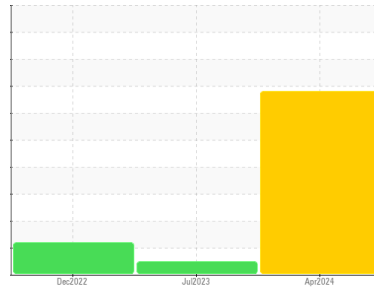


PROBLEM SUMMARY

Sample Rating Trend



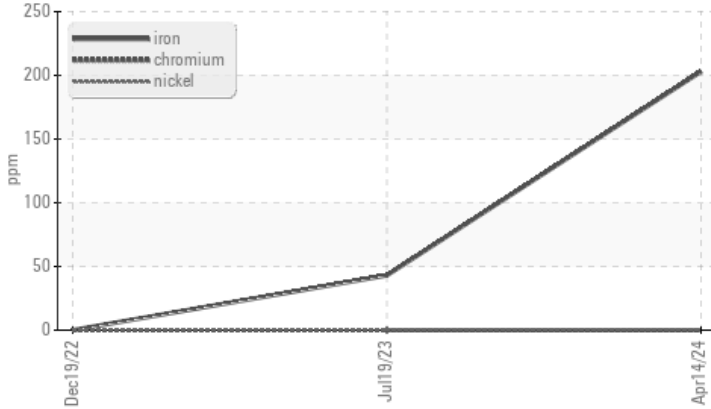
WEAR



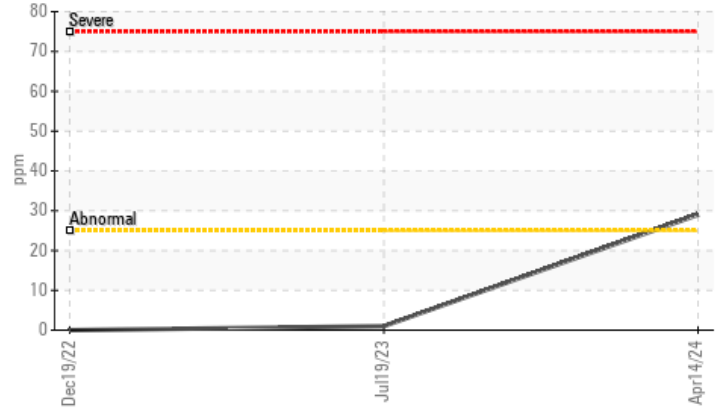
Area
NAPHTHA UNIFINER [1083321]
Machine Id
[NAPHTHA UNIFINER] NAPU-C-0001 COMPRESSOR, RECYCLE HYDROGEN
Component
Compressor
Fluid
BELRAY Turbine Oil 150 (--- QTS)

COMPONENT CONDITION SUMMARY

▲ Ferrous Alloys



▲ Aluminum (ppm)



RECOMMENDATION

We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	NORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>50	▲ 203	43	0
Aluminum	ppm	ASTM D5185m	>25	▲ 29	1	0

Customer Id: CALSHR
Sample No.: RP0042801
Lab Number: 06153203
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
Jonathan Hester +1 919-379-4092 x4092
jhester@wearcheckusa.com

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.
Resample	---	---	?	We recommend an early resample to monitor this condition.

HISTORICAL DIAGNOSIS

NORMAL



19 Jul 2023 Diag: Doug Bogart

Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



ISO



19 Dec 2022 Diag: Angela Borella

We recommend you service the filters on this component. 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 acceptable for the time in service.

