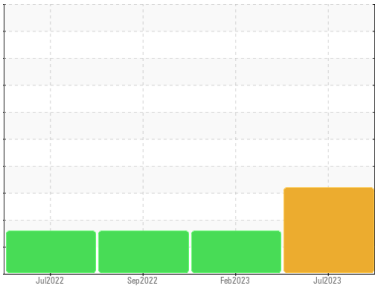
OIL ANALYSIS REPORT

OIL DIAGNOSTICS

Area
Front Load
Machine Id
FEL215598
Component
Hydraulic System
Fluid
AW HYDRAULIC OIL ISO 32 (--- GAL)

Sample Rating Trend



WEAR

DIAGNOSIS

Recommendation
We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

Wear
Chromium and iron ppm levels are abnormal. Cylinder wear is indicated.

Contamination
There is a moderate amount of silt (particulates < 14 microns in size) present 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		**PCA0090699**	PCA0083091	PCA0078049
Sample Date		Client Info		**03 Jul 2023**	20 Feb 2023	26 Sep 2022
Machine Age	hrs	Client Info		**3828**	1945	1945
Oil Age	hrs	Client Info		**3462**	1945	1477
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	>50	▲ **70**	▲ 74	▲ 81
Chromium	ppm	ASTM D5185m	>10	▲ **14**	9	6
Nickel	ppm	ASTM D5185m	>4	**0**	<1	0
Titanium	ppm	ASTM D5185m		**0**	<1	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>5	**0**	1	<1
Lead	ppm	ASTM D5185m	>4	**0**	0	0
Copper	ppm	ASTM D5185m	>15	**10**	11	8
Tin	ppm	ASTM D5185m	>4	**<1**	<1	<1
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	**0**	0	0
Molybdenum	ppm	ASTM D5185m	5	**<1**	<1	0
Manganese	ppm	ASTM D5185m		**1**	1	2
Magnesium	ppm	ASTM D5185m	25	**49**	50	59
Calcium	ppm	ASTM D5185m	200	**28**	24	15
Phosphorus	ppm	ASTM D5185m	300	**302**	279	291
Zinc	ppm	ASTM D5185m	370	**337**	319	318
Sulfur	ppm	ASTM D5185m	2500	**972**	772	896

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	**4**	4	4
Sodium	ppm	ASTM D5185m		**8**	5	5
Potassium	ppm	ASTM D5185m	>20	**2**	2	<1

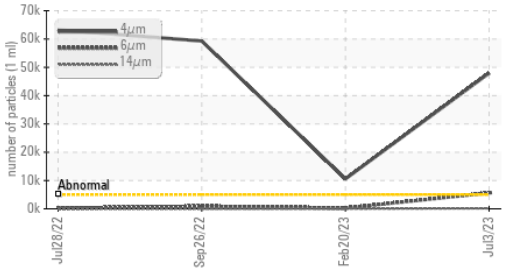
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	▲ **47958**	▲ 10578	▲ 59285
Particles >6µm		ASTM D7647	>1300	▲ **5631**	252	915
Particles >14µm		ASTM D7647	>160	▲ **165**	18	26
Particles >21µm		ASTM D7647	>40	**28**	6	7
Particles >38µm		ASTM D7647	>10	**0**	0	1
Particles >71µm		ASTM D7647	>3	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **23/20/15**	▲ 21/15/11	▲ 23/17/12

