EXHAUST EMISSION DATA SHEET

MQ POWER INDUSTRIAL GENERATOR SET

Model: MQP550V



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 | | | | | | | |
|--|---|--|---|----------------|----------------------------------|--|--------------------|
| | /OLVO | | | Bore: | 5.67 in | 144 mm | |
| Model: | AD1641GE | | | | Stroke: | 6.50 in | 165 mm |
| Туре: | I-Cycle Diesel | , Direc | t Injection, I-6 | | Displacement | : 984 in ³ | 16.12 liters |
| Aspiration: | Turbocharger, | Charg | e Air Cooled, E | CM | Compression | 16.5:1 | |
| PERFORMANCE DATA | <u>\</u> | | | | | | |
| SAE Gross HP @ 1800 RPM (60 Hz) 809 | | | | | | | |
| Rated Load Fuel Consumption (gal/Hr) 33.1 | | | | | | | |
| | Rated Load Exhaust Gas Flow (cfm) 4153 | | | | | | |
| • | w (cfm) | | 4153 | 3 | | | |
| • | . , | | 4153 954 | - | | | |
| Rated Load Exhaust Gas Flo Rated Load Exhaust Gas Ter | nperature (F) | - M | | | Tier 2 Limit | s - >751 | BHP |
| Rated Load Exhaust Gas Flo Rated Load Exhaust Gas Ter | nperature (F) States EPA | | 954 | ghway | - | s - >751 d Engine E | |
| Rated Load Exhaust Gas Flo Rated Load Exhaust Gas Ter United S | nperature (F) States EPA | | 954 obile Off-Hig | ghway | - | | missions |
| Rated Load Exhaust Gas Flo Rated Load Exhaust Gas Ter United S Criteria Pollutant | NO2) | Emis : 4.77 | 954 obile Off-Hig sion Requirem | ghway nents | Certifie 4.03 | d Engine E | missions |
| Rated Load Exhaust Gas Flo Rated Load Exhaust Gas Ter United S Criteria Pollutant NOx (Oxides of Nitrogen as N | ND2) rbons) | Emis : 4.77 | 954 obile Off-Hig sion Requirem gr/bhp-hr | ghway nents | Certifie 4.03 | d Engine E gr/bhp-hr | missions mbined |
| Rated Load Exhaust Gas Flo Rated Load Exhaust Gas Ter United S Criteria Pollutant NOx (Oxides of Nitrogen as N HC (Total Unburned Hydroca | NO2) rbons) | Emis: 4.77 (NO) | 954 obile Off-Hig sion Requirem gr/bhp-hr < + HC)* Comb | ghway nents | Certifie 4.03 (NOx | d Engine E gr/bhp-hr + HC)* Cor | missions mbined |
| Rated Load Exhaust Gas Flo Rated Load Exhaust Gas Ter United S Criteria Pollutant NOx (Oxides of Nitrogen as N HC (Total Unburned Hydroca CO (Carbon Monoxide) | ND2) rbons) | Emis: 4.77 (NO» 2.61 0.15 | 954 obile Off-Hig sion Requirem gr/bhp-hr < + HC)* Comb gr/bhp-hr | ghway nents | Certifie 4.03 (NOx 0.52 | d Engine E gr/bhp-hr + HC)* Cor gr/bhp-hr | missions mbined |
| Rated Load Exhaust Gas Flo Rated Load Exhaust Gas Ter United S Criteria Pollutant NOx (Oxides of Nitrogen as N HC (Total Unburned Hydroca CO (Carbon Monoxide) PM (Particulate Matter) | NO2) rbons) | Emis: 4.77 (NO) 2.61 0.15 PXL16 | 954 obile Off-Hig sion Requirem gr/bhp-hr gr/bhp-hr gr/bhp-hr | ghway nents | Certifie 4.03 (NOx 0.52 | d Engine E gr/bhp-hr + HC)* Cor gr/bhp-hr | missions mbined |
| Rated Load Exhaust Gas Flo Rated Load Exhaust Gas Ter United S Criteria Pollutant NOx (Oxides of Nitrogen as N HC (Total Unburned Hydroca CO (Carbon Monoxide) PM (Particulate Matter) EPA Engine Family: | NO2) rbons) NO2: rbons) 8VF nce: VP2 | Emis: 4.77 (NO) 2.61 0.15 PXL16 | 954 obile Off-Hig sion Requirem gr/bhp-hr gr/bhp-hr gr/bhp-hr .1ACB Cl-08-04 | ghway nents | Certifie 4.03 (NOx 0.52 | d Engine E gr/bhp-hr + HC)* Cor gr/bhp-hr | missions mbined |

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 | 8VPXL16.1ACB | 16.12 | Diesel | 8000 | | |
| | FEATURES & EMISSION | | TYPICAL EQUIPMENT APPLICATION | | | |
| Direct Dies | el Injection, Turbocharg Engine Control Mo | er, Charge Air Cooler, odule | 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 | EMISSION | | EXHAUST (g/kW-hr) OPACITY (% | | | | | | | |
|-------------|----------------------|------|------------------------------|-----|----------|-----|------|-------|-----|------|
| CLASS | STANDARD CATEGORY | | нс | NOx | NMHC+NOx | со | РМ | 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.

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Annette Hebert, Chief Mobile Source Operations Division

Engine Model Summary Form

Manufacturer:AB Volvo PentaEngine category:Nonroad ClEPA Engine Family:8VPXL16.1ACBMfr Family Name:TAD 164XGEProcess Code:New Submission

Attachment 1 of 1 U-R-014-0102

| 1 TAD1642GE 809@1800 404 2388 NA NA ECM, CAC, TC Dp1 2 TAD1641GE 757@1800 374 2230 NA NA J J J | 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 | |
|--|---------------|----------------|--------------------------|--|--|-------------------------------|--|--------------------------------------|--|-----|
| 2 TAD1641GE 757@1800 374 2230 NA NA J J J | | > TAD1642GE | 809@1800 | 404 | | 2388 | NA | – NA | ECM, CAC, TC, | DDI |
| | 2 | TAD1641GE | 757@1800 | 374 | | 2230 | NA | NA | V V V | Į |