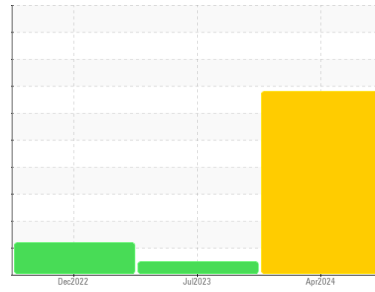
view report





OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Area
NAPHTHA UNIFINER [1083321]
 Machine Id
[NAPHTHA UNIFINER] NAPU-C-0001 COMPRESSOR, RECYCLE HYDROGEN
 Component
Compressor
 Fluid
BELRAY Turbine Oil 150 (--- QTS)

DIAGNOSIS

▲ Recommendation

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. The aluminum level is abnormal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The AN level is acceptable for this fluid.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		RP0042801	RP0034784	RP0031592
Sample Date	Client Info		14 Apr 2024	19 Jul 2023	19 Dec 2022
Machine Age	hrs	Client Info	0	0	0
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		Not Changed	Not Changed	Not Changed
Sample Status			SEVERE	NORMAL	ABNORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >50	▲ 203	43	0
Chromium	ppm	ASTM D5185m >10	0	0	0
Nickel	ppm	ASTM D5185m	<1	0	0
Titanium	ppm	ASTM D5185m	0	<1	0
Silver	ppm	ASTM D5185m	0	0	0
Aluminum	ppm	ASTM D5185m >25	▲ 29	1	0
Lead	ppm	ASTM D5185m >25	2	0	0
Copper	ppm	ASTM D5185m >50	15	4	<1
Tin	ppm	ASTM D5185m >15	5	3	0
Vanadium	ppm	ASTM D5185m	0	<1	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	0	0
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	2	1	<1
Manganese	ppm	ASTM D5185m	2	<1	0
Magnesium	ppm	ASTM D5185m	4	6	3
Calcium	ppm	ASTM D5185m	22	17	16
Phosphorus	ppm	ASTM D5185m	28	32	29
Zinc	ppm	ASTM D5185m	7	10	8

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	5	2	0
Sodium	ppm	ASTM D5185m	3	7	0
Potassium	ppm	ASTM D5185m >20	2	0	0
Water	%	ASTM D6304 >0.1	0.002	0.007	0.013
ppm Water	ppm	ASTM D6304 >1000	24	76.8	138.5

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.164	0.10	0.067

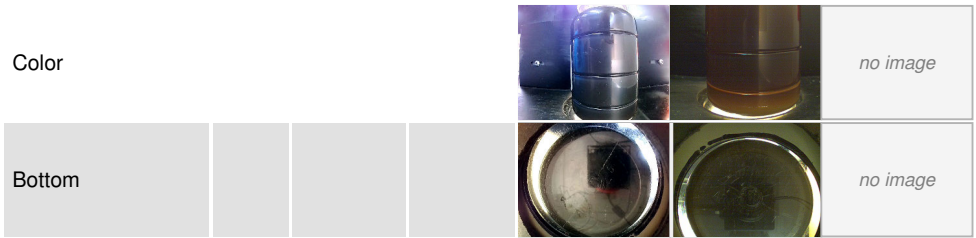
VISUAL

	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	LIGHT	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

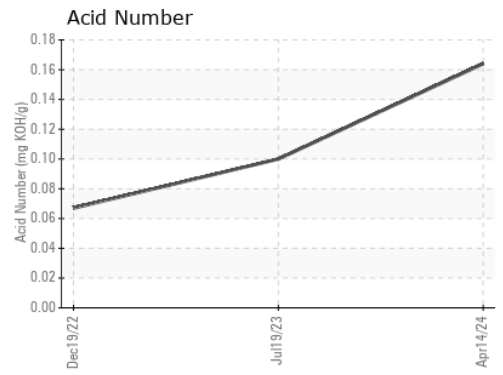
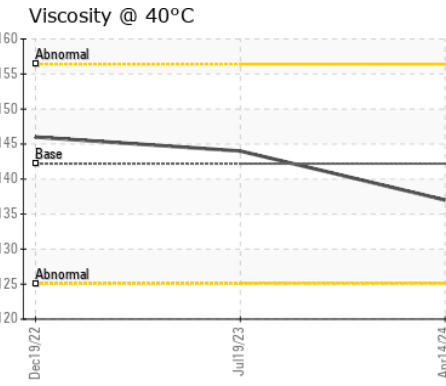
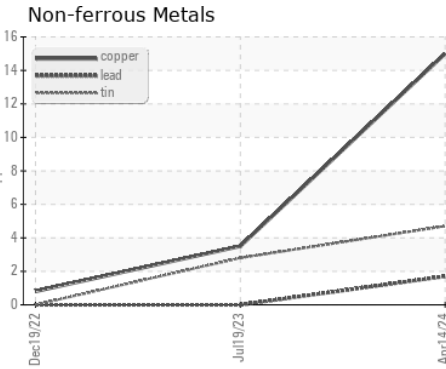
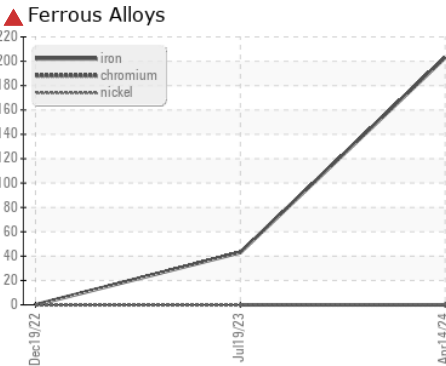
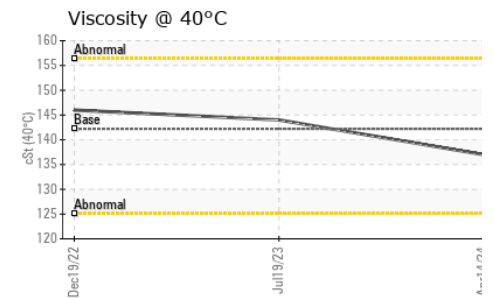
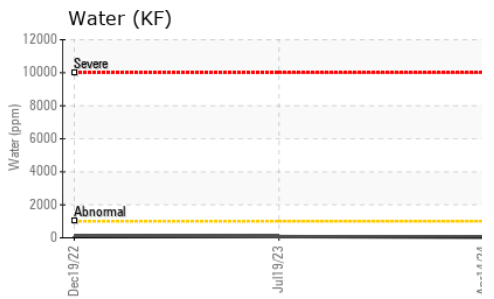
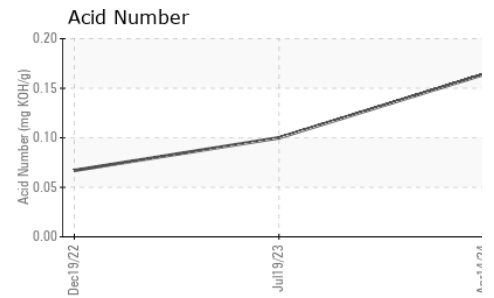
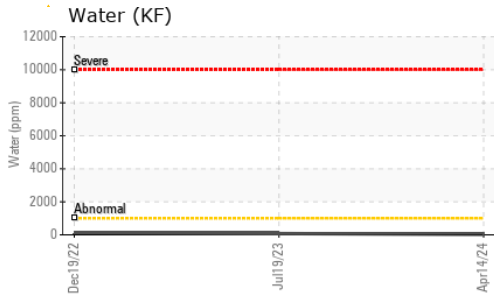
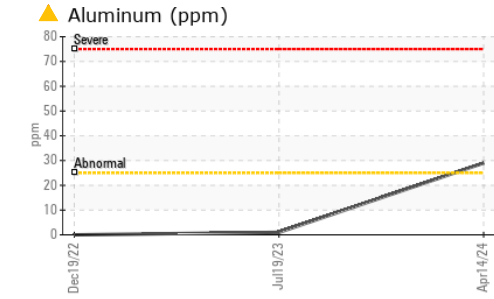
OIL ANALYSIS REPORT

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	142.2	137	144	146

SAMPLE IMAGES		method	limit/base	current	history1	history2
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GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RP0042801
Lab Number : 06153203
Unique Number : 10983281
Test Package : IND 2

Received : 18 Apr 2024
Tested : 19 Apr 2024
Diagnosed : 23 Apr 2024 - Jonathan Hester

CALUMET
 3333 MIDWAY AVENUE
 SHREVEPORT, LA
 US 71109
 Contact: NICHOLAS LESAGE
 nicholas.lesage@clmt.com

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)

T:
F: