OMD Technical Note TN62003

Graviner Mk6 Oil Mist Detector System Maintenance Schedule

This maintenance schedule is a guide only as every engine is different in its usage, oil, temperature, scrubber performance etc.

WEEKLY:

- Note the Trend Peak and Maximum levels of Detectors
- Record maximum actual engine average and peak level for each detector head.
  -> From Mk6 Control Panel press the Main Menu button
  -> Engineer Mode (Code 012345)
  -> 2. System Status
  -> 1. Engine
  -> Select the required engine (Record maximum actual level)

  -> 2. Detector
  -> 2. Detector Status
  -> Select the required engine
  -> Select the required detector-> (Record Peak Levels).
  See attached spreadsheet example.

- After recording engine maximum actual level & detector peak levels, clear maximum average (engine average) and detector peak readings. This will ensure reliable and accurate status of the engine and detector data.

  -> From the Mk6 Control Panel press the Main Menu button
  -> Enter Engineer Mode (Code 012345)
  -> 1. Configuration System
  -> 7. Clr Max Average

  -> 8. Clr Peak & Avg

  The maximum average and detector peak readings should be cleared after weekly trending, monthly alarm testing and smoke test of vital alarms.

MONTHLY:
(TEST PROCEDURE SHOULD BE DONE WITH NO LOAD ON THE ENGINE).

- Perform Smoke Test at each Detector using the push-in smoke test connector and Graviner Smoke Test kit.

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(See Graviner Mk6 IOM Manual for smoke testing procedure)

TWICE PER YEAR:
(TEST PROCEDURE SHOULD BE DONE WITH NO LOAD ON THE ENGINE).

- Verify all vital and non-vital alarm functions at Mk6 Control panel function correctly.
  -> From the Mk6 Control Panel press the Main Menu button.
  -> Enter Engineer Mode (012345)
  -> 4. Test Mode
  -> 1. Alarm Relay

  -> 2. Fault Relay

  -> 8. Slowdown Relay (The engine slowdown relay should only be tested when the shutdown of an engine would not affect the ships operation.)

- Refer to the Graviner Mk6 IOM Manual for proper Detector Head readings, removal, cleaning and refitting. Ensure Detector Heads & Detector base O-Ring seals are properly fitted with Molykote O-Ring Lubricant.

  -> From the Mk6 Control Panel press the Main Menu Button.
  -> Enter the Engineer Mode (Code 012345)
  -> 3. Isolate
  -> 1. Engine - Isolate each engine in turn
  -> Clean all Detector Heads.

CLEAR MAXIMUM AVERAGES & PEAK DEVIATION AVERAGE LEVELS AFTER TEST PROCEDURES.

ANNUAL :

Graviner Authorised Service Engineer to perform complete system inspection.

- Verify all Graviner Mk6 System Functions.
- Perform laptop Parameter Diagnostics.
- Record Oscilloscope communication line readings
- Review and record Event log history
- Clean Detector heads and Detector base Assemblies and renew base O-Rings.
- Verify cable terminations and earthing.
- Perform all vital and non-vital alarm functions

- Review C/E trending Report (see below - GRAVINER Mk6 OIL MIST DETECTOR SYSTEM WEEKLY PEAK & MAXIMUM AVERAGE READINGS)
- Upgrade software to current versions
- Upgrade Detector heads or hardware if required
- Load current manual on Control room computer
- Instruct crew on Mk6 procedures & System operation.

RECOMMENDED ONBOARD SPARES

(REQUIRED FOR ROUTINE MAINTENACE & TROUBLESHOOTNG)

Quantity	Part Number	Description
1	1-D9221-026	Commissioning Kit
1	1-D9221-027	Service Kit
1	1-44782-K183X	Interface Board – non GL
	or	
	1-44782-K183	Interface Board – GL version
1	1-44782-K071-02	Main Control Processor Board[1]
	or	
	1-43782-K178	Main Control Processor Board + LCD[1]
1	1-D5622-001	Detector Head Assembly
1	1-43682-K108-08	Detector Cable 25m – Straight Connector
	or	
	1-43682-K109-08	Detector Cable 25m – 90^{o} Connector

For systems with more than 14 detectors, it is recommended that additional detector head assemblies (Part Number 1-D5622-001) are supplied.

1 – Refer to Technical Note TN62001 to determine the required part.

If you have additional questions please contact OMD Technical Support email:
technical@emsgroup.co.uk

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GRAVINER Mk6 OIL MIST DETECTOR SYSTEM WEEKLY PEAK & MAXIMUM AVERAGE READINGS

Engine

Detector Address										
Location										
Date	Detector Peak Level	Detector Peak Level	Detector Peak Level	Detector Peak Level	Detector Peak Level	Detector Peak Level	Detector Peak Level	Detector Peak Level	Detector Peak Level	Engine Maximum Actual Average Level

AFTER RECORDING CLEAR ALL PEAK & MAXIMUM AVERAGE READINGS.

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APPENDIX 1 - EXAMPLE SHEET

Engine	Diesel Generator No.1

Detector Address	11	12	13	14						
Location	Cyl. 1	Cyl. 3	Cyl. 5	Cyl. 9						
Date	Detector Peak Level	Detector Peak Level	Detector Peak Level	Detector Peak Level	Detector Peak Level	Detector Peak Level	Detector Peak Level	Detector Peak Level	Detector Peak Level	Engine Maximum Actual Average Level
15/06/20	0.3	0.4	0.2	0.3						0.26
22/06/20	0.4	0.4	0.3	0.5						0.30
29/06/20	0.6	0.5	0.6	0.5						0.47
06/07/20	0.2	0.1	0.2	0.2						0.15

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