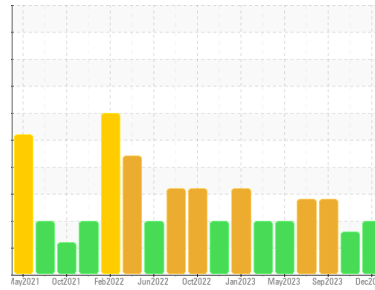




OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Machine Id
B66102 - KETTLE 10

Component
Gearbox

Fluid
PETRO CANADA 220 (--- GAL)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a high amount of silt (particulates < 14 microns in size) present in the oil.

Fluid Condition

Viscosity of sample indicates oil is within ISO 460 range, advise investigate. Confirm oil type. The AN level is acceptable for this fluid.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0872437	WC0842497	WC0842411
Sample Date	Client Info		26 Dec 2023	01 Nov 2023	06 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	ABNORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>200	13	4	5
Chromium	ppm	ASTM D5185m	>10	0	0	<1
Nickel	ppm	ASTM D5185m	>10	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	24	23	34
Lead	ppm	ASTM D5185m	>50	0	0	<1
Copper	ppm	ASTM D5185m	>200	0	0	0
Tin	ppm	ASTM D5185m	>10	0	0	<1
Vanadium	ppm	ASTM D5185m		0	0	<1
Cadmium	ppm	ASTM D5185m		0	0	<1

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		0	0	0
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m		0	0	1
Calcium	ppm	ASTM D5185m		22	3	28
Phosphorus	ppm	ASTM D5185m		571	536	586
Zinc	ppm	ASTM D5185m		0	0	0
Sulfur	ppm	ASTM D5185m		481	380	681

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>50	19	21	25
Sodium	ppm	ASTM D5185m		16	15	18
Potassium	ppm	ASTM D5185m	>20	<1	2	4

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		138477	131948	158489
Particles >6µm	ASTM D7647	>1300	40356	31285	47532
Particles >14µm	ASTM D7647	>160	591	289	634
Particles >21µm	ASTM D7647	>40	76	35	56
Particles >38µm	ASTM D7647	>10	1	0	1
Particles >71µm	ASTM D7647	>3	0	0	0
Oil Cleanliness	ISO 4406 (c)	>--/17/14	24/23/16	24/22/15	24/23/16

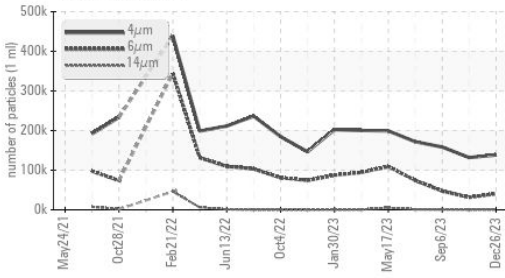
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.37	0.37	0.37

