

EXHAUST EMISSION DATA SHEET

MQ POWER GENERATOR SET

Model: MQP600VO



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:	TWD1643GE	Stroke:	6.50 in	165 mm
Type:	4-Cycle Diesel, Direct Injection, I-6	Displacement:	984 in ³	16.12 liters
Aspiration:	Turbocharger, Charge Air Cooled, ECM	Compression Ratio:	16.5:1	

PERFORMANCE DATA

SAE Gross HP @ 1800 RPM (60 Hz)	903
Rated Load Fuel Consumption (gal/Hr)	40.8
Rated Load Exhaust Gas Flow (cfm)	4593
Rated Load Exhaust Gas Temperature (F)	862

United States EPA - Mobile Off-Highway Tier 2 Limits - ≥751 BHP

Criteria Pollutant	Emission Requirements	Certified Engine Emissions
NOx (Oxides of Nitrogen as NO ₂)	4.77 gr/bhp-hr	4.10 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:	8VPXL16.1ACW
EPA Certificate of Conformance:	VPX-NRCI-08-03
ARB Executive Order:	U-R-014-0104
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.

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety 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	8VPXL16.1ACW	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 (%)		
			HC	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	-	-	-	-	0.15	-	-	-
		CERT	-	-	5.5	0.7	0.09	-	-	-

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.

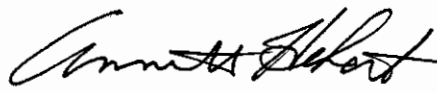
BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

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.

This Executive Order hereby cancels and replaces Executive Order U-R-014-0104 dated December 21, 2007.

Executed at El Monte, California on this 8 day of January 2008.


 Annette Hebert, Chief
 Mobile Source Operations Division

Engine Model Summary Form

Manufacturer: AB Volvo Penta
Engine category: Nonroad CI
EPA Engine Family: 8VPXL16.1ACW
Mfr Family Name: TWD1643GE
Process Code: New Submission

Attachment 1 of 1

U-R-014-0164-f

1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ 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
1	TWD1643GE	903@1800	500	NA	3576	NA	NA	DDI CACTC ECM
2	TWD1643GE	821@1500	535	NA	3903	NA	NA	↓ ↓ ↓ ↓