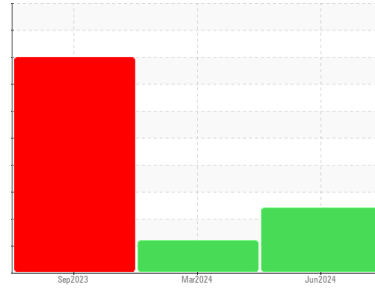# OIL ANALYSIS REPORT

Sample Rating Trend

WATER

Machine Id
PLANT 5 PUMP D
Component
Vacuum Pump
Fluid
{not provided} (--- GAL)

DIAGNOSIS

⚠ Recommendation
We advise that you perform a filter service and use off-line filtration to improve the cleanliness of the system fluid. Resample at the next service interval to monitor. There is too much water present in this sample to perform a particle count.

Wear
All component wear rates are normal.

⚠ Contamination
Appearance is milky. There is a high concentration of water present in the oil. The high sodium (Na) level indicates the possible presence of salt water.

Fluid Condition
The AN level is acceptable for this fluid.

SAMPLE INFORMATION	method	limit/base	current	history1	history2
Sample Number	Client Info		**USP0013433**	USP0008160	USP0001903
Sample Date	Client Info		**09 Jun 2024**	27 Mar 2024	22 Sep 2023
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			**ABNORMAL**	ABNORMAL	SEVERE

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	**7**	1	4
Chromium	ppm	ASTM D5185m	>20	**0**	<1	0
Nickel	ppm	ASTM D5185m	>20	**<1**	<1	0
Titanium	ppm	ASTM D5185m		**0**	<1	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**0**	2	0
Lead	ppm	ASTM D5185m	>20	**0**	<1	0
Copper	ppm	ASTM D5185m	>20	**0**	<1	<1
Tin	ppm	ASTM D5185m	>20	**<1**	1	<1
Vanadium	ppm	ASTM D5185m		**0**	<1	<1
Cadmium	ppm	ASTM D5185m		**0**	<1	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**0**	0	0
Barium	ppm	ASTM D5185m		**<1**	0	0
Molybdenum	ppm	ASTM D5185m		**0**	<1	0
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m		**<1**	<1	0
Calcium	ppm	ASTM D5185m		**4**	3	0
Phosphorus	ppm	ASTM D5185m		**36**	30	397
Zinc	ppm	ASTM D5185m		**33**	15	0
Sulfur	ppm	ASTM D5185m		**46**	23	2014

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	**<1**	2	4
Sodium	ppm	ASTM D5185m		**28**	0	0
Potassium	ppm	ASTM D5185m	>20	**3**	2	0
Water	%	ASTM D6304	>.1	⚠ **0.876**	0.003	⚠ 0.319
ppm Water	ppm	ASTM D6304	>1000	⚠ **8760**	39	⚠ 3190

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	**---**	⚠ 19934	---
Particles >6µm		ASTM D7647	>1300	**---**	⬤ 2060	---
Particles >14µm		ASTM D7647	>160	**---**	23	---
Particles >21µm		ASTM D7647	>40	**---**	6	---
Particles >38µm		ASTM D7647	>10	**---**	0	---
Particles >71µm		ASTM D7647	>3	**---**	0	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	**---**	⚠ 21/18/12	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.13**	0.09	0.067

OIL ANALYSIS REPORT

Water (KF)

(Graph: Water (ppm) vs date Sep22/23 – Mar27/24 – Jun9/24. Severe line at ~5000, Abnormal line at ~1000. Values drop from ~3200 near zero at Mar27/24 then rise to ~8700 at Jun9/24.)

Acid Number

(Graph: Acid Number (mg KOH/g) vs date. Rising from ~0.065 to ~0.13.)

