9.Emission Control Device Per SAE J1930
CVPTH12.8S01	50 State	D13H - 500	500 @ 1700	307.5	174.5	1812 @ 1050	336.8	118.1	TC, CAC, EGR, DDI, ECM, DOC, PTOX, SCR, AMOX
CVPTH12.8S01	50 State	D13H - 475	475 @ 1800	279.7	168.1	1734 @ 1050	324.6	113.8	TC, CAC, EGR, DDI, ECM, DOC, PTOX, SCR, AMOX
CVPTH12.8S01	50 State	D13H - 455	455 @ 1700	277.0	157.0	1761 @ 1050	329.0	115.0	TC, CAC, EGR, DDI, ECM, DOC, PTOX, SCR, AMOX
CVPTH12.8S01	50 State	D13H - 435	435 @ 1700	286.7	162.7	1711 @ 1050	317.8	111.4	TC, CAC, EGR, DDI, ECM, DOC, PTOX, SCR, AMOX
CVPTH12.8S01	50 State	D13H - 425	425 @ 1700	273.2	155.1	1600 @ 1050	297.7	104.4	TC, CAC, EGR, DDI, ECM, DOC, PTOX, SCR, AMOX
CVPTH12.8S01	50 State	D13H - 425	425 @ 1700	258.8	146.9	1807 @ 1050	340.4	119.3	TC, CAC, EGR, DDI, ECM, DOC, PTOX, SCR, AMOX
CVPTH12.8S01	50 State	D13H - 405	405 @ 1700	250.2	142.0	1508 @ 1000	278.1	92.9	TC, CAC, EGR, DDI, ECM, DOC, PTOX, SCR, AMOX
CVPTH12.8S01	50 State	D13H - 405	405 @ 1700	246.2	139.8	1732 @ 1050	326.8	114.6	TC, CAC, EGR, DDI, ECM, DOC, PTOX, SCR, AMOX
CVPTH12.8S01	50 State	D13H - 375	375 @ 1700	236.7	134.4	1506 @ 1000	277.6	92.7	TC, CAC, EGR, DDI, ECM, DOC, PTOX, SCR, AMOX
CVPTH12.8S01	50 State	D13H - 500P	500 @ 1700	298.9	169.7	1765 @ 1050	328.3	115.1	TC, CAC, EGR, DDI, ECM, DOC, PTOX, SCR, AMOX
CVPTH12.8S01	50 State	D13H - 435P	435 @ 1700	268.4	152.3	1727 @ 1050	321.3	112.6	TC, CAC, EGR, DDI, ECM, DOC, PTOX, SCR, AMOX
CVPTH12.8S01	50 State	MP8 - 505E	505 @ 1700	308.2	174.9	1824 @ 1100	340.3	125.0	TC, CAC, EGR, DDI, ECM, DOC, PTOX, SCR, AMOX
CVPTH12.8S01	50 State	MP8 - 445E	445 @ 1700	286.0	162.3	1780 @ 1100	330.4	121.3	TC, CAC, EGR, DDI, ECM, DOC, PTOX, SCR, AMOX
CVPTH12.8S01	50 State	MP8 - 415E	415 @ 1700	266.9	151.5	1702 @ 1100	314.4	115.5	TC, CAC, EGR, DDI, ECM, DOC, PTOX, SCR, AMOX
CVPTH12.8S01	50 State	MP8 - 505C	505 @ 1500	341.9	171.3	1824 @ 1100	336.2	123.5	TC, CAC, EGR, DDI, ECM, DOC, PTOX, SCR, AMOX
CVPTH12.8S01	50 State	MP8 - 445C	445 @ 1500	311.3	155.9	1780 @ 1100	330.4	121.3	TC, CAC, EGR, DDI, ECM, DOC, PTOX, SCR, AMOX

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CVPTH12.8S01	50 State	MP8 - 415C	415 @ 1500	290.1	145.3	1702 @ 1100	314.4	115.5	TC, CAC, EGR, DDI, ECM, DOC, PTOX, SCR, AMOX
CVPTH12.8S01	50 State	MP8 - 505M	505 @ 1700	309.2	175.5	1837 @ 1100	340.7	125.1	TC, CAC, EGR, DDI, ECM, DOC, PTOX, SCR, AMOX
CVPTH12.8S01	50 State	MP8 - 455M	455 @ 1700	282.1	160.2	1715 @ 1100	317.9	116.8	TC, CAC, EGR, DDI, ECM, DOC, PTOX, SCR, AMOX
CVPTH12.8S01	50 State	MP8 - 425M	425 @ 1700	274.1	155.6	1602 @ 1100	296.6	109.0	TC, CAC, EGR, DDI, ECM, DOC, PTOX, SCR, AMOX