

# **Diesel Particulate Filters for Large Stationary Engines**

March 2011

# DPF Validation



Co-ordinate  
Measurement  
Machine  
Dimensional



Ultrasonic  
Crack/Flaw



Flow  
Restriction Test  
(Permeability)



Dilution Tunnel  
Efficiency

100% Inspection

# DPF Systems for Stationary Engines

- 375-5,000 kW
- > 85% PM efficiency (gravimetric)
- >99% PM efficiency (particle count)
- 90% CO efficiency
- 80% HC efficiency



# Individual DPF Elements

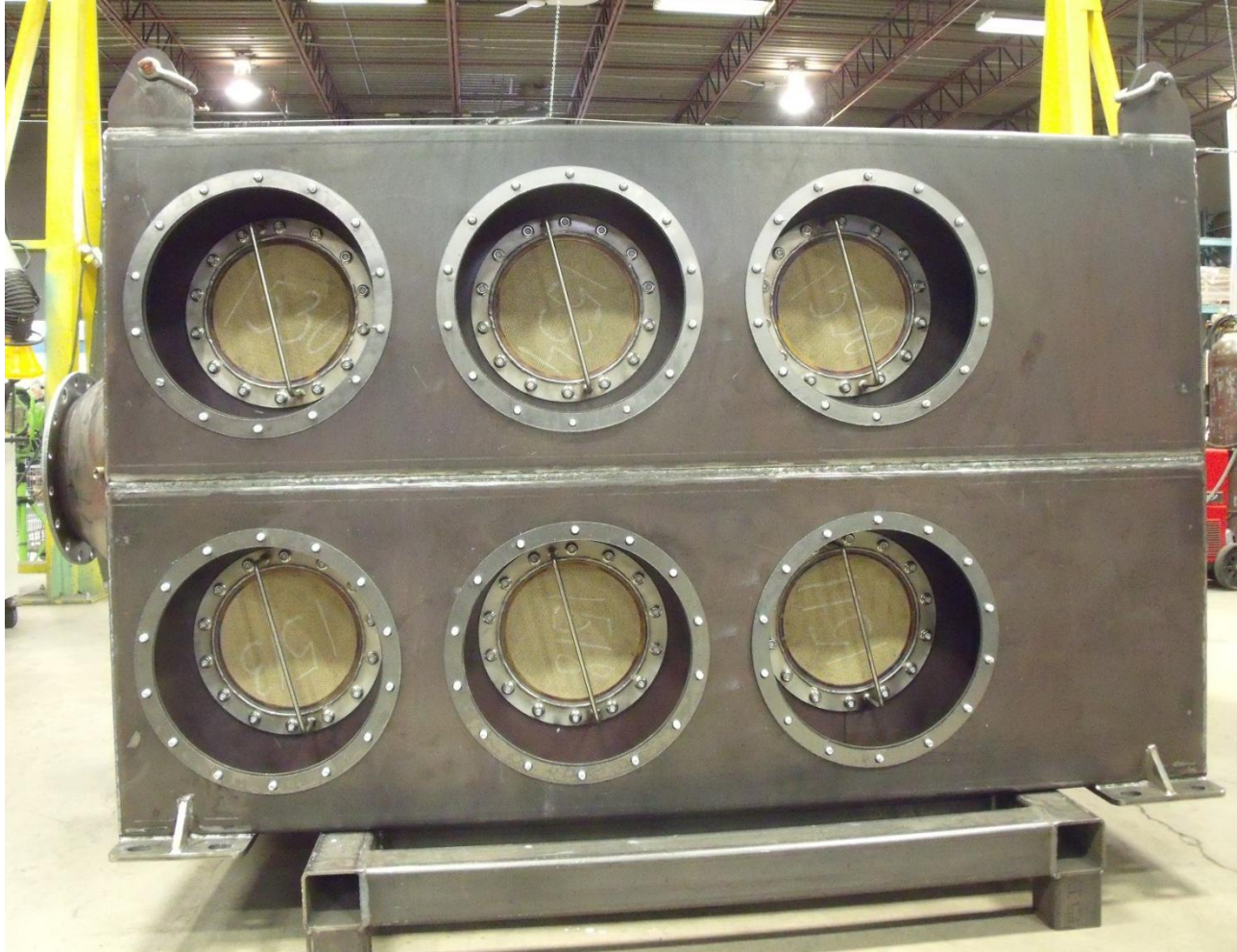


