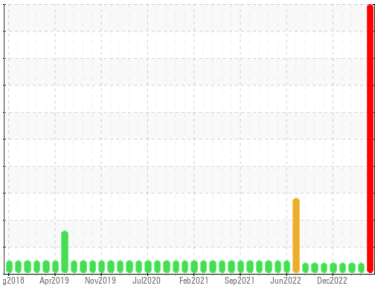
PROBLEM SUMMARY

Sample Rating Trend

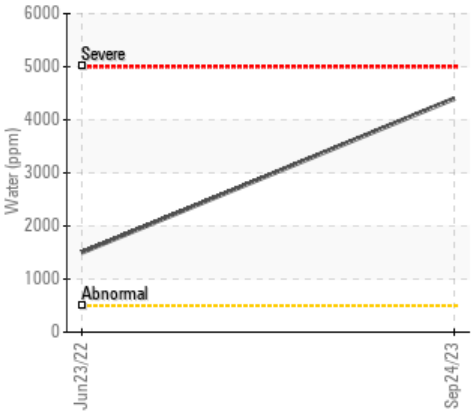


VISUAL METAL

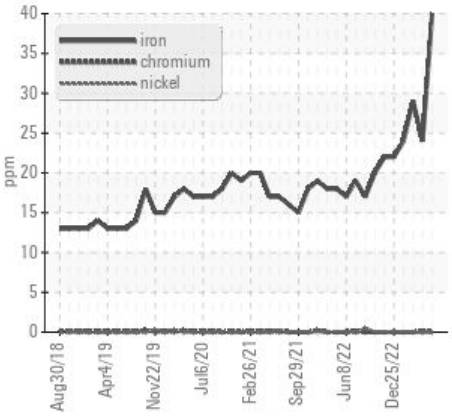
Area
RP-101 [10023546082]
Machine Id
B57009 COOKER DISCHARGE
Component
Hydraulic System
Fluid
PETRO CANADA PURITY FG HYDRAULIC AW 68 (--- QTS)

COMPONENT CONDITION SUMMARY

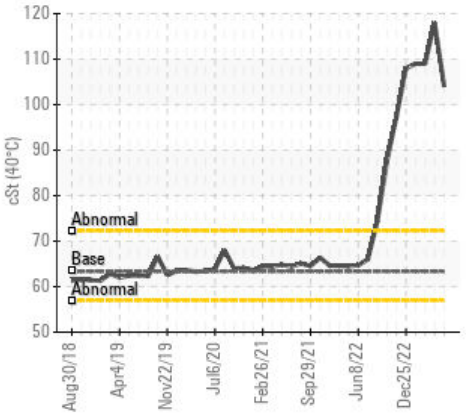
▲ Water (KF)



▲ Ferrous Alloys



▲ Viscosity @ 40°C



RECOMMENDATION

We advise that you check for the source of water entry. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. We were unable to perform a particle count due to metal particles present in this sample.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	ATTENTION	ATTENTION
Iron	ppm	ASTM D5185m	>20	▲ **40**	24	29
Water	%	ASTM D6304	>0.05	▲ **0.440**	---	---
ppm Water	ppm	ASTM D6304	>500	▲ **4400**	---	---
White Metal	scalar	*Visual	NONE	⬢ **HEAVY**	NONE	NONE
Visc @ 40°C	cSt	ASTM D445	63.34	▲ **104**	▲ 118	▲ 109

Customer Id: HORAUS
Sample No.: WC0851170
Lab Number: 05964574
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Jonathan Hester +1 919-379-4092 x4092
jhester@wearcheckusa.com

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Inspect Wear Source	---	---	?	We advise that you inspect for the source(s) of wear.
Change Filter	---	---	?	We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Alert	---	---	?	We were unable to perform a particle count due to metal particles present in this sample.
Check Water Access	---	---	?	We advise that you check for the source of water entry.
Filter Fluid	---	---	?	We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid.

HISTORICAL DIAGNOSIS

09 Jul 2023 Diag: Don Baldridge

VISCOSITY

Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. The oil viscosity is higher than normal. The AN level is acceptable for this fluid.

view report

30 Mar 2023 Diag: Don Baldridge

VISCOSITY

Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. The oil viscosity is higher than normal. The AN level is acceptable for this fluid.

view report

14 Feb 2023 Diag: Don Baldridge

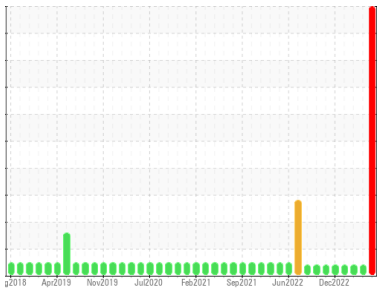
VISCOSITY

Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. The oil viscosity is higher than normal. The AN level is acceptable for this fluid.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



VISUAL METAL

Area
RP-101 [10023546082]
Machine Id
B57009 COOKER DISCHARGE
Component
Hydraulic System
Fluid
PETRO CANADA PURITY FG HYDRAULIC AW 68 (--- QTS)

DIAGNOSIS

Recommendation

We advise that you check for the source of water entry. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. We were unable to perform a particle count due to metal particles present in this sample.

Wear

The iron level is abnormal. High concentration of visible metal present.

Contamination

There is a moderate concentration of water present in the oil.

Fluid Condition

The oil viscosity is higher than normal. The AN level is acceptable for this fluid.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0851170**	WC0826163	WC0765468
Sample Date		Client Info		**24 Sep 2023**	09 Jul 2023	30 Mar 2023
Machine Age	mths	Client Info		**0**	0	0
Oil Age	mths	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**SEVERE**	ATTENTION	ATTENTION

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	▲ **40**	24	29
Chromium	ppm	ASTM D5185m	>20	**0**	<1	0
Nickel	ppm	ASTM D5185m	>20	**0**	0	0
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**0**	2	0
Lead	ppm	ASTM D5185m	>20	**0**	<1	0
Copper	ppm	ASTM D5185m	>20	**0**	<1	0
Tin	ppm	ASTM D5185m	>20	**<1**	<1	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**	1	0
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**0**	0	0
Manganese	ppm	ASTM D5185m		**2**	1	<1
Magnesium	ppm	ASTM D5185m		**3**	0	2
Calcium	ppm	ASTM D5185m		**8**	0	0
Phosphorus	ppm	ASTM D5185m		**425**	401	395
Zinc	ppm	ASTM D5185m		**29**	9	0
Sulfur	ppm	ASTM D5185m		**1579**	2227	1291

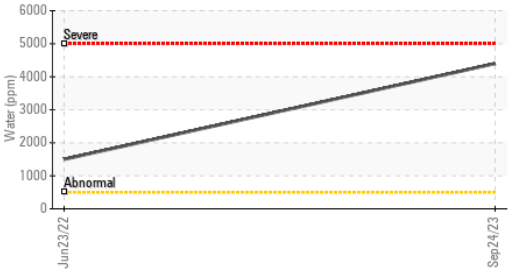
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	**2**	2	3
Sodium	ppm	ASTM D5185m		**2**	<1	<1
Potassium	ppm	ASTM D5185m	>20	**0**	1	0
Water	%	ASTM D6304	>0.05	▲ **0.440**	---	---
ppm Water	ppm	ASTM D6304	>500	▲ **4400**	---	---

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	**---**	2784	1582
Particles >6µm		ASTM D7647	>2500	**---**	741	445
Particles >14µm		ASTM D7647	>320	**---**	56	50
Particles >21µm		ASTM D7647	>80	**---**	16	14
Particles >38µm		ASTM D7647	>20	**---**	1	1
Particles >71µm		ASTM D7647	>4	**---**	0	0
Oil Cleanliness		ISO 4406 (c)	>20/18/15	**---**	19/17/13	18/16/13

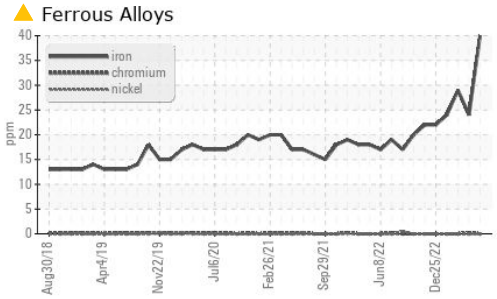
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.26	**0.41**	0.38	0.34

OIL ANALYSIS REPORT

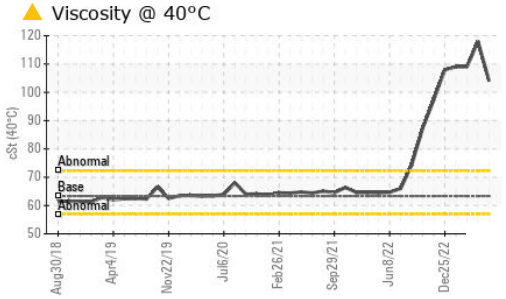
Water (KF)



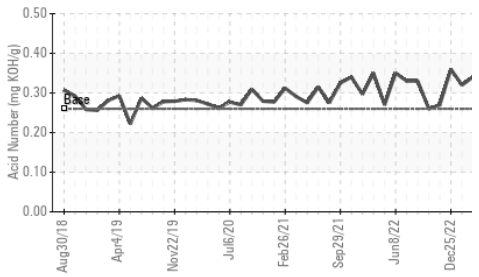
Ferrous Alloys



Viscosity @ 40°C

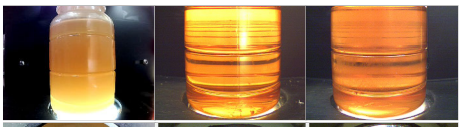
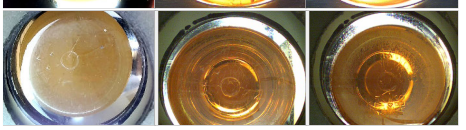


Acid Number



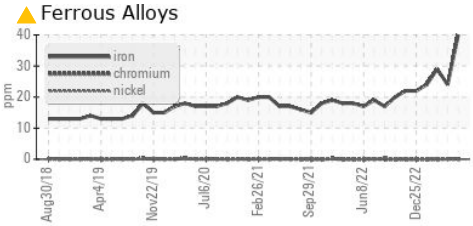
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**HEAVY**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	**0.2%**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	63.34	**104**	118	109

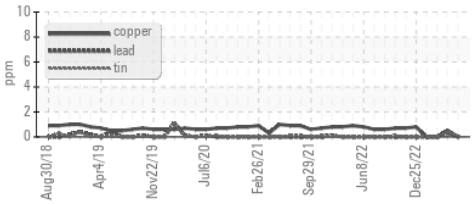
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

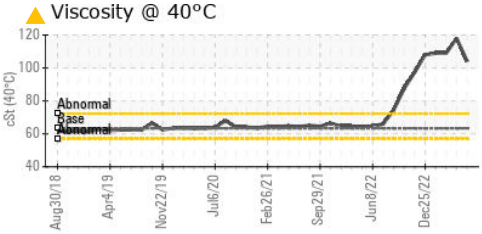
Ferrous Alloys



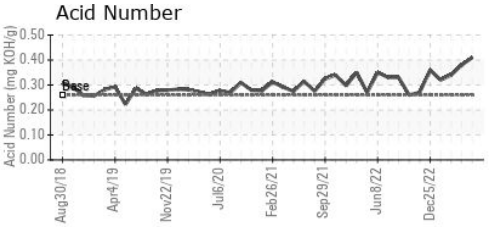
Non-ferrous Metals



Viscosity @ 40°C



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0851170 **Received** : 29 Sep 2023
Lab Number : 05964574 **Diagnosed** : 05 Oct 2023
Unique Number : 10671125 **Diagnostician** : Jonathan Hester
Test Package : IND 2 (Additional Tests: KF)

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)

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