


<b>EQUIPMENT VIBRATION ANALYSIS</b> <b>Utility Area C1</b> <b>Atlas copco compressor Model No: ZR 500</b> <b>40-460-KC-001F</b>	b1	
	Issue A	

DOCUMENT TITLE

**EQUIPMENT VIBRATION ANALYSIS**  
**Utility Area C1**  
**Atlas copco compressor Model No: ZR 500**  
**40-460-KC-001F**

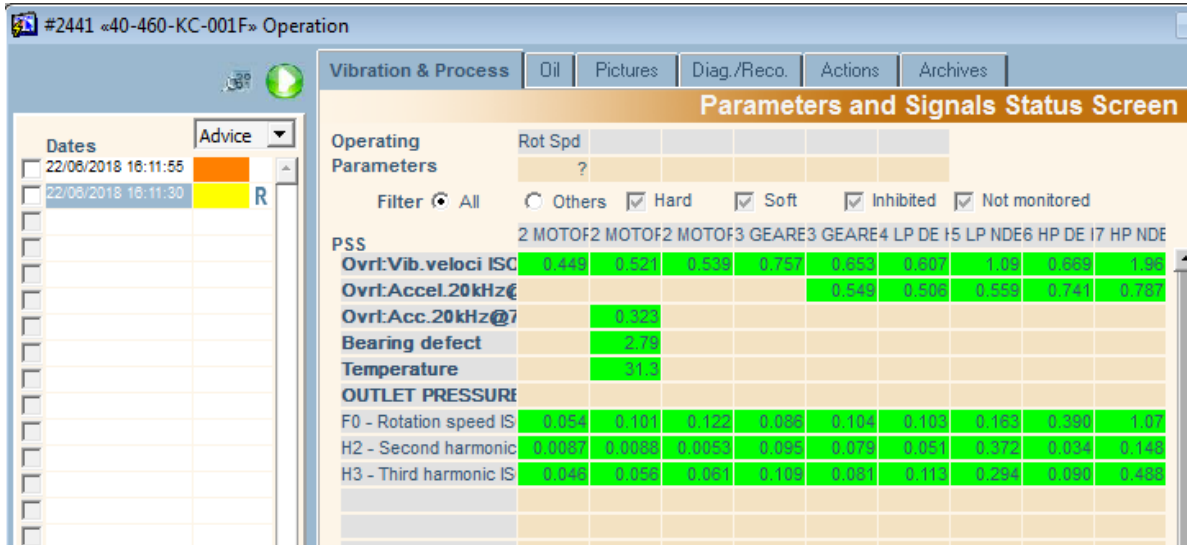
COMMENT

Compressor found running with high noise and vibrations comparing with other compressor , specially at the High stage when running full load , compressor test run without load performed & it did not detect any abnormal behavior (running normal when no load )  
we recommend to keep in Emergency Case ( to not use the compressor only in a case of emergency) , unless we get the missing documents for this compressor, to compare the allowable noise level with other compressor & to compare vibrations alarm Thresholds.

VISA

Written by	Approved by	State	Date
CBM Team	CBM SPV		05/07/2018 06:01:40

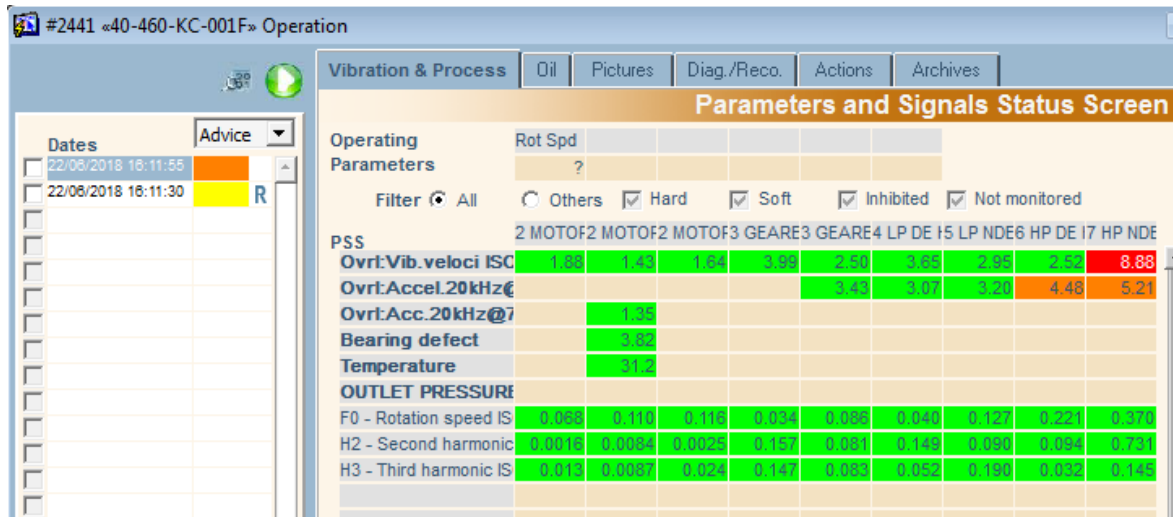
Below are vibration table taken during compressor running no load 22-6-2018



**Parameters and Signals Status Screen**

Operating Parameters	Rot Spd								
Filter: All <input type="radio"/> Others <input checked="" type="checkbox"/> Hard <input checked="" type="checkbox"/> Soft <input checked="" type="checkbox"/> Inhibited <input checked="" type="checkbox"/> Not monitored									
PSS 2 MOTOF2 MOTOF2 MOTOF3 GEARE3 GEARE4 LP DE I5 LP NDE6 HP DE I7 HP NDE									
Ovrt:Vib.veloci ISC	0.448	0.521	0.528	0.757	0.653	0.607	1.08	0.668	1.98
Ovrt:Accel.20kHz@7		0.323			0.542	0.505	0.555	0.741	0.787
Bearing defect		3.78							
Temperature		31.3							
<b>OUTLET PRESSURE</b>									
F0 - Rotation speed IS	0.054	0.101	0.122	0.085	0.104	0.103	0.163	0.280	1.07
H2 - Second harmonic	0.0087	0.0085	0.0053	0.005	0.075	0.051	0.372	0.034	0.145
H3 - Third harmonic IS	0.048	0.055	0.081	0.109	0.081	0.113	0.294	0.080	0.488

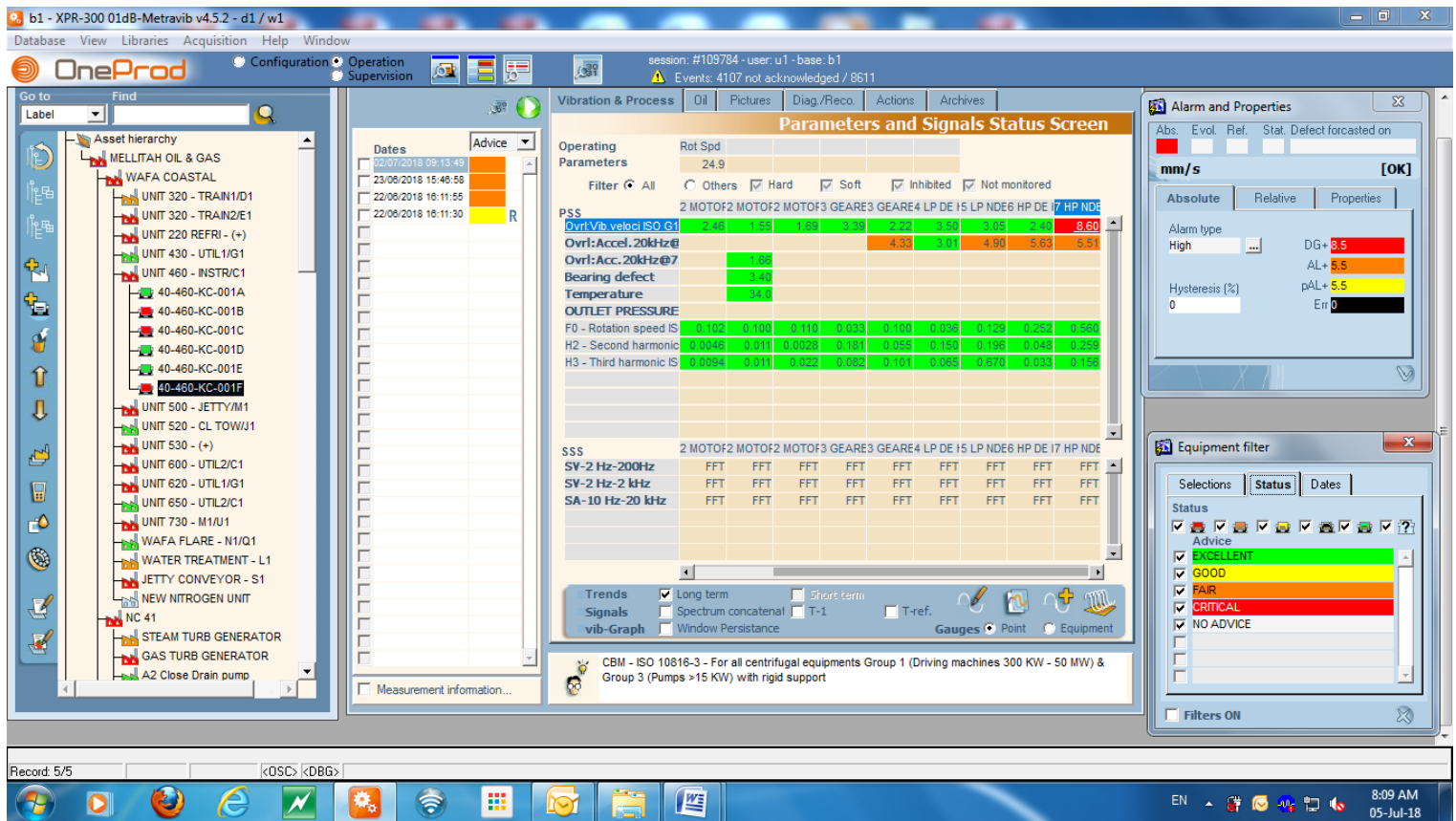
Below are vibration table taken during compressor running with load



**Parameters and Signals Status Screen**

Operating Parameters	Rot Spd								
Filter: All <input type="radio"/> Others <input checked="" type="checkbox"/> Hard <input checked="" type="checkbox"/> Soft <input checked="" type="checkbox"/> Inhibited <input checked="" type="checkbox"/> Not monitored									
PSS 2 MOTOF2 MOTOF2 MOTOF3 GEARE3 GEARE4 LP DE I5 LP NDE6 HP DE I7 HP NDE									
Ovrt:Vib.veloci ISC	1.85	1.43	1.64	3.89	2.50	3.85	2.95	2.52	8.88
Ovrt:Accel.20kHz@7		1.35			3.42	3.07	3.20	4.48	5.21
Bearing defect		3.82							
Temperature		31.3							
<b>OUTLET PRESSURE</b>									
F0 - Rotation speed IS	0.085	0.110	0.110	0.024	0.088	0.040	0.127	0.221	0.370
H2 - Second harmonic	0.0018	0.0024	0.0025	0.157	0.081	0.149	0.090	0.094	0.731
H3 - Third harmonic IS	0.013	0.0087	0.024	0.147	0.083	0.052	0.180	0.032	0.145

Below are vibration table taken during compressor running with full load 2/7/2018



The screenshot displays the OneProd software interface for equipment vibration analysis. The main window is titled "Parameters and Signals Status Screen" and shows the following data:

Operating Parameters	Rot Spd											
Rot Spd	24.9											
Filter: All    Others    Hard    Soft    Inhibited    Not monitored												
PSS	2	MOTOF2	MOTOF2	MOTOF3	GEARE3	GEARE4	LP DE	15 LP	NDE6	HP DE	7 HP	NDE
Ovrt:Vib.velocI ISO G1	3.62	3.14	3.14	3.14	3.14	3.14	3.14	3.14	3.14	3.14	3.14	3.60
Ovrt:Accel.20kHz@					4.35			4.90	5.63	5.51		
Ovrt:Acc.20kHz@7												
Bearing defect												
Temperature												
OUTLET PRESSURE												
F0 - Rotation speed IS	3.14	3.14	3.14	3.14	3.14	3.14	3.14	3.14	3.14	3.14	3.14	3.14
H2 - Second harmonic	3.14	3.14	3.14	3.14	3.14	3.14	3.14	3.14	3.14	3.14	3.14	3.14
H3 - Third harmonic IS	3.14	3.14	3.14	3.14	3.14	3.14	3.14	3.14	3.14	3.14	3.14	3.14
SSS												
SV-2 Hz-200Hz	FFT	FFT	FFT	FFT	FFT	FFT	FFT	FFT	FFT	FFT	FFT	FFT
SV-2 Hz-2 kHz	FFT	FFT	FFT	FFT	FFT	FFT	FFT	FFT	FFT	FFT	FFT	FFT
SA-10 Hz-20 kHz	FFT	FFT	FFT	FFT	FFT	FFT	FFT	FFT	FFT	FFT	FFT	FFT

The interface also includes an "Alarm and Properties" panel on the right, showing a "High" alarm type with a value of 8.5 mm/s, and an "Equipment filter" panel with various status options like EXCELLENT, GOOD, FAIR, and CRITICAL.


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## Expertise Report

Filter: Equipment name (+) \ Tree order (+)

Location	<b>MELLITAH OIL &amp; GASIWafa COASTALUNIT 460 - INSTR/C1\</b>			Stationary speed																					
Designation	UTILITY 2 - INSTRUMENT AIR SYSTEM - U460																								
Equipment	40-460-KC-001F																								
Designation	Air screw compressor																								
Abbreviation																									
Serial No																									
Model	ATLAS COPCO																								
Periodicity (d)	Normal 60	Alarm 15																							
PW:598 KW RPM:1495EM;3620LP Male;2413LP Female;5792HP Male;3861HP Female;14562LP Pulse;23298HP Pulse Hz:24.9EM;60.6LP Male;40.45LP Female;97HP Male;64.7HP Female;242.7LP Pulse;388.3HP Pulse GMF:2912.5Hz H: 10 m Male 4 lobes Female 6 lobes Screw Compress																									
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:20%;"></th> <th style="width:15%;">Previous Advice</th> <th style="width:15%;">Condition</th> <th colspan="2" style="width:50%;">Rotation Speed</th> </tr> </thead> <tbody> <tr> <td>23/06/2018 15:46:58</td> <td style="background-color: #FFD700;">FAIR</td> <td>DfCnd</td> <td>24.9 Hz</td> <td>1494 rpm</td> </tr> <tr> <td>22/06/2018 16:11:55</td> <td style="background-color: #FFD700;">FAIR</td> <td>DfCnd</td> <td>24.9 Hz</td> <td>1494 rpm</td> </tr> <tr> <td>22/06/2018 16:11:30</td> <td style="background-color: #90EE90;">GOOD</td> <td>DfCnd</td> <td>24.9 Hz</td> <td>1494 rpm</td> </tr> </tbody> </table>							Previous Advice	Condition	Rotation Speed		23/06/2018 15:46:58	FAIR	DfCnd	24.9 Hz	1494 rpm	22/06/2018 16:11:55	FAIR	DfCnd	24.9 Hz	1494 rpm	22/06/2018 16:11:30	GOOD	DfCnd	24.9 Hz	1494 rpm
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23/06/2018 15:46:58	FAIR	DfCnd	24.9 Hz	1494 rpm																					
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22/06/2018 16:11:30	GOOD	DfCnd	24.9 Hz	1494 rpm																					
Date	FAIR			Speed 24.9 Hz / 1494 rpm																					
02/07/2018 09:13:49	Health is not acceptable for a long time service.			Author u1 System - Serial Movipack - 13108EEX Sensor Model ASH201-EX; SN:7193 Connector CAT1340 CE																					
Condition	DfCnd																								
<b>Diagnosis &amp; Recommendation</b>			<b>Parameters sheet</b>																						
<b>Diagnosis</b>																									
still high vibration and noisy																									
still high vibration and noisy at the HS																									
<b>Recommendations</b>																									
recommrndations from vendor																									
To provide us with the missing documents for this compressor to compare the allowable noise level with other compressor & to compare vibrations alarm Thresholds																									

## Analysis Report

Filter: Equipment name (+) \ Tree order (+)      Alarm type: Danger \ Alarm \ Ok

### MELLITAH OIL & GASWAF COASTAL\UNIT 460 - INSTR/C1\

40-460-KC-001F	Selected Date 02/07/2018 09:13:49	Speed 24.9 Hz / 1494 rpm
	Author u1	Connector CAT1340 CE
	System - Serial No Movipack - 13108EEX	Sensor Model ASH201-EX; SN:7193

u1 :																	
Operating param.	1	H/S	Last Date	Value	Unit	T-1	Ref.	Avg									
Ovrl:Rotation speed	Rot Spd	Hard	02/07/2018 09:13:49	24.9	Hz												
PROCESS PARAMETER		H/S	Last Date	Value	Unit	T-1	Ref.	Avg	Oper.	AlmTyp	DG-	AL-	pA-	pA+	AL+	DG+	Err
1 MOTOR NDE O	6	H/S	Last Date	Value	Unit	T-1	Ref.	Avg	Oper.	AlmTyp	DG-	AL-	pA-	pA+	AL+	DG+	Err
Ovrl:Vib.veloci ISO G1&3 Centr R	OL VEL	Hard	02/07/2018 09:13:49	0.915	mm/s	0.547	0.521	0.680	DfCnd	High	0	0	5.5	5.5	5.5	8.5	0
Ovrl:Acc.20kHz@ 750-1500rpm Centr	OL ACC	Hard	02/07/2018 09:13:49	0.570	g	0.159	0.177	0.289	DfCnd	High	0	0	2	2	2	4	0
Bearing defect	BRG DEF	Hard	02/07/2018 09:13:49	2.82	DEF	2.38	2.67	2.60	DfCnd	High	0	0	6	6	6	9	0
F0 - Rotation speed ISO G1&3	F0	Soft	02/07/2018 09:13:49	0.241	mm/s	0.217	0.207	0.226	DfCnd	High	0	0	5.5	5.5	5.5	8.5	0
H2 - Second harmonic ISO G1&3	H2	Soft	02/07/2018 09:13:49	0.011	mm/s	0.024	0.024	0.019	DfCnd	High	0	0	2.5	2.5	2.5	4	0
H3 - Third harmonic ISO G1&3	H3	Soft	02/07/2018 09:13:49	0.040	mm/s	0.062	0.073	0.054	DfCnd	High	0	0	2.5	2.5	2.5	4	0
2 MOTOR DE A Ovrl:Vib.veloci ISO G1&3 Centr R	4 OL VEL	Hard	02/07/2018 09:13:49	2.46	mm/s	0.448	0.449	0.927	DfCnd	High	0	0	5.5	5.5	5.5	8.5	0
F0 - Rotation speed ISO G1&3	F0	Soft	02/07/2018 09:13:49	0.102	mm/s	0.058	0.054	0.060	DfCnd	High	0	0	5.5	5.5	5.5	8.5	0
H2 - Second harmonic ISO G1&3	H2	Soft	02/07/2018 09:13:49	0.0046	mm/s	0.012	0.0087	0.0076	DfCnd	High	0	0	2.5	2.5	2.5	4	0
H3 - Third harmonic ISO G1&3	H3	Soft	02/07/2018 09:13:49	0.0094	mm/s	0.042	0.046	0.034	DfCnd	High	0	0	2.5	2.5	2.5	4	0
2 MOTOR DE H Ovrl:Vib.veloci ISO G1&3 Centr R	7 OL VEL	Hard	02/07/2018 09:13:49	1.55	mm/s	0.519	0.521	0.824	DfCnd	High	0	0	5.5	5.5	5.5	8.5	0
Ovrl:Acc.20kHz@ 750-1500rpm Centr	OL ACC	Hard	02/07/2018 09:13:49	1.66	g	0.273	0.323	0.647	DfCnd	High	0	0	2	2	2	4	0

**MELLITAH OIL & GASIWAF**  
**COASTAL\UNIT 460 - INSTR/C1\**

<b>40-460-KC-001F</b>	<i>Selected Date</i> 02/07/2018 09:13:49	<i>Speed</i> 24.9 Hz / 1494 rpm	
	<i>Author</i> u1	<i>Connector</i> CAT1340 CE	
	<i>System - Serial No</i> Movipack - 13108EEX	<i>Sensor</i> Model ASH201-EX; SN:7193	

u1 :