Cordierite  
Wall Flow  
Filter

Brazed  
Metal  
Pre-Filter



# Installed DPF Elements



# Empty Housing





# DPF Element Installation

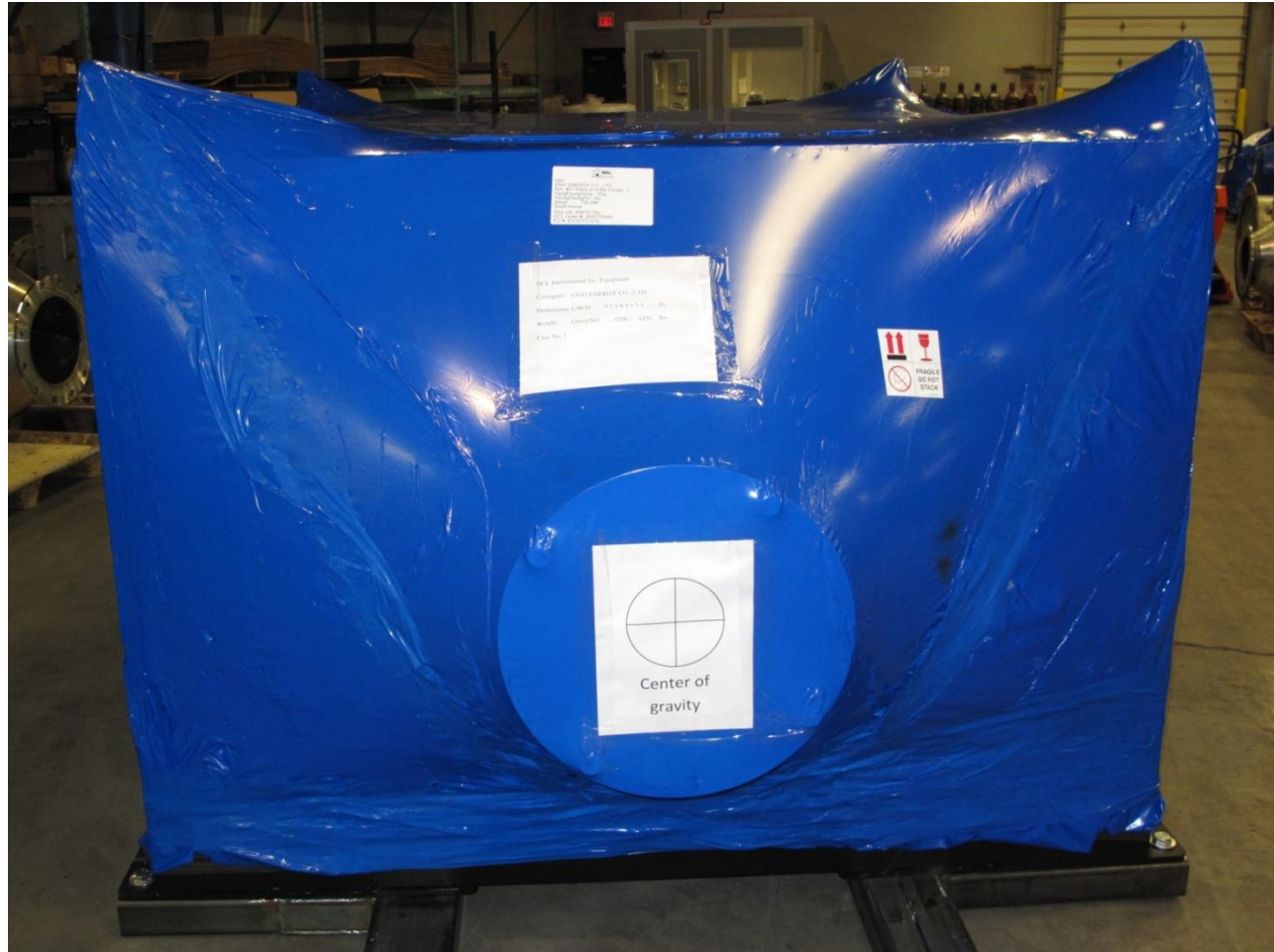


# Installed Cover Plates





# Packaged for Shipment



# Caterpillar XQ1000 Standby Generator

8-DCF 4.9 MINE-X  
SOOTFILTER® Caterpillar 3508B  
Engine – 1502hp



# Mitsubishi Genset

16-DLT 4.9 MINE-XSOOTFILTER®  
Mitsubishi S16R-PTA Engine –  
2200hp



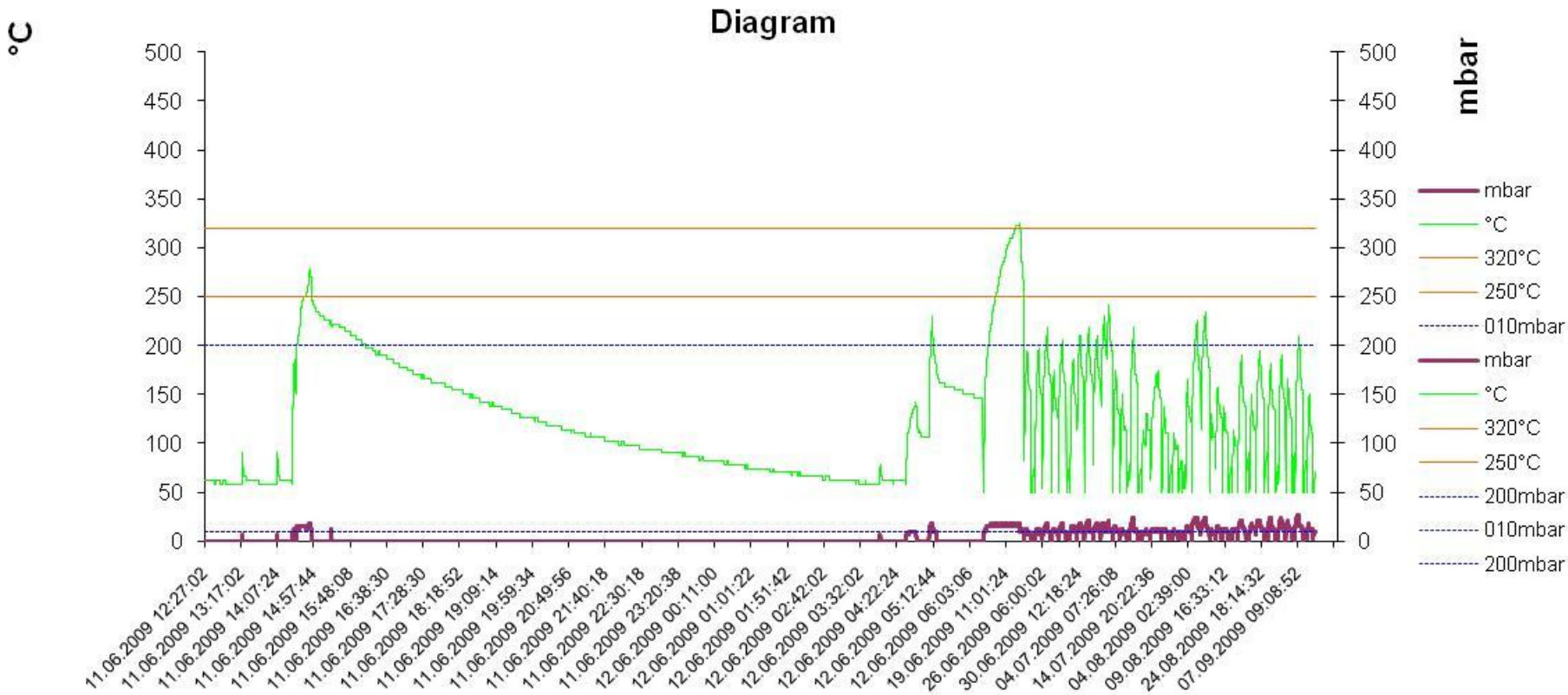


# Monitoring System



- Provides operator the visual status of DPF
- Meets CARB/EPA/VERT data monitoring standards
- Records pressure and temperature data >1000 hour memory (at 10 s interval)
- Modbus / SAE J1939 protocol compatible

# Mitsubishi Genset Initial 25 Hours



# DPF Validation



Verminderung der Emissionen  
von Realmaschinen im  
Tunnelbau



United States EPA



California Air Resources Board



**MLIT**

Ministry of Land, Infrastructure, Transport and Tourism

Japan MLIT

