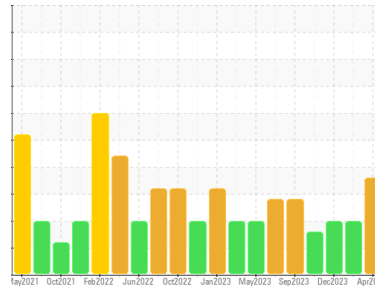




OIL ANALYSIS REPORT

Sample Rating Trend



WATER



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. We were unable to perform a particle count due to a high concentration of particles present in this sample.

Wear

An increase in the iron level is noted. All other component wear rates are normal.

Contamination

Appearance is hazy. There is a light concentration of water present in the oil. Moderate concentration of visible dirt/debris 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	WC0921285	WC0885419	WC0872437
Sample Date	Client Info	15 Apr 2024	20 Feb 2024	26 Dec 2023
Machine Age	hrs	0	0	0
Oil Age	hrs	0	0	0
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 >200	165	25	13
Chromium	ppm	ASTM D5185m >10	1	0	0
Nickel	ppm	ASTM D5185m >10	0	<1	0
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m	0	0	0
Aluminum	ppm	ASTM D5185m >25	11	23	24
Lead	ppm	ASTM D5185m >50	0	0	0
Copper	ppm	ASTM D5185m >200	0	<1	0
Tin	ppm	ASTM D5185m >10	0	0	0
Vanadium	ppm	ASTM D5185m	0	0	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	0	0	0
Manganese	ppm	ASTM D5185m	2	<1	0
Magnesium	ppm	ASTM D5185m	0	3	0
Calcium	ppm	ASTM D5185m	<1	27	22
Phosphorus	ppm	ASTM D5185m	302	538	571
Zinc	ppm	ASTM D5185m	0	0	0
Sulfur	ppm	ASTM D5185m	697	592	481

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >50	11	21	19
Sodium	ppm	ASTM D5185m	6	15	16
Potassium	ppm	ASTM D5185m >20	0	2	<1
Water	%	ASTM D6304 >0.2	0.327	---	---
ppm Water	ppm	ASTM D6304 >2000	3270	---	---

FLUID CLEANLINESS

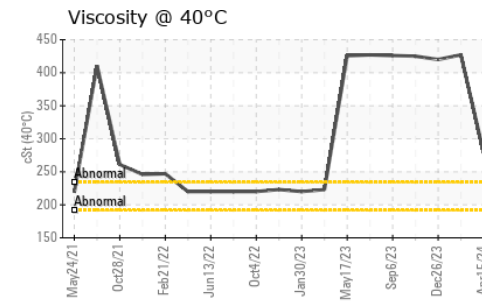
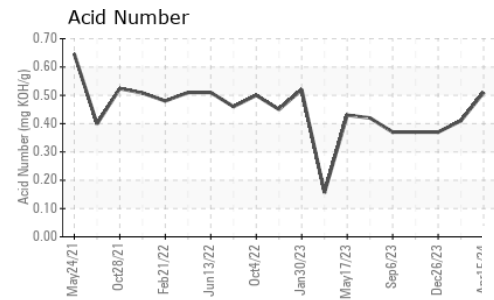
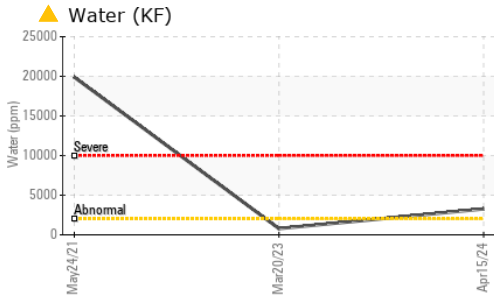
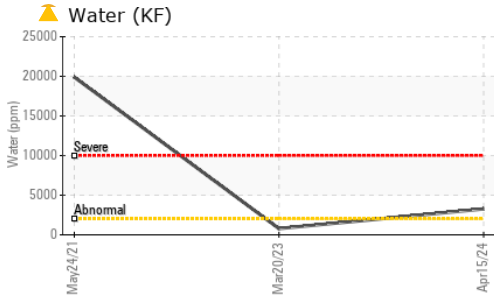
method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	---	243906	138477
Particles >6µm	ASTM D7647 >1300	---	96307	40356
Particles >14µm	ASTM D7647 >160	---	2548	591
Particles >21µm	ASTM D7647 >40	---	322	76
Particles >38µm	ASTM D7647 >10	---	1	1
Particles >71µm	ASTM D7647 >3	---	0	0
Oil Cleanliness	ISO 4406 (c) >--/17/14	---	25/24/19	24/23/16

