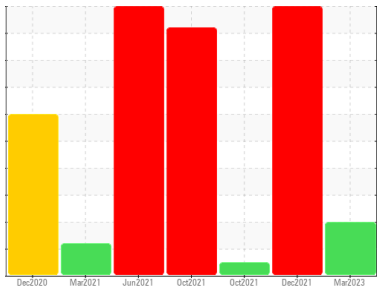
OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Machine Id
OSV HERCULES 1PH
Component
Port Wheel Hub
Fluid
SHELL OMALA 68 (25 GAL)

DIAGNOSIS

Recommendation
The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
There is a high amount of particulates present in the oil.

Fluid Condition
Confirm oil type. 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		**WC0757307**	WC0631048	WC0579475
Sample Date		Client Info		**09 Mar 2023**	23 Dec 2021	19 Oct 2021
Machine Age	hrs	Client Info		**23758**	20521	20021
Oil Age	hrs	Client Info		**0**	470	8000
Oil Changed		Client Info		**Changed**	N/A	Changed
Sample Status				**ABNORMAL**	SEVERE	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>500	**4**	309	0
Chromium	ppm	ASTM D5185m	>8	**0**	▲ 33	<1
Nickel	ppm	ASTM D5185m	>5	**0**	▲ 19	<1
Titanium	ppm	ASTM D5185m		**0**	<1	0
Silver	ppm	ASTM D5185m		**0**	<1	0
Aluminum	ppm	ASTM D5185m	>5	**<1**	▲ 4	0
Lead	ppm	ASTM D5185m	>5	**0**	▲ 3	0
Copper	ppm	ASTM D5185m	>50	**0**	▲ 599	4
Tin	ppm	ASTM D5185m		**0**	▲ 45	<1
Antimony	ppm	ASTM D5185m	>5	**---**	0	0
Vanadium	ppm	ASTM D5185m		**0**	<1	<1
Cadmium	ppm	ASTM D5185m		**0**	0	0

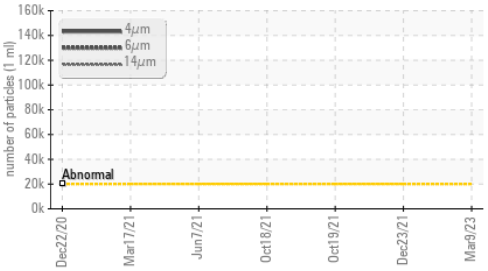
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**0**	5	0
Barium	ppm	ASTM D5185m		**0**	0	<1
Molybdenum	ppm	ASTM D5185m		**0**	2	<1
Manganese	ppm	ASTM D5185m		**<1**	4	0
Magnesium	ppm	ASTM D5185m		**3**	9	0
Calcium	ppm	ASTM D5185m		**42**	13	0
Phosphorus	ppm	ASTM D5185m		**194**	314	268
Zinc	ppm	ASTM D5185m		**0**	0	0
Sulfur	ppm	ASTM D5185m		**6638**	7087	5997

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**<1**	7	<1
Sodium	ppm	ASTM D5185m		**2**	43	2
Potassium	ppm	ASTM D5185m	>20	**0**	2	1

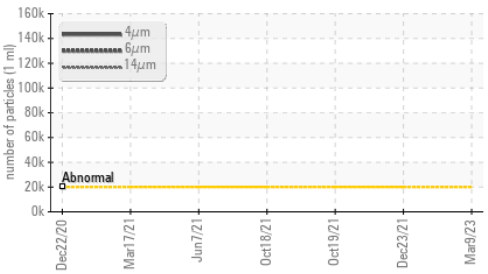
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>20000	▲ **155746**	---	---
Particles >6µm		ASTM D7647	>5000	▲ **82750**	---	---
Particles >14µm		ASTM D7647	>640	▲ **4967**	---	---
Particles >21µm		ASTM D7647	>160	▲ **328**	---	---
Particles >38µm		ASTM D7647	>40	**5**	---	---
Particles >71µm		ASTM D7647	>10	**0**	---	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ **24/24/19**	---	---

OIL ANALYSIS REPORT

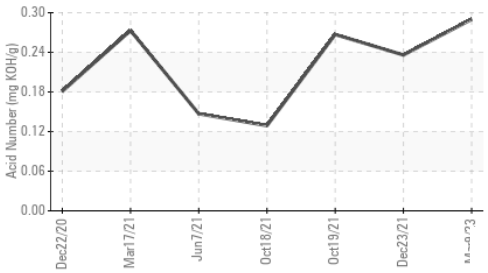
Particle Trend



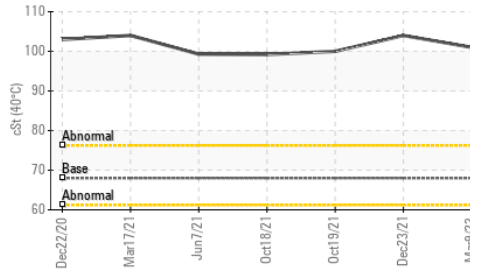
Particle Trend



Acid Number



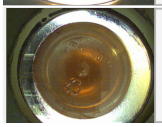
Viscosity @ 40°C



FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.29**	0.236	0.267

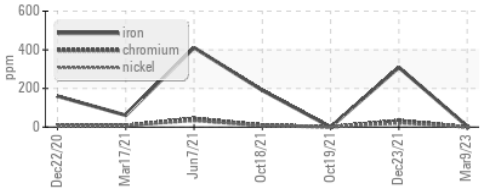
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	▲ MODER	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	**NEG**	▲ 0.2%	NEG
Free Water	scalar	*Visual		**NEG**	▲ 1.0	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	68.0	**101**	104	100

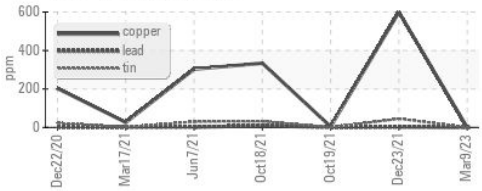
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color				*no image*	*no image*
Bottom				*no image*	*no image*

GRAPHS

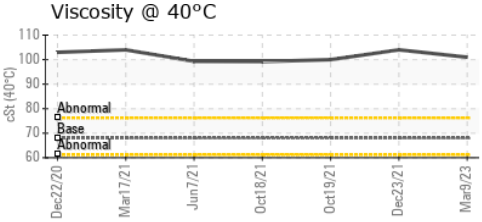
Ferrous Alloys



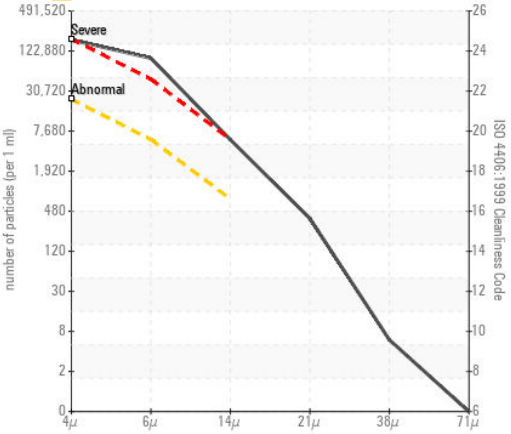
Non-ferrous Metals



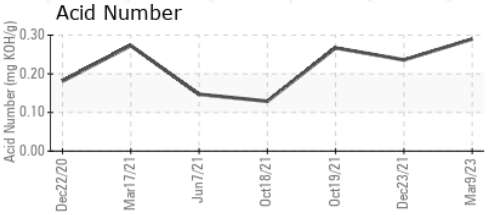
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0757307 **Received** : 16 Mar 2023
Lab Number : 05794049 **Tested** : 20 Mar 2023
Unique Number : 10383733 **Diagnosed** : 20 Mar 2023 - Don Baldridge
Test Package : MAR 2 (Additional Tests: PrtCount)

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: ALADUT [WUSCAR] 05794049 (Generated: 03/19/2024 12:04:17) Rev: 1

Submitted By: CHIEF ENGINEER