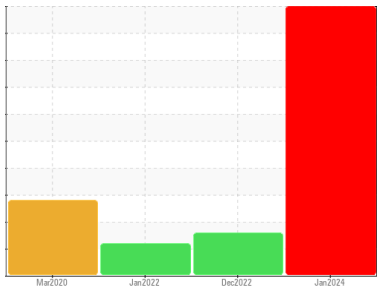
OIL DIAGNOSTICS

OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Area
PLANT
Machine Id
00449
Component
Hydraulic System
Fluid
AW HYDRAULIC OIL ISO 32 (--- QTS)

DIAGNOSIS

Recommendation
We advise that you check all areas where dirt can enter the system. We recommend you service the filters on this component. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

Wear
The iron level is severe.

Contamination
There is a high amount of particulates present in the oil. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

Fluid Condition
The oil viscosity is higher than normal. Confirm oil type.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PCA0090543**	WC0661525	WC0542170
Sample Date		Client Info		**21 Jan 2024**	01 Dec 2022	31 Jan 2022
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				**SEVERE**	ABNORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.1	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	● **189**	19	▲ 24
Chromium	ppm	ASTM D5185m	>10	**1**	<1	<1
Nickel	ppm	ASTM D5185m	>10	**2**	0	<1
Titanium	ppm	ASTM D5185m		**<1**	0	<1
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>10	▲ **25**	0	<1
Lead	ppm	ASTM D5185m	>10	**1**	0	<1
Copper	ppm	ASTM D5185m	>75	**6**	<1	2
Tin	ppm	ASTM D5185m	>10	**<1**	0	<1
Antimony	ppm	ASTM D5185m		**---**	---	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**<1**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	5	**13**	0	2
Barium	ppm	ASTM D5185m	5	**0**	<1	0
Molybdenum	ppm	ASTM D5185m	5	**<1**	<1	<1
Manganese	ppm	ASTM D5185m		**2**	0	<1
Magnesium	ppm	ASTM D5185m	25	**4**	3	<1
Calcium	ppm	ASTM D5185m	200	**17**	81	159
Phosphorus	ppm	ASTM D5185m	300	**234**	321	337
Zinc	ppm	ASTM D5185m	370	**19**	421	435
Sulfur	ppm	ASTM D5185m	2500	**8589**	836	1069

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	● **116**	3	2
Sodium	ppm	ASTM D5185m		**9**	0	1
Potassium	ppm	ASTM D5185m	>20	**14**	1	<1

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	▲ **495209**	▲ 95586	---
Particles >6µm		ASTM D7647	>1300	▲ **191993**	▲ 18010	---
Particles >14µm		ASTM D7647	>160	▲ **839**	▲ 288	---
Particles >21µm		ASTM D7647	>40	▲ **162**	39	---
Particles >38µm		ASTM D7647	>10	**9**	1	---
Particles >71µm		ASTM D7647	>3	**0**	0	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **26/25/17**	▲ 24/21/15	---

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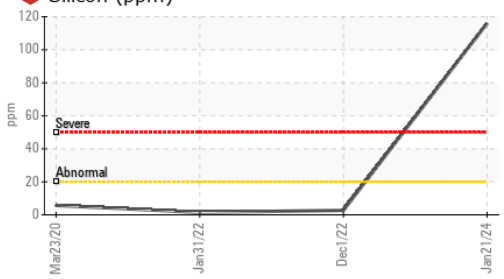
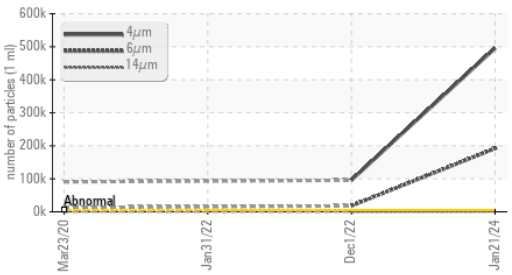
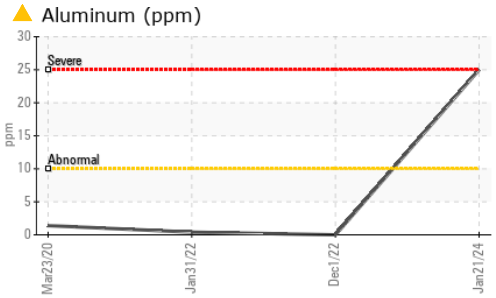
Silicon (ppm)



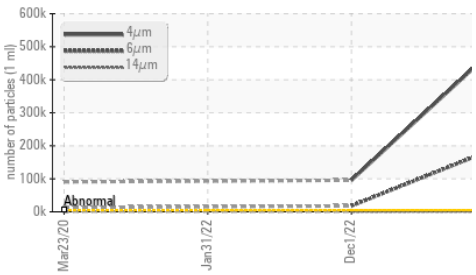
Particle Trend



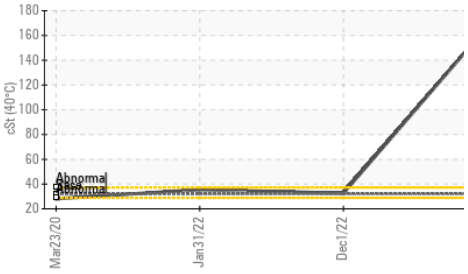
Aluminum (ppm)



Particle Trend



Viscosity @ 40°C



FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	**0.48**	0.39	0.42

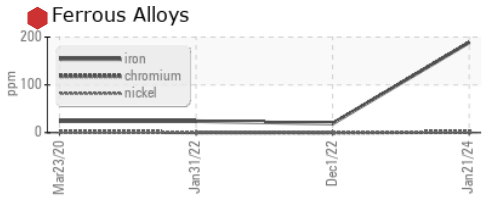
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	▲ MODER
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	**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	▲ **167**	32.6	35.5

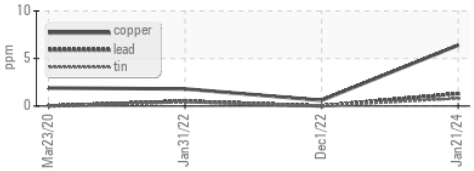
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

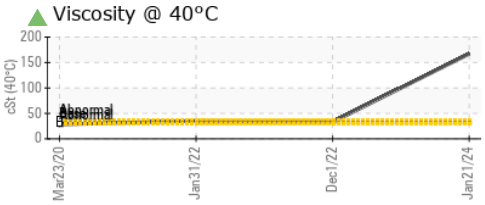
Ferrous Alloys



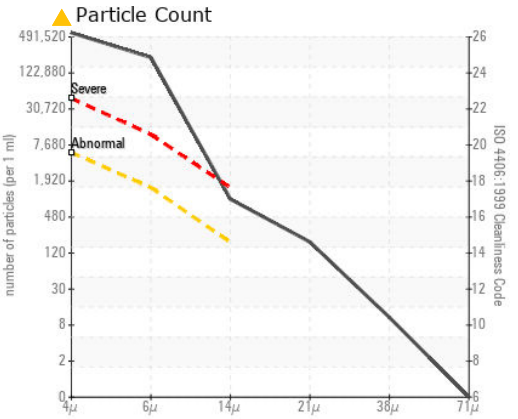
Non-ferrous Metals



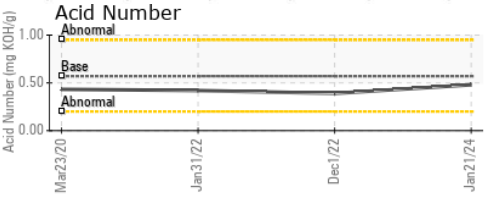
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0090543
Lab Number : 06067634
Unique Number : 10844311
Test Package : MOB 2

Recieved : 22 Jan 2024
Diagnosed : 24 Jan 2024
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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