



# West Virginia Diesel Commission

## ISO Test and Extrapolation For .12 mg/m<sup>3</sup>

(Insert DPM Calculations Here)

Example:

- MSHA Approved Engine No. 07-ENA040007 Deutz BF 4M 1013 FC
- 157 Horsepower@2200 RPM
- Ventilation Plate Quantity – 6500 CFM (186.06m<sup>3</sup>/min)
- DMM output – 4.88 gr/hr
- Filter Efficiency rating - 87%

The following equation will be used to solve for the ambient DPM level

$$\text{Ambient DPM level} = \text{DPM}_{\text{avg}} = \frac{PT}{V_{\text{Vent plate}}}$$

PT = Average DPM Level

$$PT = \frac{4.88g}{\text{hour}}$$

$$\frac{4.88g}{\text{hour}} \times \frac{1000g}{1g} \times \frac{1\text{hour}}{60\text{min}} = 81.33 \text{ mg/min}$$

Solve for DPM Level:

$$81.33 \text{ mg/min} - 87\% (\text{filter efficiency}) = \text{g/min}$$

$$10.57 \text{ g/m} \div 184.06\text{m} = \mathbf{.057\text{mg/m}^3}$$



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Insert Engine ISO 8-mode Test Sheet Here: