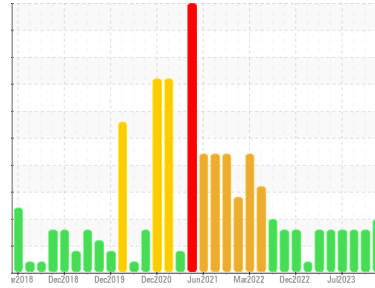




OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Area
SOUTH KETTLE ROOM
Machine Id
B46483 - KETTLE 9

Component
Gearbox
Fluid
PETRO CANADA ENDURATEX SYNTHETIC EP 220 (3 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 particulates 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		WC0872461	WC0866816	WC0842456
Sample Date	Client Info		10 Jan 2024	13 Nov 2023	18 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	3	7	6
Chromium	ppm	ASTM D5185m	>10	0	<1	0
Nickel	ppm	ASTM D5185m	>10	0	<1	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	17	18	18
Lead	ppm	ASTM D5185m	>50	0	0	0
Copper	ppm	ASTM D5185m	>200	<1	<1	<1
Tin	ppm	ASTM D5185m	>10	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	<1	0

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	33	0	0	0
Barium	ppm	ASTM D5185m	5	0	0	0
Molybdenum	ppm	ASTM D5185m		0	<1	0
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	5	<1	1	<1
Calcium	ppm	ASTM D5185m	5	13	21	21
Phosphorus	ppm	ASTM D5185m	437	522	566	524
Zinc	ppm	ASTM D5185m	5	0	0	6
Sulfur	ppm	ASTM D5185m	5000	510	519	606

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>50	15	17	15
Sodium	ppm	ASTM D5185m		10	12	12
Potassium	ppm	ASTM D5185m	>20	0	1	<1

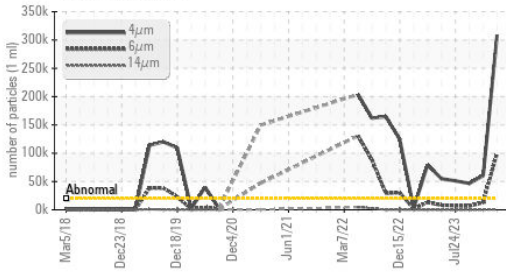
FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	▲ 308574	▲ 60352	▲ 46553
Particles >6µm	ASTM D7647	>5000	▲ 99582	▲ 13232	▲ 6504
Particles >14µm	ASTM D7647	>640	▲ 743	370	94
Particles >21µm	ASTM D7647	>160	36	27	10
Particles >38µm	ASTM D7647	>40	2	1	1
Particles >71µm	ASTM D7647	>10	0	0	1
Oil Cleanliness	ISO 4406 (c)	>21/19/16	▲ 25/24/17	▲ 23/21/16	▲ 23/20/14

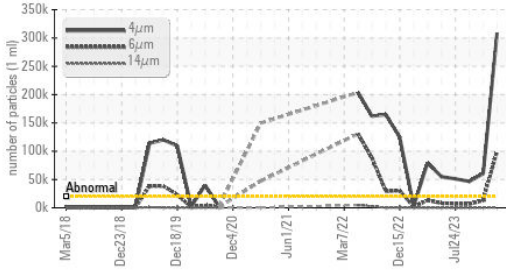
FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045	0.7	0.40	0.34	0.38

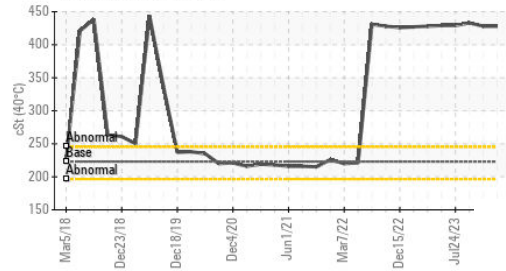
▲ Particle Trend



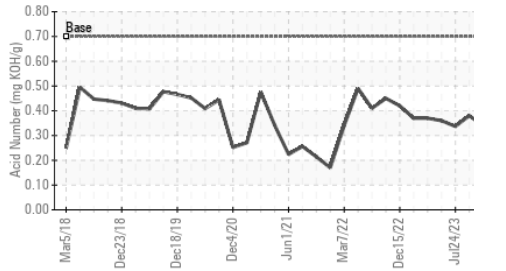
▲ Particle Trend



▲ Viscosity @ 40°C



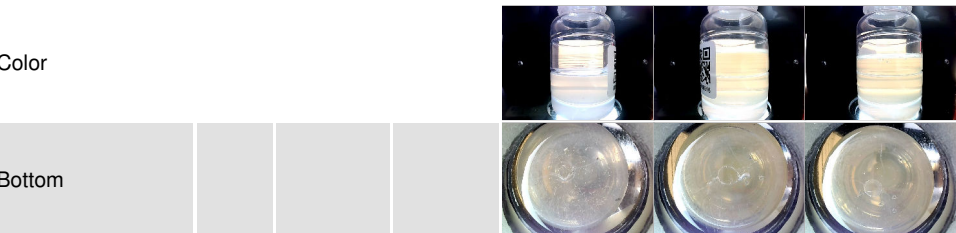
Acid Number



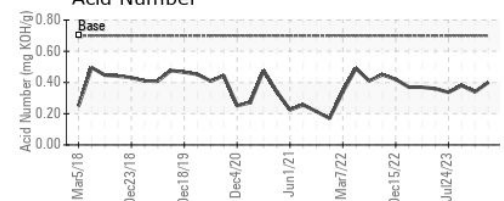
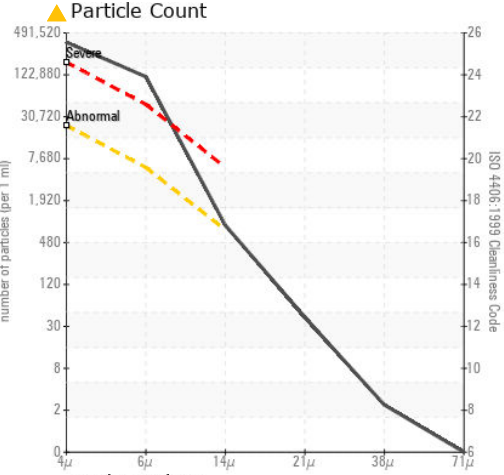
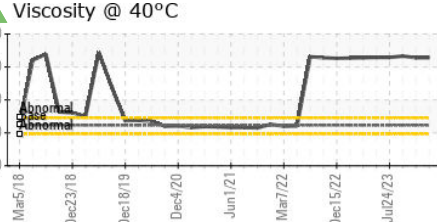
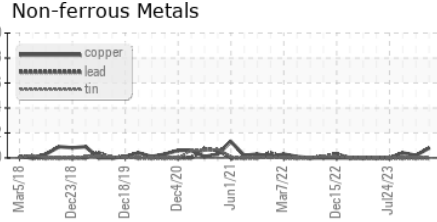
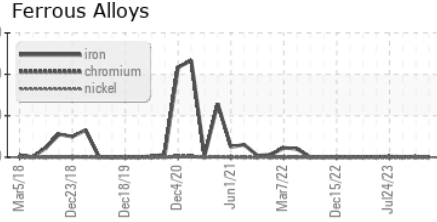
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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 223	▲ 428	▲ 428	▲ 433

SAMPLE IMAGES



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0872461 **Received** : 19 Jan 2024
Lab Number : 06065573 **Diagnosed** : 24 Jan 2024
Unique Number : 10836955 **Diagnostician** : Doug Bogart
Test Package : IND 2 (Additional Tests: PrtCount)

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

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)