EXHAUST EMISSION DATA SHEET

MQ POWER GENERATOR SET



Model: DCA600SSV

The engine used in this generator set is certified to comply with United States EPA Tier 2 and CARB Mobile Off-Highway emission regulations.

ENGINE DATA

Manufacturer: **VOLVO** Bore: 5.67 in. (144 mm) Model: TAD1642GE Stroke: 6.50 in. (165 mm) Type: 4-Cycle Diesel, In-Line, 6-Cylinder Displacement: 984 cid (16.1 liters) Aspiration: Turbocharged, Air-To-Air Intercooler, ECM 16.5:1 Compression Ratio:

PERFORMANCE DATA

SAE Gross HP @ 1800 RPM (60 Hz) 809
Rated Load Fuel Consumption (gal/Hr) 33.1
Rated Load Exhaust Gas Flow (cfm) 4153
Rated Load Exhaust Gas Temperature (°F) 954

United States EPA - Mobile Off-Highway Tier 2 Limits - >751 BHP							
Criteria Pollutant	Emission Requirements	Certified Engine Emissions					
NOx (Oxides of Nitrogen as NO2)	4.77 gr/bhp-hr	4.03 gr/bhp-hr					
HC (Total Unburned Hydrocarbons)	(NOx + HC)* Combined	(NOx + HC)* Combined					
CO (Carbon Monoxide)	2.61 gr/bhp-hr	0.52 gr/bhp-hr					
PM (Particulate Matter)	0.15 gr/bhp-hr	0.07 gr/bhp-hr					

EPA Engine Family: 8VPXL16.1ACB
EPA Certificate of Conformance: VPX-NRCI-08-04
ARB Executive Order: U-R-014-0102
Effective Date: Model Year 2008

Note: Engine operation with excessive air intake or exhaust restriction beyond factory published maximum limits, or with improper service maintenance, may result in higher emission levels.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460

2008 Model Year Certificate of Conformity

NOx:

Manufacturer:

AB VOLVO PENTA

Engine Family:

8VPXL16.1ACB

Certificate Number:

Intended Service Class:

VPX-NRCI-08-04 NR 8 (450-560)

Fuel Type:

DIESEL

FELs:

RPRESIDENT

NMHC+NOx: 6.0

PM: 0.17

Effective Date: Date Issued:

8/20/2007 AUG **2 0** 2007

Karl J. Simon, Dhector

Compliance and Innovative Strategies Division

Office of Transportation and Air Quality

Pursuant to Section 213 of the Clean Air Act (42 U.S.C. section 7547) and 40 CFR Part 89, and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which have been found to conform to applicable requirements and which represent the following nonroad engines, by engine family, more fully described in the documentation required by 40 CFR 89 and produced in the stated model year.

This certificate of conformity covers only those nonroad compression-ignition engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Part 89 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Part 89.

This certificate of conformity is conditional upon compliance of said manufacturer with the averaging, banking and trading provisions of 40 CFR Part 89, Subpart C. Failure to comply with these provisions may render this certificate void ab initio.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 89.129-96 and 89.506-96 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to a revocation or suspension of this certificate for reasons specified in 40 CFR Part 89. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void ab initio for other reasons specified in 40 CFR Part 89.

This certificate does not cover nonroad engines sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate.



AB VOLVO PENTA

EXECUTIVE ORDER U-R-014-0102 New Off-Road Compression-Ignition Engines

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Şafety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engines and emission control system produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)		
2008	8VPXL16.1ACB	16.12	Diesel	8000		
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS		TYPICAL EQUIPMENT APPLICATION				
Direct Diesel Injection, Turbocharger, Charge Air Cooler, Engine Control Module			Generator			

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for hydrocarbon (HC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kW-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED POWER CLASS	EMISSION STANDARD CATEGORY	EXHAUST (g/kW-hr)				OPACITY (%)				
			нс	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
kW > 560	Tier 2	STD	N/A	N/A	6.4	3.5	0.20	N/A	N/A	N/A
		FEL	_	-	6.0	-	0.17	-	-	-
		CERT	-	-	5.4	0.7	0.10	_	-	-

BE IT FURTHER RESOLVED: That the family emission limit(s) (FEL) is an emission level declared by the manufacturer for use in any averaging, banking and trading program and in lieu of an emission standard for certification. It serves as the applicable emission standard for determining compliance of any engine within this engine family under 13 CCR Sections 2423 and 2427.

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

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

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this ______ day of December 2007.

Annette Hebert, Chief

Mobile Source Operations Division