Bearing defect	BRG DEF	Hard	02/07/2018 09:13:49	3.40DEF	2.81	2.79	3.14	DfCnd	High	0	0	6	6	6	9	0	
Temperature	TEMP	Hard	02/07/2018 09:13:49	34.0°C	27.6	31.3	30.0	DfCnd	High	0	0	70	70	70	90	0	
F0 - Rotation speed ISO G1&3	F0	Soft	02/07/2018 09:13:49	0.100mm/s	0.115	0.101	0.109	DfCnd	High	0	0	5.5	5.5	5.5	8.5	0	
H2 - Second harmonic ISO G1&3	H2	Soft	02/07/2018 09:13:49	0.011mm/s	0.0036	0.0088	0.0070	DfCnd	High	0	0	2.5	2.5	2.5	4	0	
H3 - Third harmonic ISO G1&3	H3	Soft	02/07/2018 09:13:49	0.011mm/s	0.053	0.056	0.039	DfCnd	High	0	0	2.5	2.5	2.5	4	0	
2 MOTOR DE V OvrI:Vib.veloci ISO G1&3 Centr R	4 OL VEL	H/S	<i>Last Date</i> 02/07/2018 09:13:49	<i>Value</i> 1.69mm/s	<i>Unit</i>	<i>T-1</i> 1.64	<i>Ref.</i> 0.539	<i>Avg</i> 1.09	<i>Oper.</i> DfCnd	<i>AlmTyp</i> High	<i>DG-</i> 0	<i>AL-</i> 0	<i>pA-</i> 5.5	<i>pA+</i> 5.5	<i>AL+</i> 5.5	<i>DG+</i> 8.5	<i>Err</i> 0
F0 - Rotation speed ISO G1&3	F0	Soft	02/07/2018 09:13:49	0.110mm/s		0.116	0.122	0.119	DfCnd	High	0	0	5.5	5.5	5.5	8.5	0
H2 - Second harmonic ISO G1&3	H2	Soft	02/07/2018 09:13:49	0.0028mm/s		0.0025	0.0053	0.0039	DfCnd	High	0	0	2.5	2.5	2.5	4	0
H3 - Third harmonic ISO G1&3	H3	Soft	02/07/2018 09:13:49	0.022mm/s		0.024	0.061	0.043	DfCnd	High	0	0	2.5	2.5	2.5	4	0
3 GEARBOX DE A OvrI:Vib.veloci ISO G1&3 Centr R	4 OL VEL	H/S	<i>Last Date</i> 02/07/2018 09:13:49	<i>Value</i> 3.39mm/s	<i>Unit</i>	<i>T-1</i> 0.848	<i>Ref.</i> 0.757	<i>Avg</i> 1.87	<i>Oper.</i> DfCnd	<i>AlmTyp</i> High	<i>DG-</i> 0	<i>AL-</i> 0	<i>pA-</i> 5.5	<i>pA+</i> 5.5	<i>AL+</i> 5.5	<i>DG+</i> 8.5	<i>Err</i> 0
F0 - Rotation speed ISO G1&3	F0	Soft	02/07/2018 09:13:49	0.033mm/s		0.065	0.086	0.062	DfCnd	High	0	0	5.5	5.5	5.5	8.5	0
H2 - Second harmonic ISO G1&3	H2	Soft	02/07/2018 09:13:49	0.181mm/s		0.051	0.095	0.101	DfCnd	High	0	0	2.5	2.5	2.5	4	0
H3 - Third harmonic ISO G1&3	H3	Soft	02/07/2018 09:13:49	0.082mm/s		0.145	0.109	0.134	DfCnd	High	0	0	2.5	2.5	2.5	4	0
3 GEARBOX DE H OvrI:Vib.veloci ISO G1&3 Centr R	5 OL VEL	H/S	<i>Last Date</i> 02/07/2018 09:13:49	<i>Value</i> 2.22mm/s	<i>Unit</i>	<i>T-1</i> 0.680	<i>Ref.</i> 0.653	<i>Avg</i> 1.28	<i>Oper.</i> DfCnd	<i>AlmTyp</i> High	<i>DG-</i> 0	<i>AL-</i> 0	<i>pA-</i> 5.5	<i>pA+</i> 5.5	<i>AL+</i> 5.5	<i>DG+</i> 8.5	<i>Err</i> 0
OvrI:Accel.20kHz @3000rpm Centr	OL ACC	Hard	02/07/2018 09:13:49	4.33g		0.577	0.549	1.52	DfCnd	High	0	0	4	4	4	6	0

**MELLITAH OIL & GASIWAF**  
**COASTAL\UNIT 460 - INSTR/C1\**

<b>40-460-KC-001F</b>	<i>Selected Date</i> <b>02/07/2018 09:13:49</b>	<i>Speed</i> <b>24.9 Hz / 1494 rpm</b>
	<i>Author</i> <b>u1</b>	<i>Connector</i> <b>CAT1340 CE</b>
	<i>System - Serial No</i> <b>Movipack - 13108EEX</b>	<i>Sensor</i> <b>Model ASH201-EX; SN:7193</b>

u1 :																
F0 - Rotation speed ISO G1&3	F0	Soft	02/07/2018 09:13:49	0.100mm/s	0.142	0.104	0.111	DfCnd	High	0	0	5.5	5.5	5.5	8.5	0
H2 - Second harmonic ISO G1&3	H2	Soft	02/07/2018 09:13:49	0.055mm/s	0.067	0.079	0.076	DfCnd	High	0	0	2.5	2.5	2.5	4	0
H3 - Third harmonic ISO G1&3	H3	Soft	02/07/2018 09:13:49	0.101mm/s	0.072	0.081	0.078	DfCnd	High	0	0	2.5	2.5	2.5	4	0
4 LP DE H Ovr:Vib.veloci ISO G1&3 Centr R	5	H/S	<i>Last Date</i>	<i>Value</i> <i>Unit</i>	<i>T-1</i>	<i>Ref.</i>	<i>Avg</i>	<i>Oper.</i>	<i>AlmTyp</i>	<i>DG-</i>	<i>AL-</i>	<i>pA-</i>	<i>pA+</i>	<i>AL+</i>	<i>DG+</i>	<i>Err</i>
	OL VEL	Hard	02/07/2018 09:13:49	3.50mm/s	0.551	0.607	1.60	DfCnd	High	0	0	5.5	5.5	5.5	8.5	0
Ovr:Accel.20kHz @3000rpm Centr	OL ACC	Hard	02/07/2018 09:13:49	3.01g	0.407	0.506	1.33	DfCnd	High	0	0	4	4	4	6	0
F0 - Rotation speed ISO G1&3	F0	Soft	02/07/2018 09:13:49	0.036mm/s	0.081	0.103	0.075	DfCnd	High	0	0	5.5	5.5	5.5	8.5	0
H2 - Second harmonic ISO G1&3	H2	Soft	02/07/2018 09:13:49	0.150mm/s	0.042	0.051	0.081	DfCnd	High	0	0	2.5	2.5	2.5	4	0
H3 - Third harmonic ISO G1&3	H3	Soft	02/07/2018 09:13:49	0.065mm/s	0.097	0.113	0.087	DfCnd	High	0	0	2.5	2.5	2.5	4	0
5 LP NDE H Ovr:Vib.veloci ISO G1&3 Centr R	5	H/S	<i>Last Date</i>	<i>Value</i> <i>Unit</i>	<i>T-1</i>	<i>Ref.</i>	<i>Avg</i>	<i>Oper.</i>	<i>AlmTyp</i>	<i>DG-</i>	<i>AL-</i>	<i>pA-</i>	<i>pA+</i>	<i>AL+</i>	<i>DG+</i>	<i>Err</i>
	OL VEL	Hard	02/07/2018 09:13:49	3.05mm/s	1.48	1.09	1.84	DfCnd	High	0	0	5.5	5.5	5.5	8.5	0
Ovr:Accel.20kHz @3000rpm Centr	OL ACC	Hard	02/07/2018 09:13:49	4.90g	0.305	0.559	1.35	DfCnd	High	0	0	4	4	4	6	0
F0 - Rotation speed ISO G1&3	F0	Soft	02/07/2018 09:13:49	0.129mm/s	0.118	0.163	0.136	DfCnd	High	0	0	5.5	5.5	5.5	8.5	0
H2 - Second harmonic ISO G1&3	H2	Soft	02/07/2018 09:13:49	0.196mm/s	0.244	0.372	0.235	DfCnd	High	0	0	2.5	2.5	2.5	4	0
H3 - Third harmonic ISO G1&3	H3	Soft	02/07/2018 09:13:49	0.670mm/s	0.212	0.294	0.232	DfCnd	High	0	0	2.5	2.5	2.5	4	0
6 HP DE H Ovr:Vib.veloci ISO G1&3 Centr R	5	H/S	<i>Last Date</i>	<i>Value</i> <i>Unit</i>	<i>T-1</i>	<i>Ref.</i>	<i>Avg</i>	<i>Oper.</i>	<i>AlmTyp</i>	<i>DG-</i>	<i>AL-</i>	<i>pA-</i>	<i>pA+</i>	<i>AL+</i>	<i>DG+</i>	<i>Err</i>
	OL VEL	Hard	02/07/2018 09:13:49	2.40mm/s	0.704	0.669	1.30	DfCnd	High	0	0	5.5	5.5	5.5	8.5	0
Ovr:Accel.20kHz @3000rpm Centr	OL ACC	Hard	02/07/2018 09:13:49	5.63g	0.658	0.741	1.96	DfCnd	High	0	0	4	4	4	6	0



**MELLITAH OIL & GASWAF**  
**COASTAL\UNIT 460 - INSTR/C1\**

<b>40-460-KC-001F</b>	<i>Selected Date</i> <b>02/07/2018 09:13:49</b>	<i>Speed</i> <b>24.9 Hz / 1494 rpm</b>
	<i>Author</i> <b>u1</b>	<i>Connector</i> <b>CAT1340 CE</b>
	<i>System - Serial No</i> <b>Movipack - 13108EEX</b>	<i>Sensor</i> <b>Model ASH201-EX; SN:7193</b>

**u1 :**

F0 - Rotation speed ISO G1&3	F0	Soft	02/07/2018 09:13:49	0.252mm/s	0.366	0.390	0.326	DfCnd	High	0	0	5.5	5.5	5.5	8.5	0	
H2 - Second harmonic ISO G1&3	H2	Soft	02/07/2018 09:13:49	0.048mm/s	0.053	0.034	0.060	DfCnd	High	0	0	2.5	2.5	2.5	4	0	
H3 - Third harmonic ISO G1&3	H3	Soft	02/07/2018 09:13:49	0.033mm/s	0.098	0.090	0.073	DfCnd	High	0	0	2.5	2.5	2.5	4	0	
<b>7 HP NDE H OvrI:Vib.veloci ISO G1&amp;3 Centr R</b>	<b>5 OL VEL</b>	<b>H/S Hard</b>	<b>Last Date 02/07/2018 09:13:49</b>	<b>Value 8.60</b> mm/s	<b>Unit</b>	<b>T-1 1.91</b>	<b>Ref. 1.96</b>	<b>Avg 4.25</b>	<b>Oper. DfCnd</b>	<b>AlmTyp High</b>	<b>DG- 0</b>	<b>AL- 0</b>	<b>pA- 5.5</b>	<b>pA+ 5.5</b>	<b>AL+ 5.5</b>	<b>DG+ 8.5</b>	<b>Err 0</b>
<b>OvrI:Accel.20kHz @3000rpm Centr</b>	<b>OL ACC</b>	<b>Hard</b>	<b>02/07/2018 09:13:49</b>	<b>5.51</b> g		<b>0.627</b>	<b>0.787</b>	<b>2.21</b>	<b>DfCnd</b>	<b>High</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>6</b>	<b>0</b>
F0 - Rotation speed ISO G1&3	F0	Soft	02/07/2018 09:13:49	0.560mm/s	1.17	1.07	0.868	DfCnd	High	0	0	5.5	5.5	5.5	8.5	0	
H2 - Second harmonic ISO G1&3	H2	Soft	02/07/2018 09:13:49	0.259mm/s	0.193	0.148	0.357	DfCnd	High	0	0	2.5	2.5	2.5	4	0	
H3 - Third harmonic ISO G1&3	H3	Soft	02/07/2018 09:13:49	0.156mm/s	0.359	0.488	0.330	DfCnd	High	0	0	2.5	2.5	2.5	4	0	