



PROBLEM SUMMARY

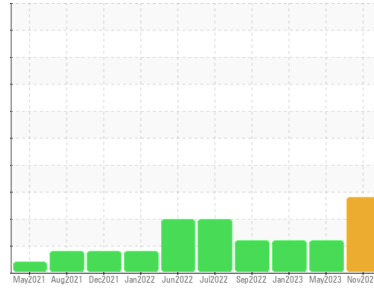
Sample Rating Trend

ISO



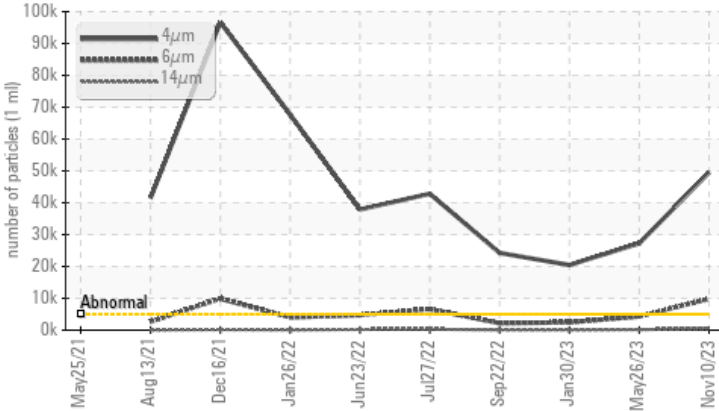
Area
COLD MILL/CM-5-STAND
Machine Id
K-UNIT HPU 1710-002-1031

Component
Hydraulic System
Fluid
PETRO CANADA HYDREX AW 68 (1000 GAL)



COMPONENT CONDITION SUMMARY

Particle Trend



RECOMMENDATION

We advise that you check all areas where contaminants can enter the system. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. 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. Resample in 30-45 days to monitor this situation.

PROBLEMATIC TEST RESULTS

Sample Status	ASTM D7647	SEVERE	ABNORMAL	ABNORMAL
Particles >4µm	>5000	49515	27261	20451
Particles >6µm	>1300	9795	4297	2450
Particles >14µm	>160	530	139	55
Particles >21µm	>40	147	24	10
Oil Cleanliness	ISO 4406 (c)	23/20/16	22/19/14	22/18/13

Customer Id: CONMUSAL
Sample No.: KFS0004941
Lab Number: 06007651
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
Wes Davis +1 905-569-8600 x223
wesd@wearcheck.ca

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

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	---	---	?	We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid.
Resample	---	---	?	Resample in 30-45 days to monitor this situation.
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 Dirt Access	---	---	?	We advise that you check all areas where contaminants can enter the system.
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

26 May 2023 Diag: Wes Davis

ISO



We recommend you service the filters on this component. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

view report



30 Jan 2023 Diag: Jonathan Hester

ISO



No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



22 Sep 2022 Diag: Don Baldrige

ISO



We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

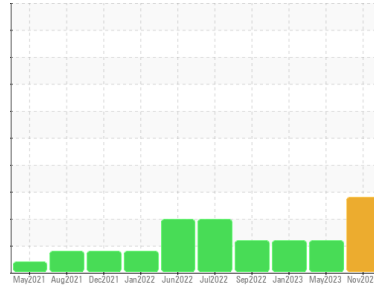
view report





OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area
COLD MILL/CM-5-STAND
Machine Id
K-UNIT HPU 1710-002-1031

Component
Hydraulic System
Fluid
PETRO CANADA HYDREX AW 68 (1000 GAL)

DIAGNOSIS

Recommendation

We advise that you check all areas where contaminants can enter the system. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. 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. Resample in 30-45 days to monitor this situation.

Wear

All component wear rates are normal.

Contamination

There is a high amount of particulates (2 to 100 microns in size) 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		KFS0004941	KFS0003374	KFS0002520
Sample Date	Client Info		10 Nov 2023	26 May 2023	30 Jan 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			SEVERE	ABNORMAL	ABNORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >20	0	2	2
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	0	<1
Lead	ppm	ASTM D5185m >20	0	<1	<1
Copper	ppm	ASTM D5185m >20	2	3	4
Tin	ppm	ASTM D5185m >20	0	0	0
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	<1	<1

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	0	0	0
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 0	0	0	0
Manganese	ppm	ASTM D5185m 0	0	0	0
Magnesium	ppm	ASTM D5185m 0	0	2	1
Calcium	ppm	ASTM D5185m 50	45	49	46
Phosphorus	ppm	ASTM D5185m 330	335	330	334
Zinc	ppm	ASTM D5185m 430	434	441	428
Sulfur	ppm	ASTM D5185m 760	825	953	1015

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >15	0	<1	<1
Sodium	ppm	ASTM D5185m	<1	<1	2
Potassium	ppm	ASTM D5185m >20	0	<1	0

