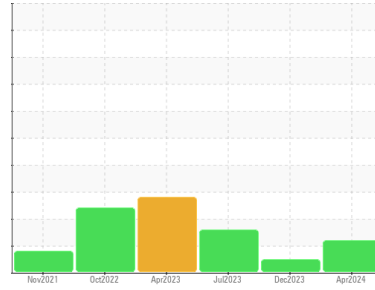




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area
PROD
Machine Id
KETTLE 7 TUBLINE
Component
Refrigeration Compressor
Fluid
PETRO CANADA PURITY FG EP GEAR OIL 220 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Insufficient sample was received to conduct all the routine laboratory tests. There is a high amount of silt (particulates < 14 microns in size) present in the oil.

Fluid Condition

The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		USP0006694	USP0004461	USP250219
Sample Date	Client Info		25 Apr 2024	17 Dec 2023	05 Jul 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	NORMAL	MARGINAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >8	3	<1	<1
Chromium	ppm	ASTM D5185m >2	0	0	0
Nickel	ppm	ASTM D5185m	0	0	0
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >3	<1	0	<1
Lead	ppm	ASTM D5185m >2	0	0	0
Copper	ppm	ASTM D5185m >8	0	0	1
Tin	ppm	ASTM D5185m >4	0	0	1
Vanadium	ppm	ASTM D5185m	0	0	<1
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	<1
Molybdenum	ppm	ASTM D5185m	0	0	0
Manganese	ppm	ASTM D5185m	0	0	0
Magnesium	ppm	ASTM D5185m	0	0	0
Calcium	ppm	ASTM D5185m	0	0	0
Phosphorus	ppm	ASTM D5185m	505	521	594
Zinc	ppm	ASTM D5185m	0	0	0
Sulfur	ppm	ASTM D5185m	413	386	923

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >15	6	13	▲ 18
Sodium	ppm	ASTM D5185m	<1	<1	<1
Potassium	ppm	ASTM D5185m >20	0	0	2
Water	%	ASTM D6304 >0.01	0.001	0.007	0.001
ppm Water	ppm	ASTM D6304 >100	14	80	6.0

FLUID CLEANLINESS

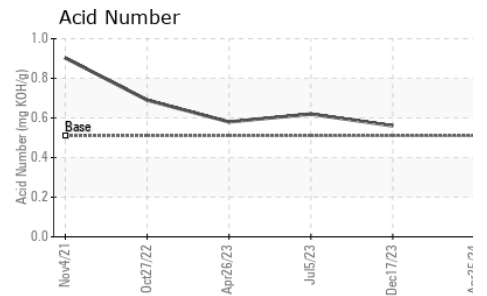
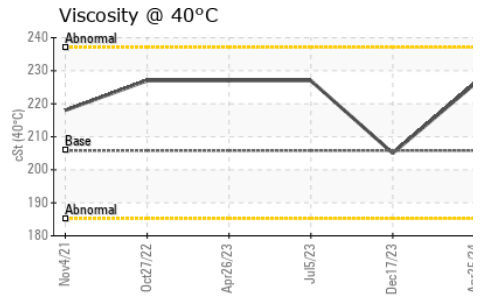
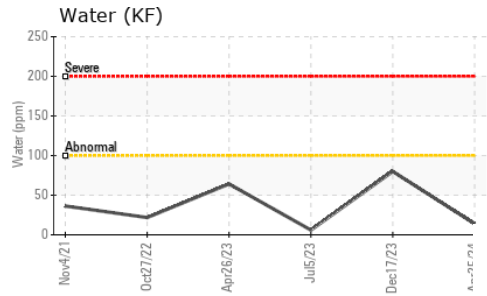
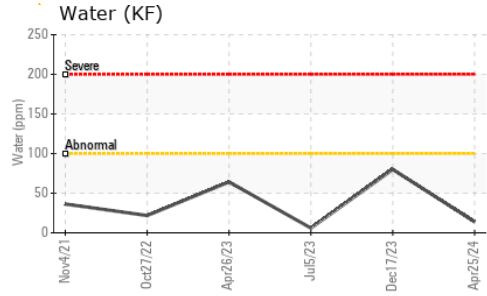
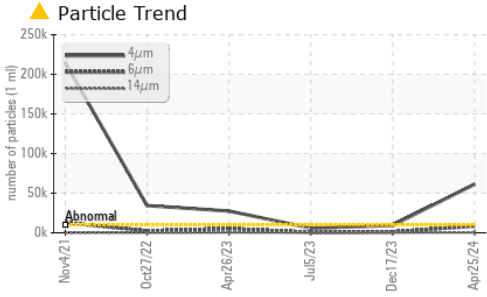
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>10000	▲ 61351	9369	5854
Particles >6µm	ASTM D7647	>2500	▲ 8543	1155	501
Particles >14µm	ASTM D7647	>640	343	48	21
Particles >21µm	ASTM D7647	>160	83	11	7
Particles >38µm	ASTM D7647	>40	3	2	1
Particles >71µm	ASTM D7647	>10	0	1	0
Oil Cleanliness	ISO 4406 (c)	>20/18/16	▲ 23/20/16	20/17/13	20/16/12

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974 0.51	---	0.56	0.62



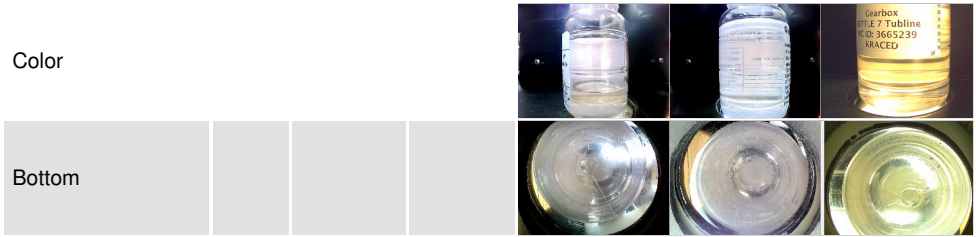
OIL ANALYSIS REPORT



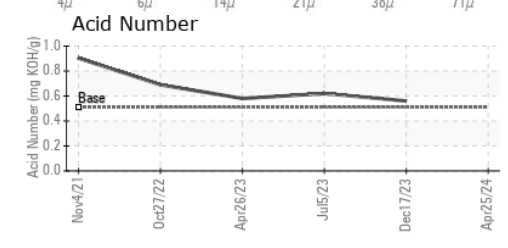
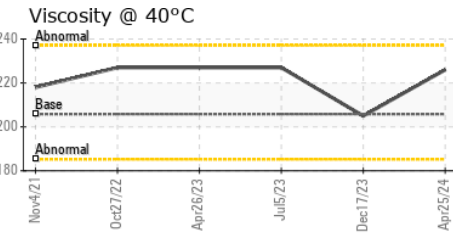
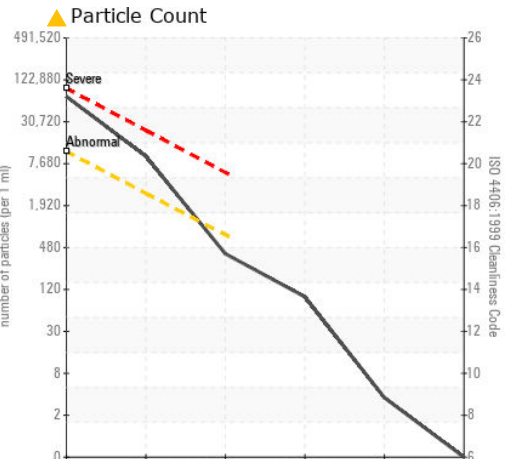
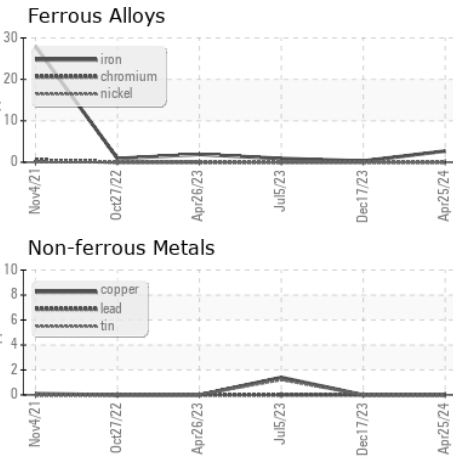
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.01	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	205.8	226	205

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : USP006694
Lab Number : 06161492
Unique Number : 10996915
Test Package : IND 2
Received : 26 Apr 2024
Tested : 30 Apr 2024
Diagnosed : 30 Apr 2024 - Jonathan Hester

KraftHeinz - Cedar Rapids - Plant 8370
 4601 C ST SW
 CEDAR RAPIDS, IA
 US 52404
 Contact: Service Manager

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)