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	**0.31**	0.31	0.37

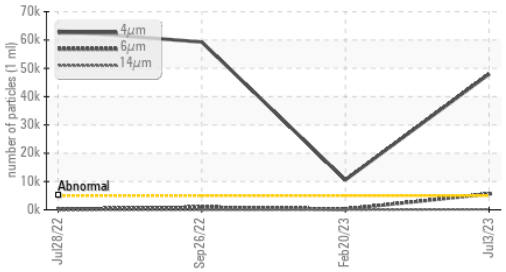
OIL DIAGNOSTICS

OIL ANALYSIS REPORT

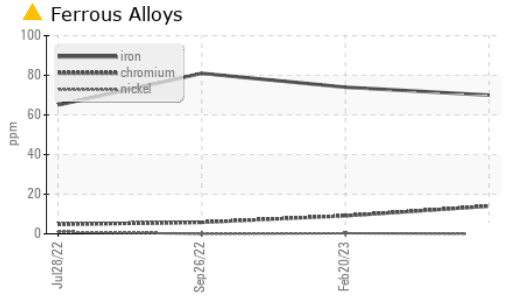
Particle Trend



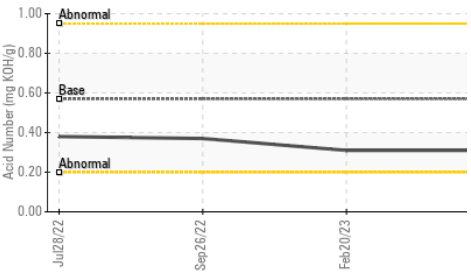
Particle Trend



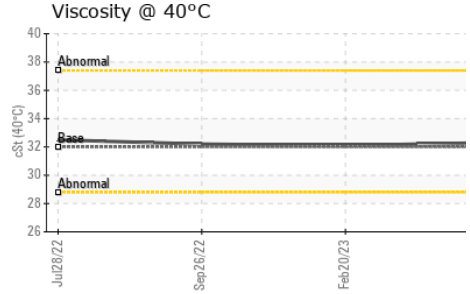
Ferrous Alloys



Acid Number

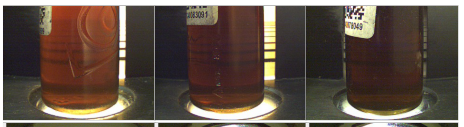
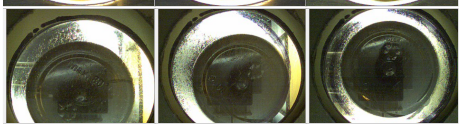


Viscosity @ 40°C



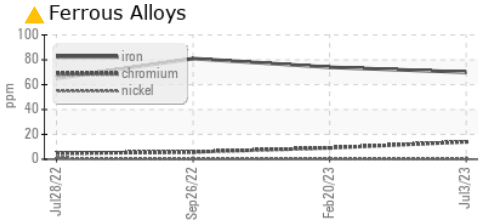
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	**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	**32.3**	32.1	32.2

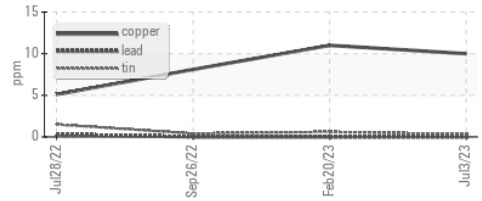
SAMPLE IMAGES		method	limit/base	current	history1	history2
Color						
Bottom						

GRAPHS

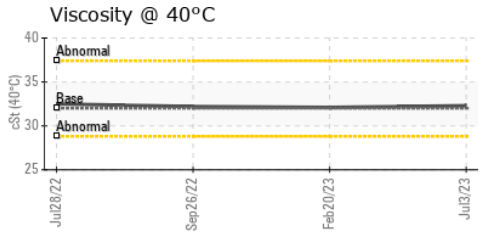
Ferrous Alloys



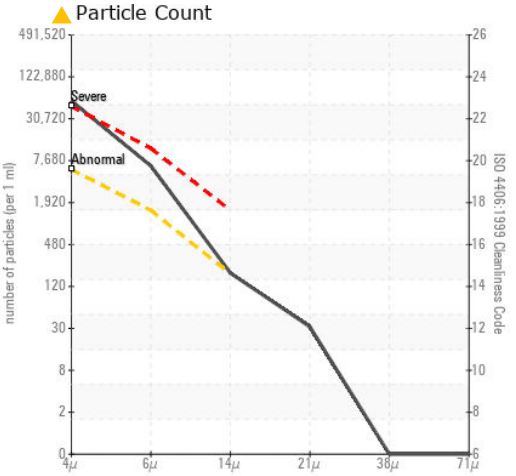
Non-ferrous Metals



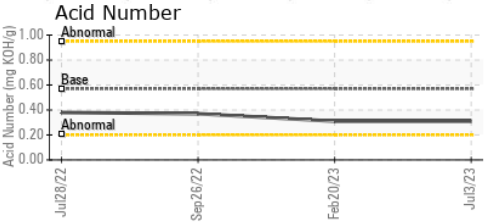
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0090699
Lab Number : 05898537
Unique Number : 10559893
Test Package : MOB 2

Received : 14 Jul 2023
Diagnosed : 17 Jul 2023
Diagnostician : Angela Borella

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)

UMM - Shop 401 - Norton
186 South Washington Street
Norton, MA
US 02766
Contact: Dave Wilson Jr.
Dwilson1@win-waste.com
T:
F: