



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**2MW Compressor 1st Stage Oil Cooler**  
 Component  
**Centrifugal Compressor**  
 Fluid  
**SHELL TELLUS 32 (1000 LTR)**

## RECOMMENDATION

Resample at the next service interval to monitor. ( Customer Sample  
 Comment: Yearly oil sample test 2MW stage 1 )

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0943220</b>	WC0361079	WC586118
Sample Date		Client Info		<b>28 May 2024</b>	12 May 2021	07 Oct 2003
Machine Age	yrs	Client Info		<b>0</b>	0	0
Oil Age	yrs	Client Info		<b>0</b>	0	0
Filter Age	yrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	N/A	Not Changd
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>50	<b>&lt;1</b>	<1	13
Chromium	ppm	ASTM D5185(m)	>10	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m)		<b>0</b>	0	0
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)		<b>0</b>	<1	<1
Aluminum	ppm	ASTM D5185(m)	>25	<b>0</b>	0	<1
Lead	ppm	ASTM D5185(m)	>25	<b>2</b>	3	235
Copper	ppm	ASTM D5185(m)	>50	<b>16</b>	16	6
Tin	ppm	ASTM D5185(m)	>15	<b>&lt;1</b>	<1	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

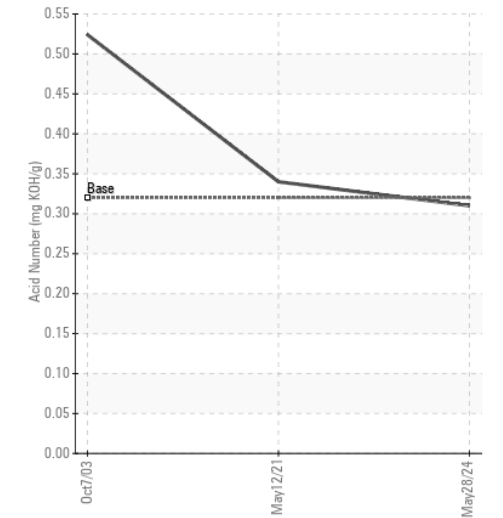
