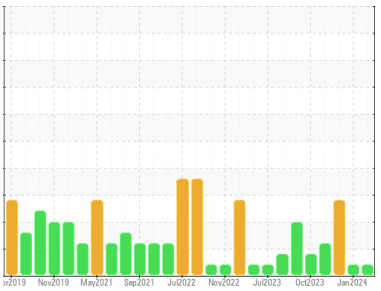
OIL ANALYSIS REPORT

Sample Rating Trend



VIS DEBRIS

Area
Paul G. Blazer
Machine Id
[Paul G. Blazer] Hydraulic - Steering
Component
Hydraulic System
Fluid
R&O OIL ISO 32 (150 GAL)

DIAGNOSIS

Recommendation
We recommend you service the filters on this component. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample. (Customer Sample Comment: Kirk James)

Wear
All component wear rates are normal.

Contamination
Moderate concentration of visible dirt/debris present in the oil.

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

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0845834**	WC0845765	WC0845855
Sample Date		Client Info		**14 Apr 2024**	25 Jan 2024	21 Dec 2023
Machine Age	hrs	Client Info		**6050**	4464	3867
Oil Age	hrs	Client Info		**6050**	4464	3867
Oil Changed		Client Info		**Not Changd**	N/A	Not Changd
Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	**14**	9	13
Chromium	ppm	ASTM D5185m	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>20	**<1**	0	0
Titanium	ppm	ASTM D5185m		**<1**	0	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**2**	0	0
Lead	ppm	ASTM D5185m	>20	**0**	0	0
Copper	ppm	ASTM D5185m	>20	**2**	<1	1
Tin	ppm	ASTM D5185m	>20	**<1**	<1	0
Vanadium	ppm	ASTM D5185m		**<1**	0	0
Cadmium	ppm	ASTM D5185m		**<1**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	5	**0**	0	0
Barium	ppm	ASTM D5185m	5	**0**	0	0
Molybdenum	ppm	ASTM D5185m	5	**<1**	0	0
Manganese	ppm	ASTM D5185m		**0**	0	0
Magnesium	ppm	ASTM D5185m	5	**<1**	0	0
Calcium	ppm	ASTM D5185m	5	**1**	0	3
Phosphorus	ppm	ASTM D5185m	100	**19**	17	20
Zinc	ppm	ASTM D5185m	25	**25**	19	17
Sulfur	ppm	ASTM D5185m	1500	**172**	204	216

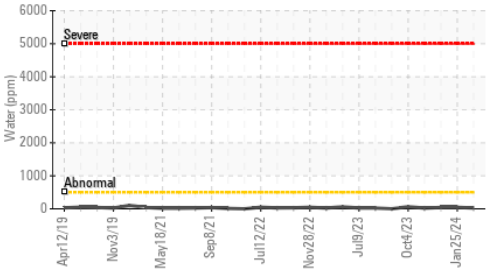
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	**<1**	0	<1
Sodium	ppm	ASTM D5185m		**0**	0	0
Potassium	ppm	ASTM D5185m	>20	**1**	<1	0
Water	%	ASTM D6304	>0.05	**0.002**	0.004	0.004
ppm Water	ppm	ASTM D6304	>500	**25**	45	41

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	**---**	---	▲ 96012
Particles >6µm		ASTM D7647	>1300	**---**	---	▲ 27648
Particles >14µm		ASTM D7647	>160	**---**	---	▲ 1883
Particles >21µm		ASTM D7647	>40	**---**	---	▲ 496
Particles >38µm		ASTM D7647	>10	**---**	---	▲ 58
Particles >71µm		ASTM D7647	>3	**---**	---	▲ 7
Oil Cleanliness		ISO 4406 (c)	>19/17/14	**---**	---	▲ 24/22/18

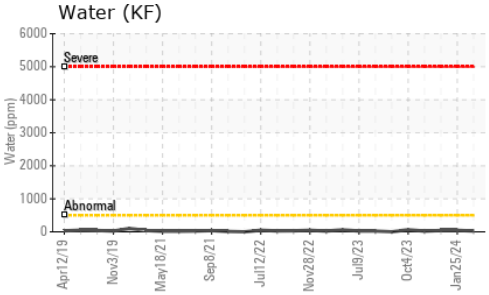
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.08	**0.066**	0.075	0.091

OIL ANALYSIS REPORT

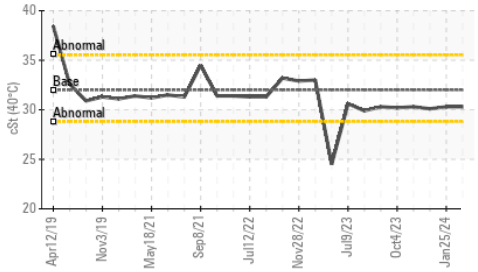
Water (KF)



Water (KF)



Viscosity @ 40°C



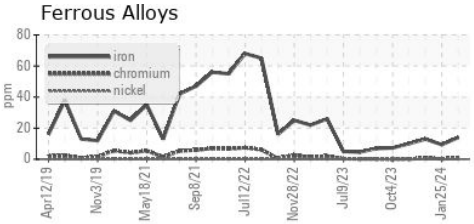
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	▲ **MODER**	▲ MODER	LIGHT
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	>0.05	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	32	**30.3**	30.3	30.1

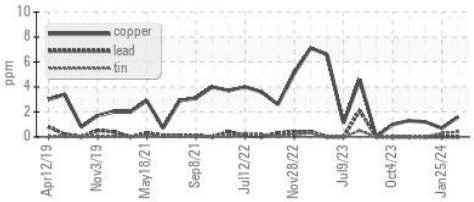
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

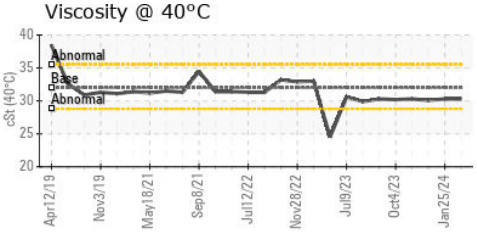
Ferrous Alloys



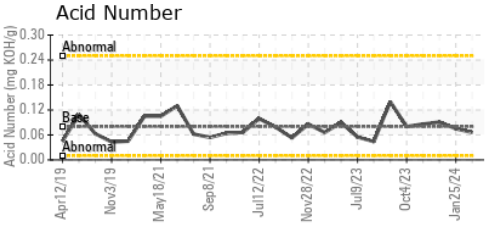
Non-ferrous Metals



Viscosity @ 40°C



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0845834
Lab Number : 06157686
Unique Number : 10993109
Test Package : IND 2 (Additional Tests: KF)

Received : 23 Apr 2024
Tested : 25 Apr 2024
Diagnosed : 25 Apr 2024 - Jonathan Hester

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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Report Id: MARCAT [WUSCAR] 06157686 (Generated: 04/25/2024 18:27:36) Rev: 1

Submitted By: M/V PAUL BLAZER