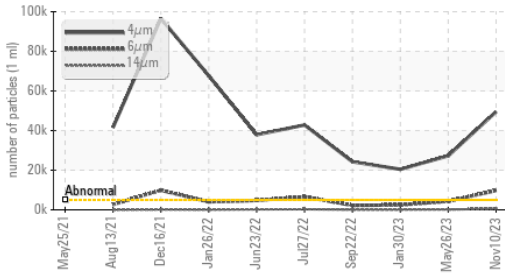
FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	49515	27261	20451
Particles >6µm	ASTM D7647	>1300	9795	4297	2450
Particles >14µm	ASTM D7647	>160	530	139	55
Particles >21µm	ASTM D7647	>40	147	24	10
Particles >38µm	ASTM D7647	>10	8	1	1
Particles >71µm	ASTM D7647	>3	1	0	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	23/20/16	22/19/14	22/18/13

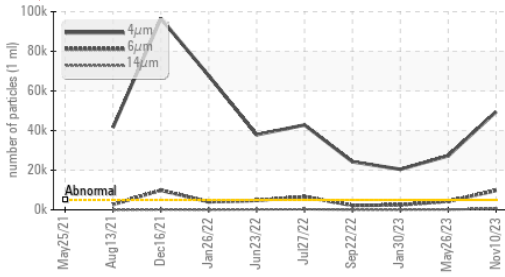
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 0.60	0.39	0.43	0.41

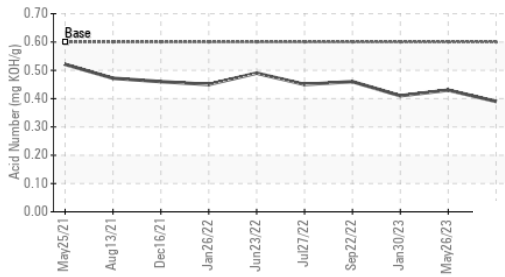
Particle Trend



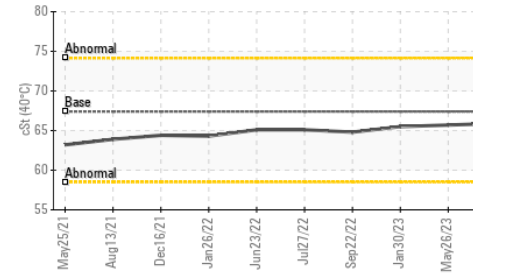
Particle Trend



Acid Number



Viscosity @ 40°C



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	>0.05	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	67.4	65.9	65.7

SAMPLE IMAGES	method	limit/base	current	history1	history2
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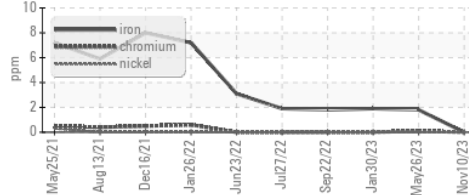
Color



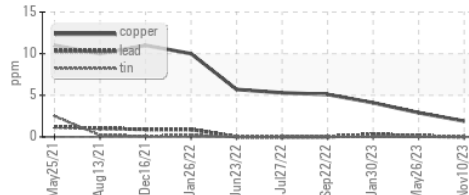
Bottom

GRAPHS

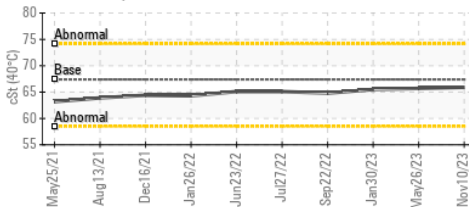
Ferrous Alloys



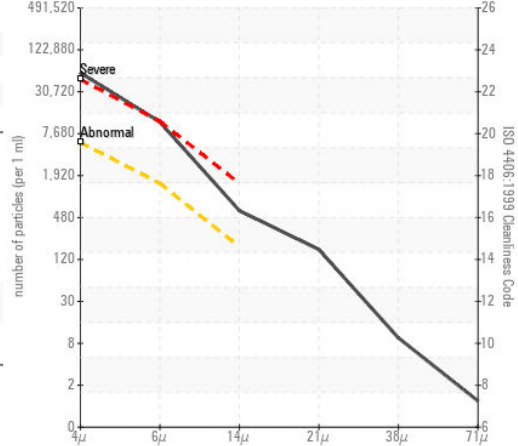
Non-ferrous Metals



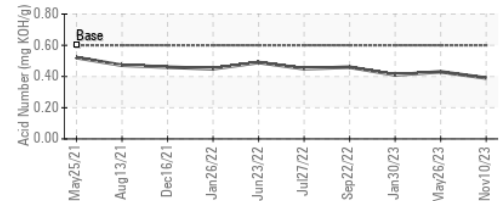
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KFS0004941 **Received** : 14 Nov 2023
Lab Number : 06007651 **Diagnosed** : 15 Nov 2023
Unique Number : 10741413 **Diagnostician** : Wes Davis
Test Package : IND 2

CONSTELLIUM
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 MUSCLE SHOALS, AL
 US 35661
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 T: (256)386-6956
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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)