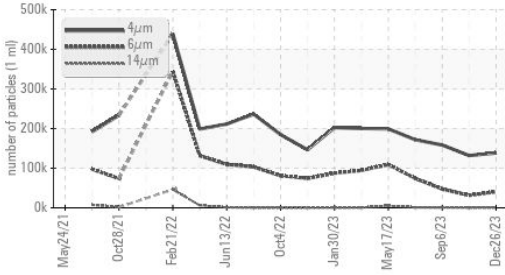


OIL ANALYSIS REPORT

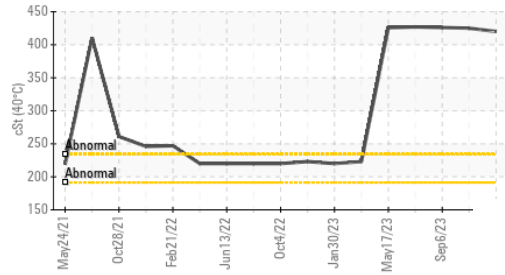
▲ Particle Trend



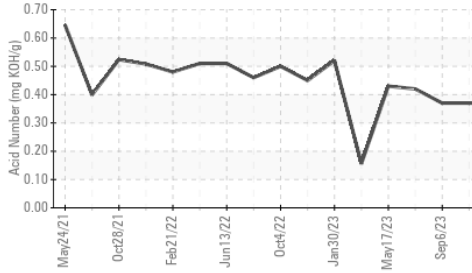
▲ Particle Trend



▲ Viscosity @ 40°C



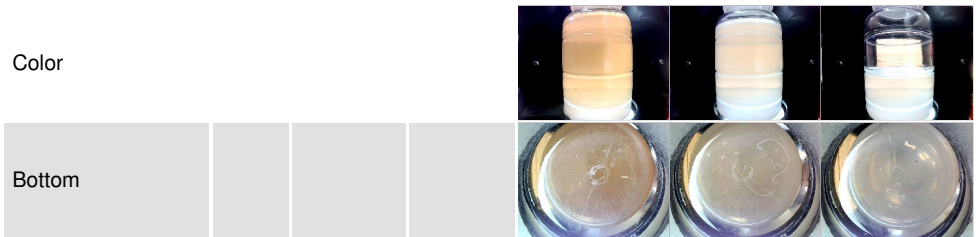
Acid Number



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

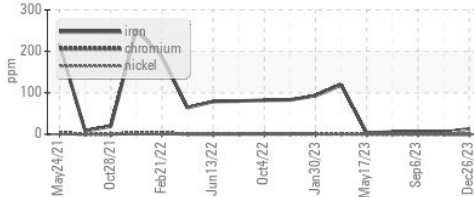
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	▲ 420	▲ 425	▲ 426

SAMPLE IMAGES	method	limit/base	current	history1	history2
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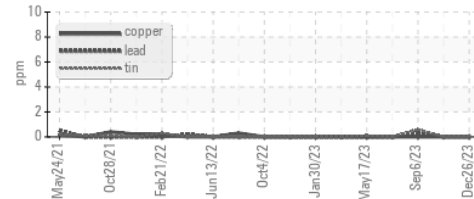


GRAPHS

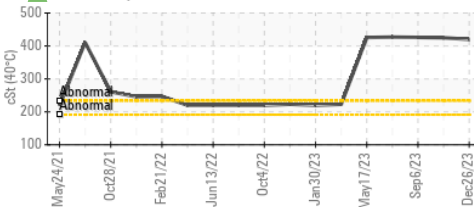
Ferrous Alloys



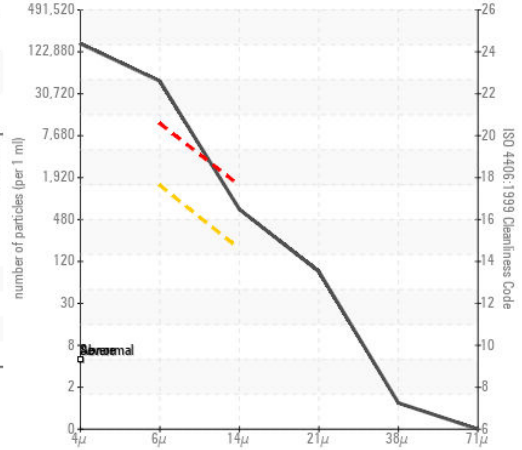
Non-ferrous Metals



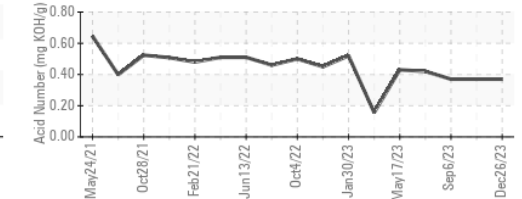
▲ Viscosity @ 40°C



▲ Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : WC0872437
 Lab Number : 06055900
 Unique Number : 10821849
 Test Package : IND 2 (Additional Tests: PrtCount)

Received : 09 Jan 2024
 Diagnosed : 11 Jan 2024
 Diagnostician : Jonathan Hester

Rochelle Foods - PRE
 1001 South Main, P.O. Box 45
 Rochelle, IL
 US 61068
 Contact: JAMES ROBINSON III
 jrobinson3@hormel.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: (815)562-4147