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045	0.51	0.41	0.37



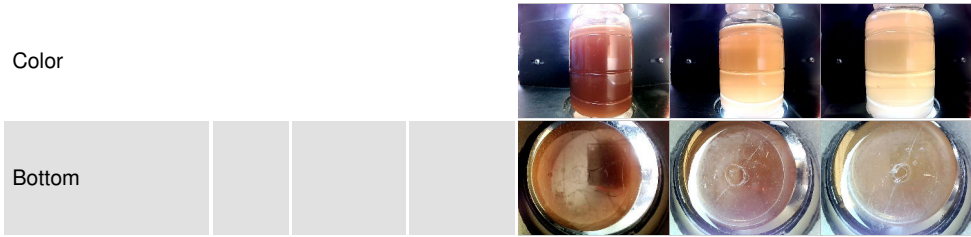
OIL ANALYSIS REPORT



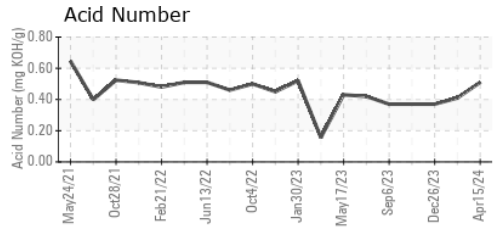
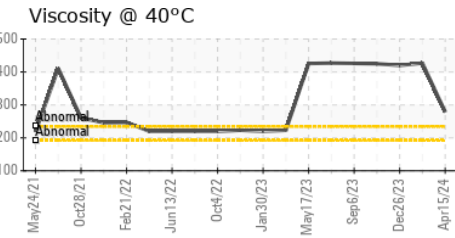
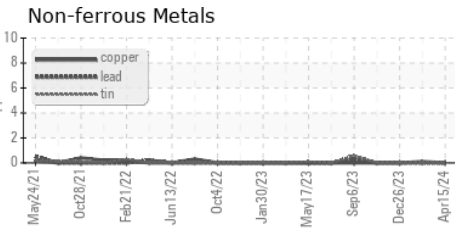
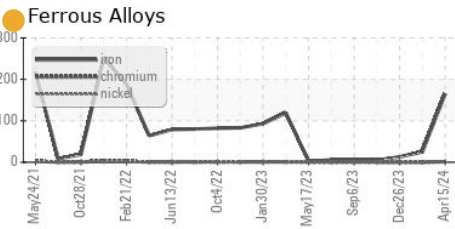
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	MODER	NONE
Debris	scalar	*Visual	NONE	MODER	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	279	427	420

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0921285 **Received** : 26 Apr 2024
Lab Number : 06161424 **Tested** : 30 Apr 2024
Unique Number : 10996847 **Diagnosed** : 30 Apr 2024 - Don Baldrige
Test Package : IND 2 (Additional Tests: KF, PftCount)

Rochelle Foods - PRE
 1001 South Main, P.O. Box 45
 Rochelle, IL
 US 61068
 Contact: JAMES ROBINSON III
 jrobinson3@hormel.com
 T:

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)

F: (815)562-4147