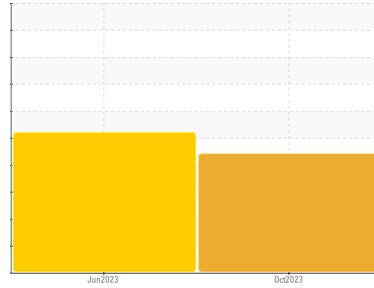




PROBLEM SUMMARY

Sample Rating Trend



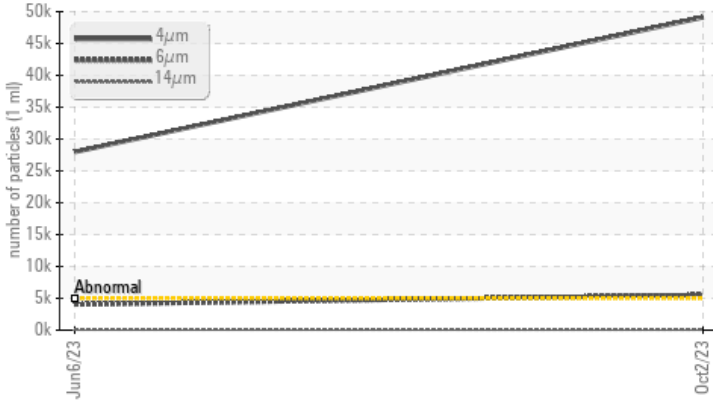
WATER



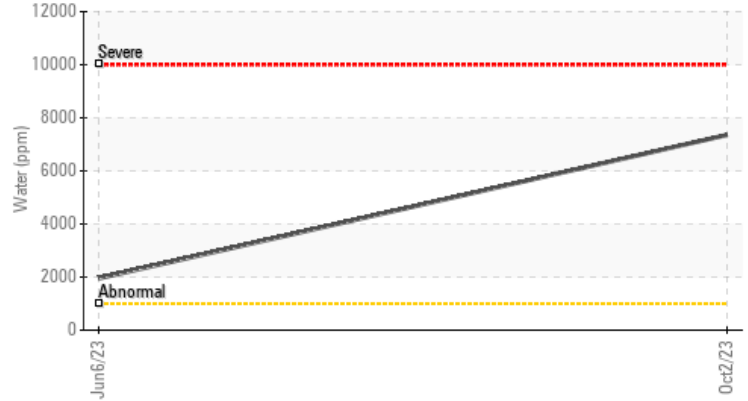
Area
[111169]
 Machine Id
DUMPER #4
 Component
Hydraulic System
 Fluid
PETRO CANADA PURITY FG AW HYDRAULIC 32 (3 LTR)

COMPONENT CONDITION SUMMARY

Particle Trend



Water (KF)



RECOMMENDATION

We advise that you check for the source of water entry. Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation. Please specify the component make and model with your next sample.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	ABNORMAL	---
Water	%	ASTM D6304*	>0.1	▲ 0.735	▲ 0.194	---
ppm Water	ppm	ASTM D6304*	>1000	▲ 7355.7	▲ 1949.6	---
Particles >4µm		ASTM D7647	>5000	● 49106	▲ 27971	---
Particles >6µm		ASTM D7647	>1300	▲ 5515	▲ 4029	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	● 23/20/14	▲ 22/19/14	---
Appearance	scalar	Visual*	NORML	▲ MILKY	▲ WGOIL	---
Emulsified Water	scalar	Visual*	>0.1	▲ .2%	▲ .2%	---

Customer Id: GRA685CAM
 Sample No.: WC0850438
 Lab Number: 02586793
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Kevin Marson +1 (289)291-4644 x4644
Kevin.Marson@wearcheck.com

To change component or sample information:
 Gloria Gonzalez +1 (289)291-4643 x4643
gloria.gonzalez@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	---	---	?	We recommend you service the filters on this component.
Resample	---	---	?	Resample in 30-45 days to monitor this situation.
Information Required	---	---	?	Please specify the component make and model with your next sample.
Check Breathers	---	---	?	The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather.
Check Water Access	---	---	?	We advise that you check for the source of water entry.
Check Seals	---	---	?	Check seals and/or filters for points of contaminant entry.

HISTORICAL DIAGNOSIS

06 Jun 2023 Diag: Kevin Marson

WATER



We advise that you check for the source of water entry. We advise that you follow the water drain-off procedure for this component. We advise that you use off-line filtration with water adsorbent filters to attempt to remove the water from this oil. We recommend you service the filters on this component. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample. All component wear rates are normal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. There is a moderate concentration of water present in the oil. Free water present. The AN level is acceptable for this fluid.

view report





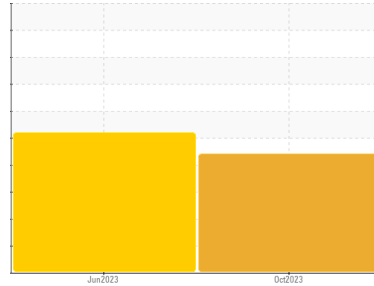
OIL ANALYSIS REPORT

Sample Rating Trend

WATER



Area
[111169]
 Machine Id
DUMPER #4
 Component
Hydraulic System
 Fluid
PETRO CANADA PURITY FG AW HYDRAULIC 32 (3 LTR)



DIAGNOSIS

Recommendation

We advise that you check for the source of water entry. Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation. Please specify the component make and model with your next sample.

Wear

All component wear rates are normal.

Contamination

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

Fluid Condition

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0850438	WC0808202	---
Sample Date	Client Info		02 Oct 2023	06 Jun 2023	---
Machine Age	mths	Client Info	0	0	---
Oil Age	mths	Client Info	3	0	---
Oil Changed	Client Info		N/A	N/A	---
Sample Status			SEVERE	ABNORMAL	---

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>20	11	6	---
Chromium	ppm	ASTM D5185(m)	>10	<1	0	---
Nickel	ppm	ASTM D5185(m)	>10	0	0	---
Titanium	ppm	ASTM D5185(m)		0	0	---
Silver	ppm	ASTM D5185(m)		<1	0	---
Aluminum	ppm	ASTM D5185(m)	>10	5	<1	---
Lead	ppm	ASTM D5185(m)	>10	0	0	---
Copper	ppm	ASTM D5185(m)	>75	<1	0	---
Tin	ppm	ASTM D5185(m)	>10	0	0	---
Antimony	ppm	ASTM D5185(m)		0	0	---
Vanadium	ppm	ASTM D5185(m)		0	0	---
Beryllium	ppm	ASTM D5185(m)		0	0	---
Cadmium	ppm	ASTM D5185(m)		0	0	---

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)		<1	0	---
Barium	ppm	ASTM D5185(m)		<1	0	---
Molybdenum	ppm	ASTM D5185(m)		0	0	---
Manganese	ppm	ASTM D5185(m)		0	0	---
Magnesium	ppm	ASTM D5185(m)		0	0	---
Calcium	ppm	ASTM D5185(m)		<1	0	---
Phosphorus	ppm	ASTM D5185(m)		439	490	---
Zinc	ppm	ASTM D5185(m)		2	1	---
Sulfur	ppm	ASTM D5185(m)		459	523	---
Lithium	ppm	ASTM D5185(m)		<1	<1	---

CONTAMINANTS

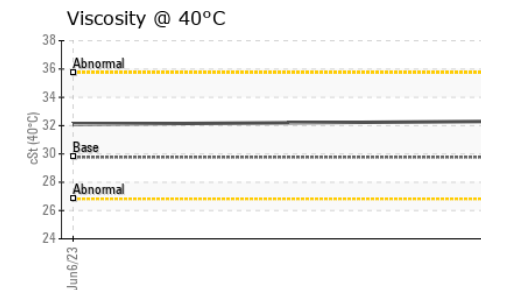
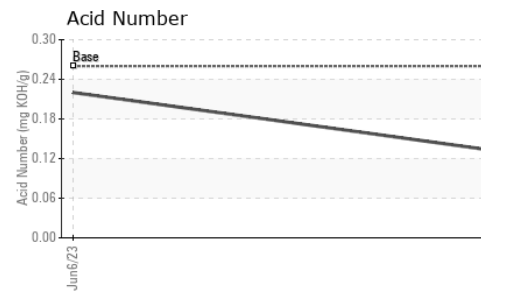
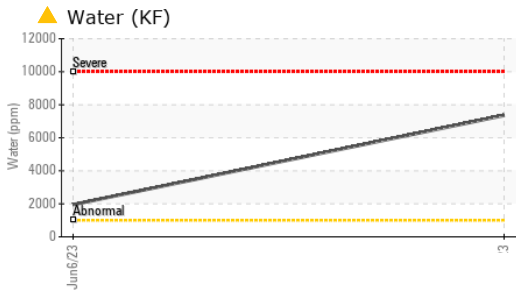
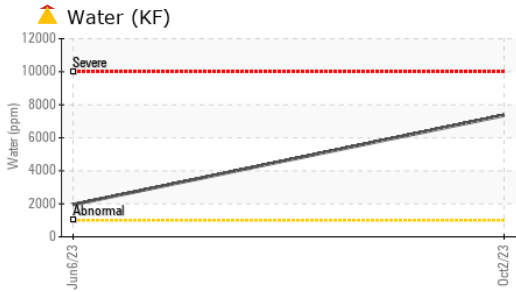
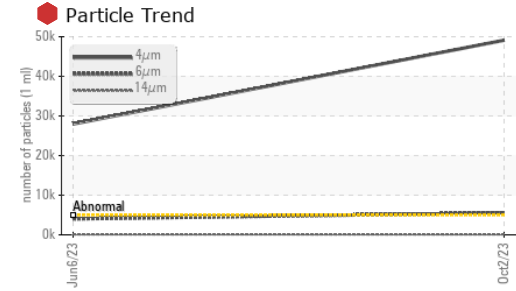
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>20	4	4	---
Sodium	ppm	ASTM D5185(m)		3	1	---
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	---
Water	%	ASTM D6304*	>0.1	▲ 0.735	▲ 0.194	---
ppm Water	ppm	ASTM D6304*	>1000	▲ 7355.7	▲ 1949.6	---

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	▲ 49106	▲ 27971	---
Particles >6µm	ASTM D7647	>1300	▲ 5515	▲ 4029	---
Particles >14µm	ASTM D7647	>160	109	116	---
Particles >21µm	ASTM D7647	>40	19	21	---
Particles >38µm	ASTM D7647	>10	2	0	---
Particles >71µm	ASTM D7647	>3	0	0	---
Oil Cleanliness	ISO 4406 (c)	>19/17/14	▲ 23/20/14	▲ 22/19/14	---



OIL ANALYSIS REPORT

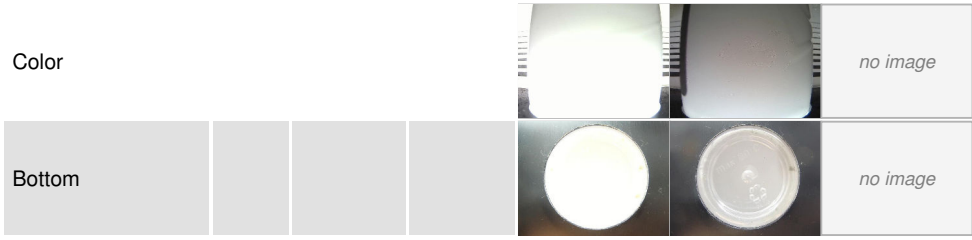


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.26	0.13	0.22	---

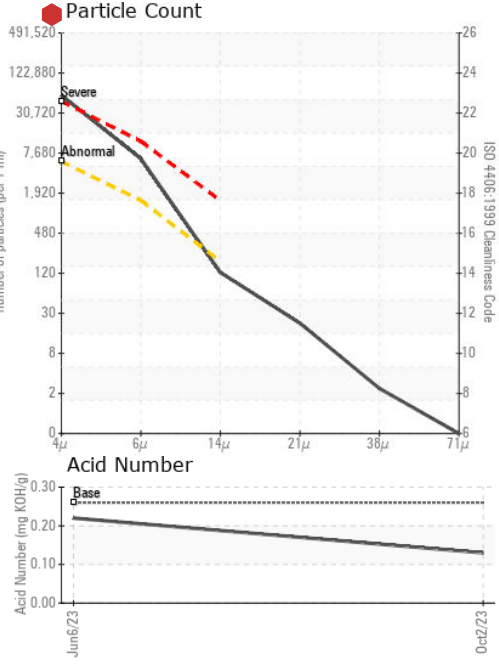
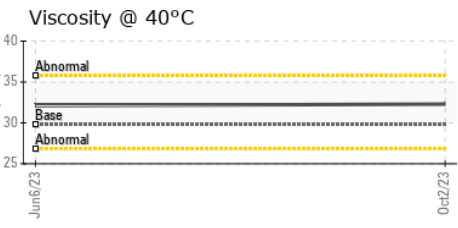
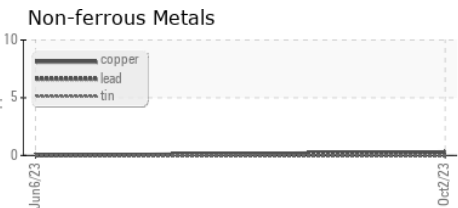
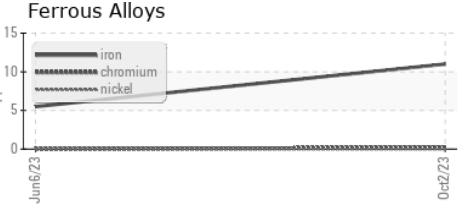
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE	---
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	---
Precipitate	scalar	Visual*	NONE	VLITE	NONE	---
Silt	scalar	Visual*	NONE	NONE	NONE	---
Debris	scalar	Visual*	NONE	NONE	NONE	---
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	---
Appearance	scalar	Visual*	NORML	▲ MILKY	▲ WGOIL	---
Odor	scalar	Visual*	NORML	NORML	NORML	---
Emulsified Water	scalar	Visual*	>0.1	▲ .2%	▲ .2%	---
Free Water	scalar	Visual*		NEG	▲ 1%	---

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	29.77	32.3	32.1	---

SAMPLE IMAGES		method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0850438 **Received** : 04 Oct 2023
Lab Number : **02586793** **Diagnosed** : 05 Oct 2023
Unique Number : 5655859 **Diagnostician** : Kevin Marson
Test Package : IND 2 (Additional Tests: KF)

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 190 VONDRAU DRIVE
 CAMBRIDGE, ON
 CA N3E 1B8
 Contact: Ryan Shea
 rshea@grandriverfoods.com
 T: (519)653-3577
 F:

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.