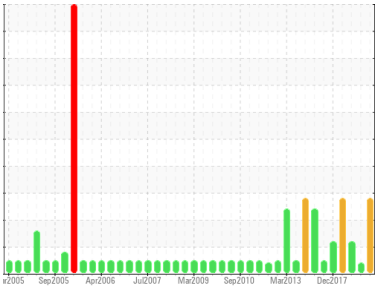
PROBLEM SUMMARY

Sample Rating Trend

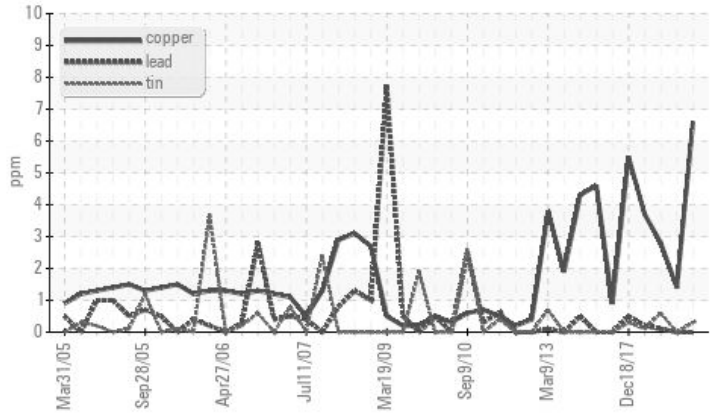


VISUAL METAL

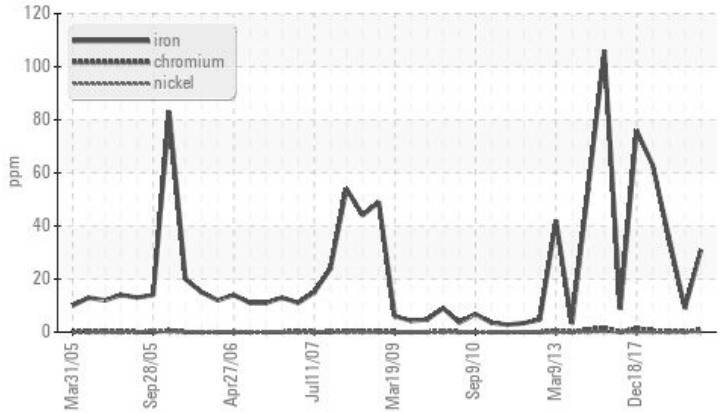
Machine Id
47
Component
Turbine
Fluid
R&O OIL ISO 68 (--- QTS)

COMPONENT CONDITION SUMMARY

▲ Non-ferrous Metals



▲ Ferrous Alloys



RECOMMENDATION

We recommend you service the filters on this component if applicable. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. We were unable to perform a particle count due to metal particles present in this sample.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>15	▲ **31**	9	▲ 36
Copper	ppm	ASTM D5185m	>5	▲ **7**	1	3
White Metal	scalar	*Visual	NONE	▲ **MODER**	NONE	NONE

Customer Id: COLALB
Sample No.: WC0813258
Lab Number: 05923385
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Don Baldridge +1
don.b505@comcast.net

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Inspect Wear Source	---	---	?	We advise that you inspect for the source(s) of wear.
Change Filter	---	---	?	We recommend you service the filters on this component if applicable.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Alert	---	---	?	We were unable to perform a particle count due to metal particles present in this sample.

HISTORICAL DIAGNOSIS

08 Sep 2020 Diag: Don Baldridge

ISO

No corrective action is recommended at this time. Resample at the next service interval to monitor.All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

20 Aug 2019 Diag: Doug Bogart

WEAR

No corrective action is recommended at this time. Resample at the next service interval to monitor.The iron level has decreased, but is still abnormal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

28 Nov 2018 Diag: Jonathan Hester

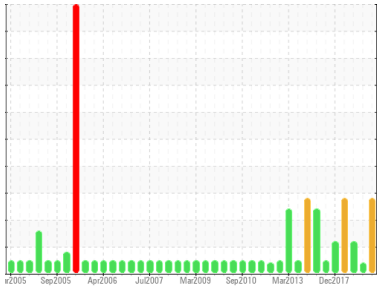
WEAR

We recommend you service the filters on this component. Resample at the next service interval to monitor.The iron level is abnormal. All other component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



VISUAL METAL

Machine Id
47
Component
Turbine
Fluid
R&O OIL ISO 68 (--- QTS)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component if applicable. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. We were unable to perform a particle count due to metal particles present in this sample.

Wear

The iron level is abnormal. The copper level is abnormal. Moderate concentration of visible metal present.

Contamination

No other contaminants were detected in the oil.

Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0813258**	WC0499528	WC04781458
Sample Date		Client Info		**13 Aug 2023**	08 Sep 2020	20 Aug 2019
Machine Age	hrs	Client Info		**0**	0	0
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>15	▲ **31**	9	▲ 36
Chromium	ppm	ASTM D5185m	>4	**1**	0	<1
Nickel	ppm	ASTM D5185m	>2	**0**	<1	0
Titanium	ppm	ASTM D5185m		**<1**	0	<1
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>10	**2**	1	1
Lead	ppm	ASTM D5185m		**0**	0	<1
Copper	ppm	ASTM D5185m	>5	▲ **7**	1	3
Tin	ppm	ASTM D5185m	>5	**<1**	0	<1
Antimony	ppm	ASTM D5185m		**---**	1	0
Vanadium	ppm	ASTM D5185m		**<1**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	5	**0**	0	0
Barium	ppm	ASTM D5185m	5	**<1**	<1	0
Molybdenum	ppm	ASTM D5185m	5	**0**	0	0
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	5	**6**	0	<1
Calcium	ppm	ASTM D5185m	5	**<1**	1	0
Phosphorus	ppm	ASTM D5185m	100	**4**	2	1
Zinc	ppm	ASTM D5185m	25	**28**	15	9
Sulfur	ppm	ASTM D5185m	1500	**55**	46	52

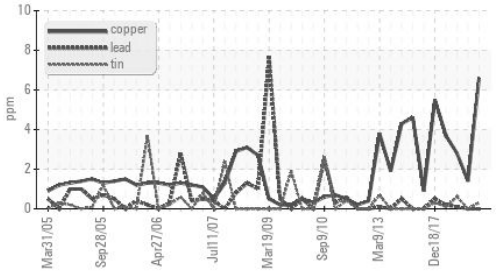
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	**8**	6	6
Sodium	ppm	ASTM D5185m		**1**	1	0
Potassium	ppm	ASTM D5185m	>20	**<1**	0	0

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		**---**	106587	175134
Particles >6µm		ASTM D7647	>1300	**---**	▲ 7728	▲ 21741
Particles >14µm		ASTM D7647	>160	**---**	47	37
Particles >21µm		ASTM D7647	>40	**---**	7	5
Particles >38µm		ASTM D7647	>10	**---**	0	0
Particles >71µm		ASTM D7647	>3	**---**	0	0
Oil Cleanliness		ISO 4406 (c)	>--/17/14	**---**	▲ 24/20/13	▲ 25/22/12

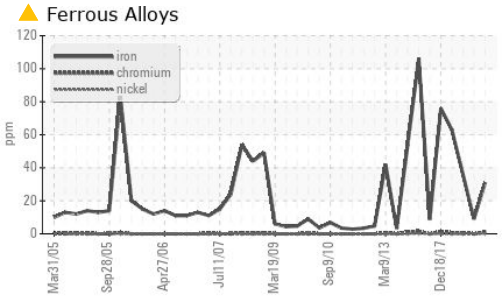
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.08	**0.093**	0.064	0.066

OIL ANALYSIS REPORT

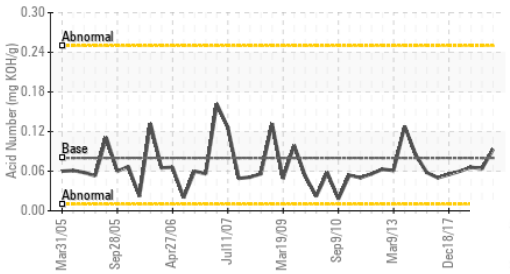
Non-ferrous Metals



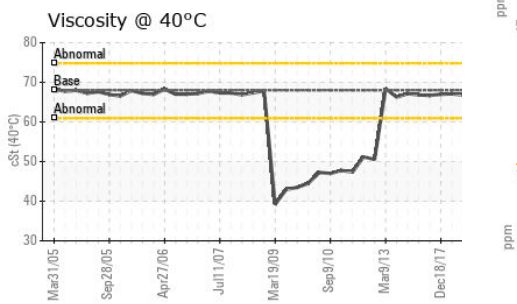
Ferrous Alloys



Acid Number



Viscosity @ 40°C



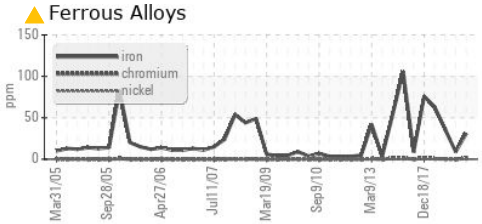
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	▲ **MODER**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.03	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	68	**70.8**	66.5	66.8

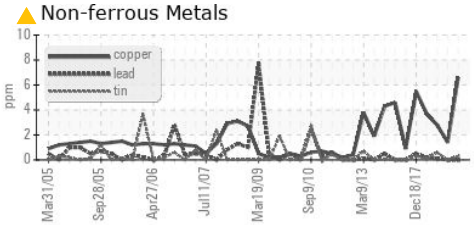
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

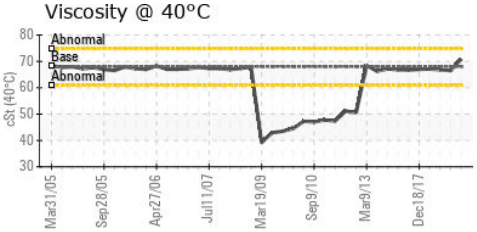
Ferrous Alloys



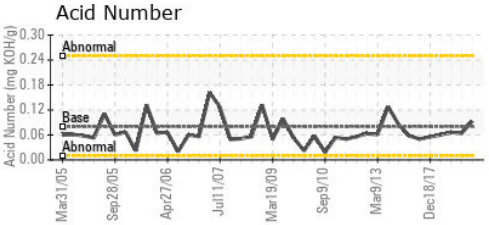
Non-ferrous Metals



Viscosity @ 40°C



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0813258
Lab Number : 05923385
Unique Number : 10603332
Test Package : IND 2

Received : 14 Aug 2023
Diagnosed : 15 Aug 2023
Diagnostician : Don Baldridge

To discuss this sample report, contact Customer Service at 1-800-237-1369.
** - Denotes test methods that are outside of the ISO 17025 scope of accreditation.*
Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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