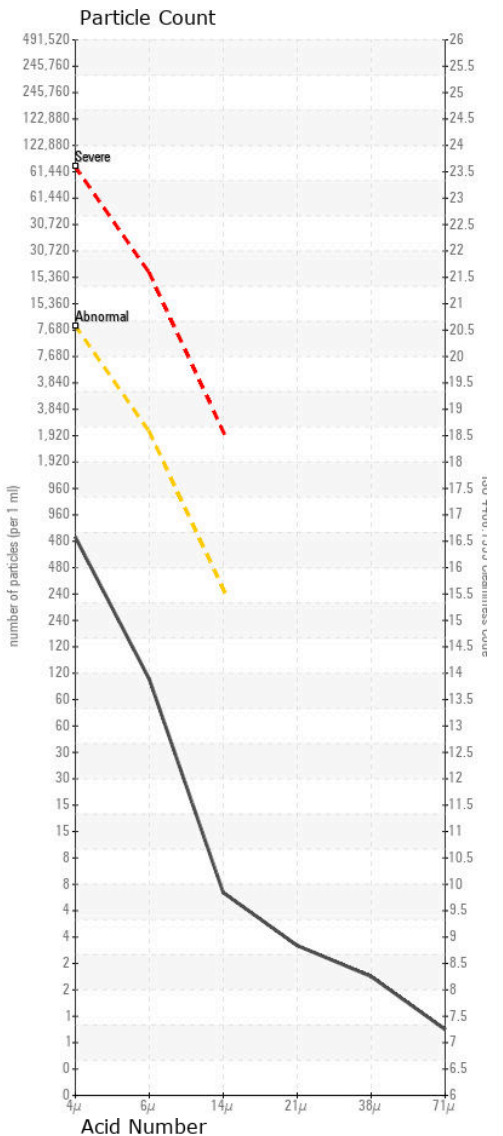
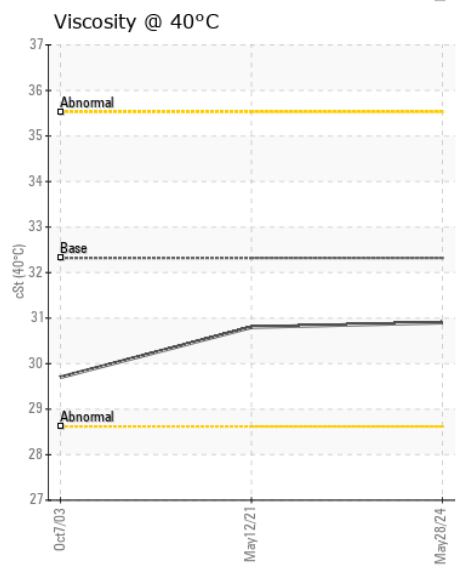
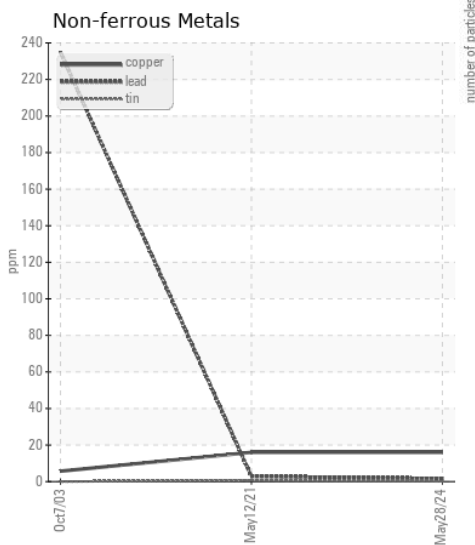
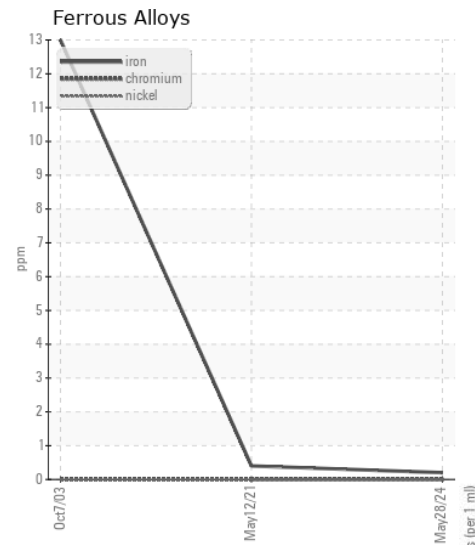
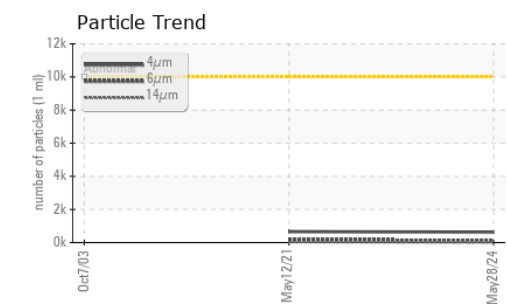
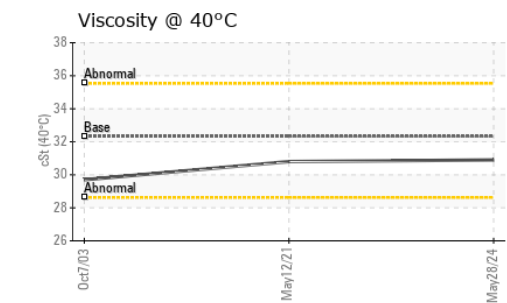
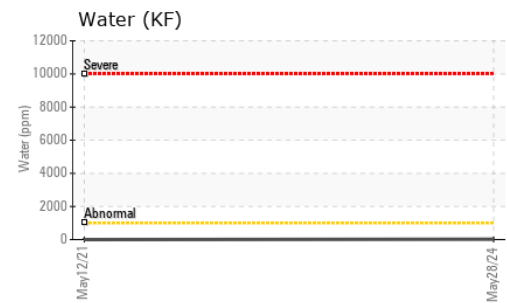
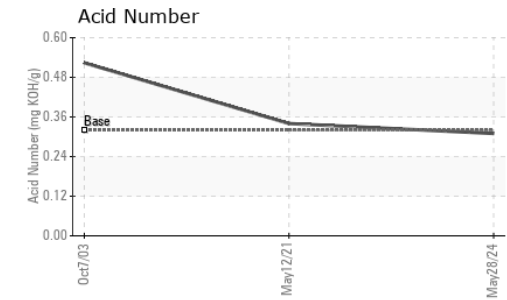
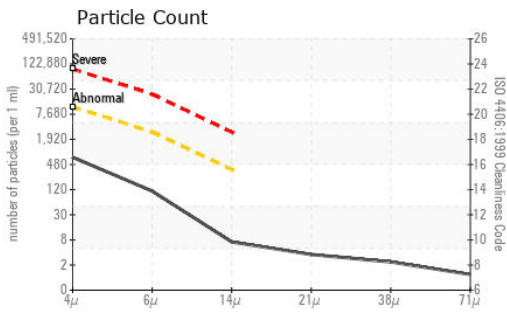
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The water content is negligible. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185(m)	>25	<b>2</b>	4	8
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	0
Water	%	ASTM D6304*	>0.1	<b>0.002</b>	---	---
ppm Water	ppm	ASTM D6304*	>1000	<b>23</b>	---	---
Particles >4µm		ASTM D7647	>10000	<b>629</b>	661	---
Particles >6µm		ASTM D7647	>2500	<b>98</b>	187	---
Particles >14µm		ASTM D7647	>320	<b>6</b>	29	---
Particles >21µm		ASTM D7647	>80	<b>3</b>	8	---
Particles >38µm		ASTM D7647	>20	<b>2</b>	2	---
Particles >71µm		ASTM D7647	>4	<b>1</b>	0	---
Oil Cleanliness		ISO 4406 (c)	>20/18/15	<b>16/14/10</b>	17/15/12	---
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	Visual*	NONE	<b>NONE</b>	NONE	VLITE
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185(m)		<b>0</b>	<1	4
Boron	ppm	ASTM D5185(m)		<b>0</b>	<1	166
Barium	ppm	ASTM D5185(m)		<b>0</b>	<1	<1
Molybdenum	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Manganese	ppm	ASTM D5185(m)		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	11	<b>1</b>	1	<1
Calcium	ppm	ASTM D5185(m)	35	<b>37</b>	38	6
Phosphorus	ppm	ASTM D5185(m)	259	<b>294</b>	296	940
Zinc	ppm	ASTM D5185(m)	277	<b>333</b>	358	5
Sulfur	ppm	ASTM D5185(m)	1865	<b>2221</b>	2626	14844
Acid Number (AN)	mg KOH/g	ASTM D974*	0.32	<b>0.31</b>	0.34	0.524
Visc @ 40°C	cSt	ASTM D7279(m)	32.32	<b>30.9</b>	30.8	29.7



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0943220  
**Lab Number** : 02638882  
**Unique Number** : 5788044  
**Test Package** : IND 2 ( Additional Tests: KF )

**Received** : 30 May 2024  
**Tested** : 04 Jun 2024  
**Diagnosed** : 04 Jun 2024 - Kevin Marson

To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.

**NATIONAL RESEARCH COUNCIL**  
 1200 MONTREAL ROAD, BUILDING M-10  
 OTTAWA, ON  
 CA K1A 0R6

Contact: Brian Coughler  
 brian.coughler@nrc-cnrc.gc.ca  
 T: (613)998-3478  
 F: (613)952-7677