



PERFORMANCE
UNDER
PRESSURE

OIL ANALYSIS REPORT

WEAR	SEVERE
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
NAPHTHA UNIFINER [1083321]

Machine Id
[NAPHTHA UNIFINER] NAPU-C-0001 COMPRESSOR, RECYCLE HYDROGEN

Component
Compressor

Fluid
BELRAY Turbine Oil 150 (--- QTS)

RECOMMENDATION

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

Test	UOM	Method	Limit/Abn	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
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				SEVERE	NORMAL	ABNORMAL

WEAR

The iron level is severe. The aluminum level is abnormal.

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
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

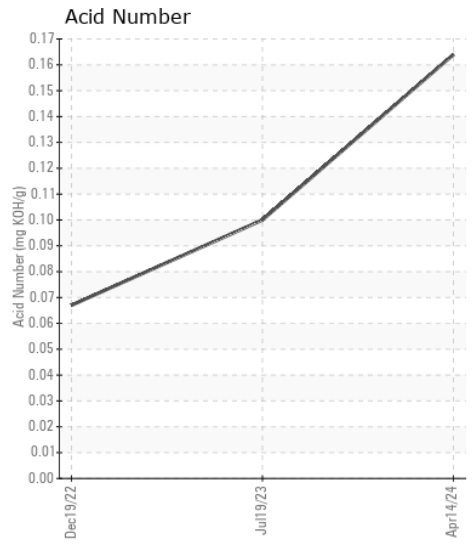
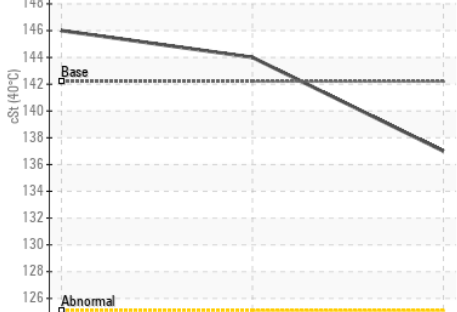
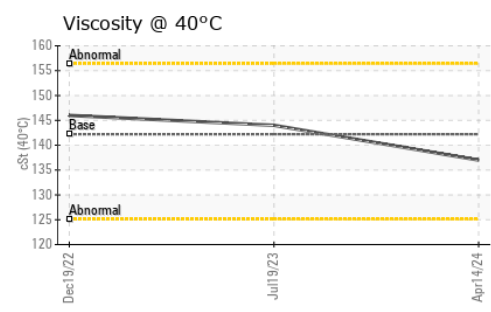
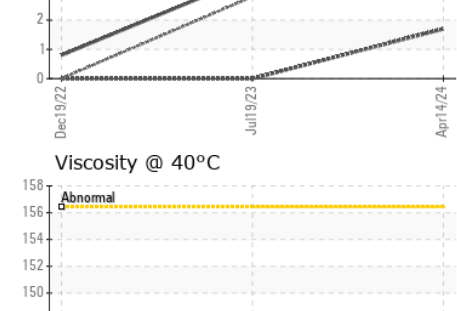
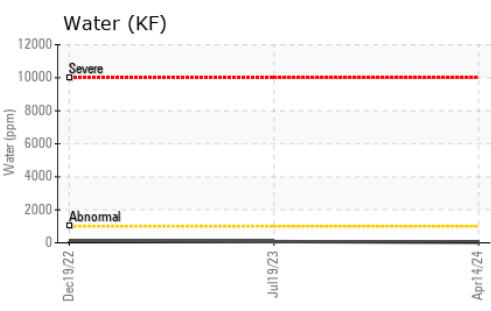
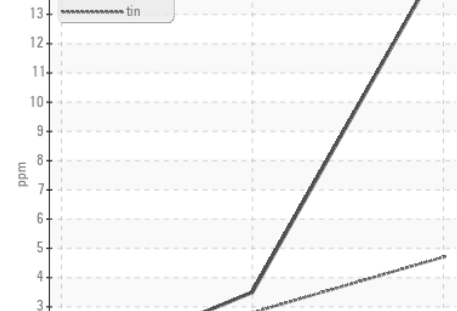
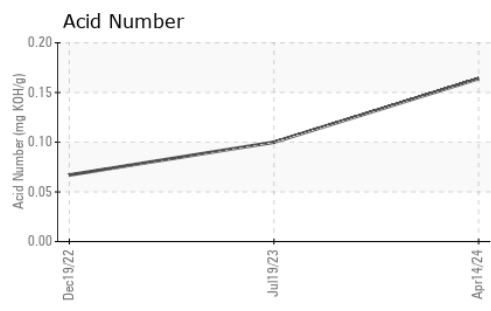
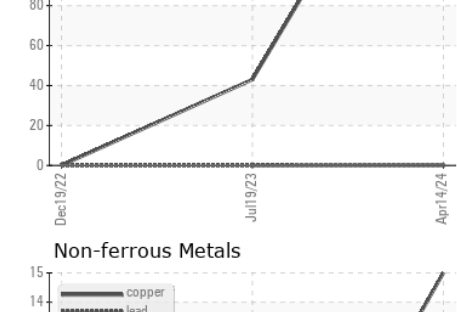
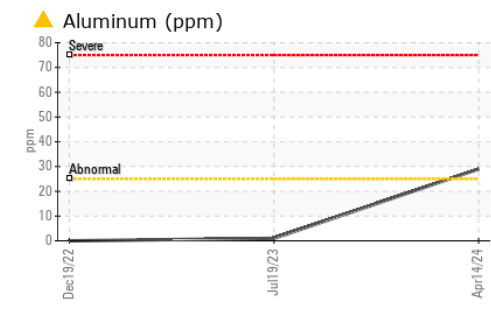
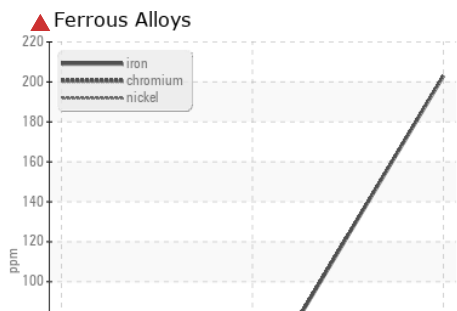
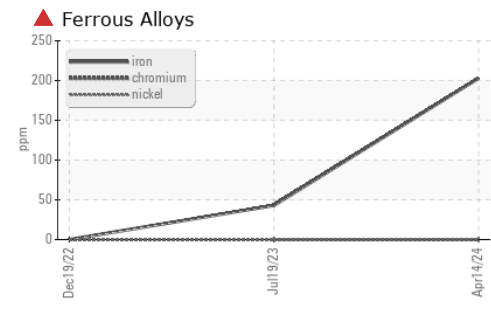
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	5	2	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
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

FLUID CONDITION

The AN level is acceptable for this fluid.

Sodium	ppm	ASTM D5185m		3	7	0
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
Acid Number (AN)	mg KOH/g	ASTM D8045		0.164	0.10	0.067
Visc @ 40°C	cSt	ASTM D445	142.2	137	144	146



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
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 T:
 F:

Certificate L2367
 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)