Viscosity @ 40°C

(Graph: cSt (40°C) vs date. Abnormal lines at ~102 and ~84. Value steady ~103–104.)
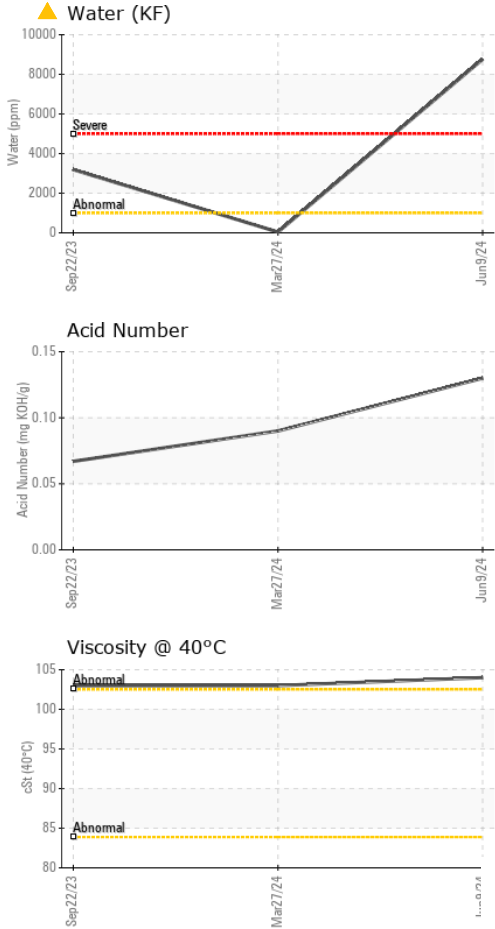
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	⚠ HEAVY
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	🟠 **MILKY**	NORML	🟤 HAZY
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>.1	⚠ **0.2%**	NEG	0.2%
Free Water	scalar	*Visual		**NEG**	NEG	🔺 50.0

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		**104**	103	103

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					
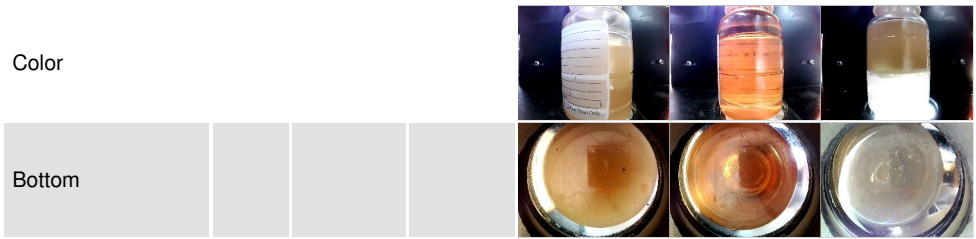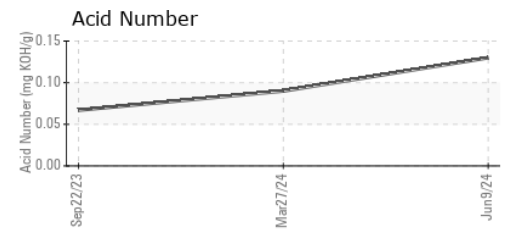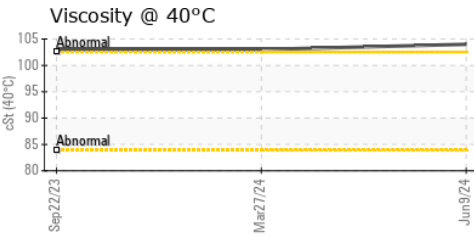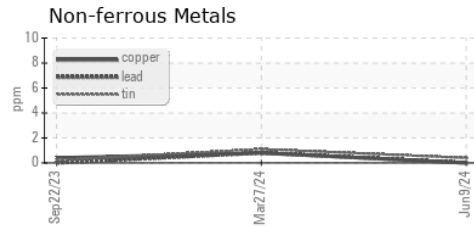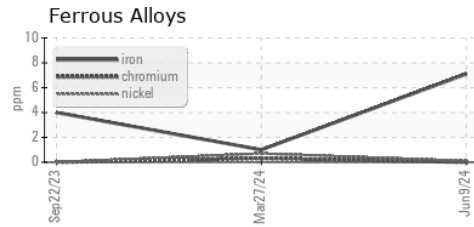
GRAPHS

Ferrous Alloys

(Graph: ppm vs date. Legend: iron, chromium, nickel. Iron drops from ~4 to ~1 then rises to ~7.)

Non-ferrous Metals

(Graph: ppm vs date. Legend: copper, lead, tin. Values near 0–1.)

Viscosity @ 40°C

(Graph: cSt (40°C) vs date. Abnormal lines ~102 and ~84. Value ~103–104.)

Acid Number

(Graph: Acid Number (mg KOH/g) vs date. Rising from ~0.065 to ~0.13.)

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:

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY — Certificate L2367