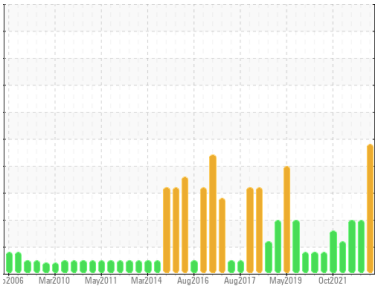
PROBLEM SUMMARY

Sample Rating Trend

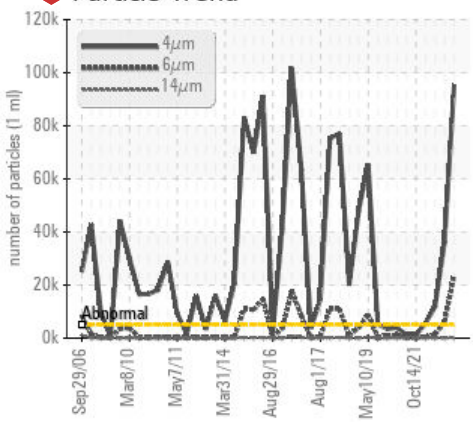


ISO

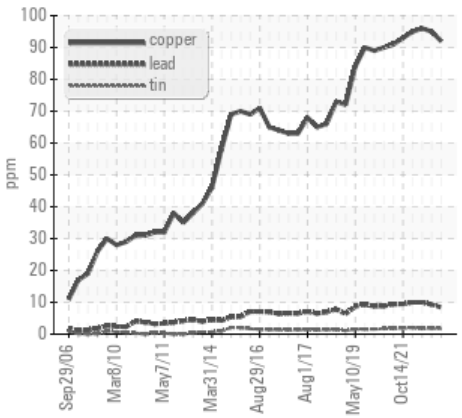
Machine Id
PRESS #5 (S/N MPR-49611)
Component
Hydraulic System
Fluid
PETRO CANADA HYDREX AW 68 (4000 GAL)

COMPONENT CONDITION SUMMARY

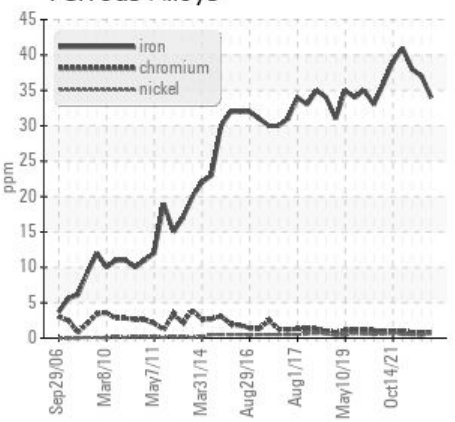
Particle Trend



Non-ferrous Metals



Ferrous Alloys



RECOMMENDATION

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 contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using Advanced Oil Monitoring (AOM) kits for this system. The AOM test package includes advanced level testing to determine the suitability of turbine and large industrial compressor oils for continued use.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	ABNORMAL	ABNORMAL
Copper	ppm	ASTM D5185(m)	>20	▲ **92**	▲ 95	▲ 96
Particles >4µm		ASTM D7647	>5000	⬢ **95394**	▲ 36251	▲ 11926
Particles >6µm		ASTM D7647	>1300	⬢ **23627**	▲ 5993	▲ 1478
Particles >14µm		ASTM D7647	>160	▲ **187**	115	75
Oil Cleanliness		ISO 4406 (c)	>19/17/14	⬢ **24/22/15**	▲ 22/20/14	▲ 21/18/13

Customer Id: EXTWOO
Sample No.: PC0076109
Lab Number: 02562613
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.
Contact Required	---	---	?	Please contact your representative for information regarding the proper sampling kits for your service.
Alert	---	---	?	NOTE: We recommend using Advanced Oil Monitoring (AOM) kits for this system. The AOM test package includes advanced level testing to determine the suitability of turbine and large industrial compressor oils for continued use.
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 Seals	---	---	?	Check seals and/or filters for points of contaminant entry.

HISTORICAL DIAGNOSIS

WEAR

02 Nov 2022 Diag: Kevin Marson

We recommend you service the filters on this component. We recommend an early resample to monitor this condition. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using Advanced Oil Monitoring (AOM) kits for this system. The AOM test package includes advanced level testing to determine the suitability of turbine and large industrial compressor oils for continued use. this testkit includes Analytical Ferrography which provides a detailed morphological analysis of wear particles present in the fluid.Copper ppm levels are noted. All other component wear rates are normal. Particles >4µm are abnormally high. Particles >6µm and oil cleanliness are abnormally high. The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service (unconfirmed). The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

view report

WEAR

22 Jun 2022 Diag: Kevin Marson

We recommend you service the filters on this component. We recommend an early resample to monitor this condition. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using Advanced Oil Monitoring (AOM) kits for this system. The AOM test package includes advanced level testing to determine the suitability of turbine and large industrial compressor oils for continued use.Copper ppm levels are noted. All other component wear rates are normal. Particles >4µm and oil cleanliness are abnormally high. Particles >6µm are notably high. The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service (unconfirmed). The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

view report

WEAR

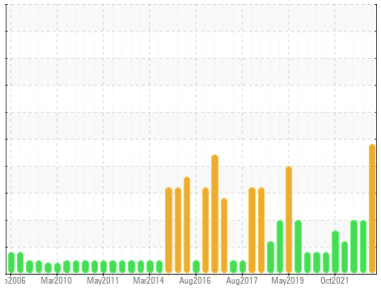
11 Feb 2022 Diag: Kevin Marson

We recommend you service the filters on this component. Resample at the next service interval to monitor. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using Advanced Oil Monitoring (AOM) kits for this system. The AOM test package includes advanced level testing to determine the suitability of turbine and large industrial compressor oils for continued use.Copper ppm levels are noted. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion. All other component wear rates are normal. There is a light 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 acceptable for the time in service (unconfirmed).

view report

OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Machine Id
PRESS #5 (S/N MPR-49611)
Component
Hydraulic System
Fluid
PETRO CANADA HYDREX AW 68 (4000 GAL)

DIAGNOSIS

Recommendation

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 contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using Advanced Oil Monitoring (AOM) kits for this system. The AOM test package includes advanced level testing to determine the suitability of turbine and large industrial compressor oils for continued use.

Wear

Copper ppm levels are noted. All other component wear rates are normal.

Contamination

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

Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service (unconfirmed). 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		**PC0076109**	PC0062183	PC0058501
Sample Date		Client Info		**02 Jun 2023**	02 Nov 2022	22 Jun 2022
Machine Age	yrs	Client Info		**0**	0	0
Oil Age	yrs	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
PQ		ASTM D8184*		**0**	0	0
Iron	ppm	ASTM D5185(m)	>20	**34**	37	38
Chromium	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)		**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>20	**8**	9	9
Lead	ppm	ASTM D5185(m)	>20	**8**	9	10
Copper	ppm	ASTM D5185(m)	>20	▲ **92**	▲ 95	▲ 96
Tin	ppm	ASTM D5185(m)	>20	**2**	2	2
Antimony	ppm	ASTM D5185(m)		**<1**	<1	0
Vanadium	ppm	ASTM D5185(m)		**0**	0	0
Beryllium	ppm	ASTM D5185(m)		**0**	0	0
Cadmium	ppm	ASTM D5185(m)		**0**	0	0

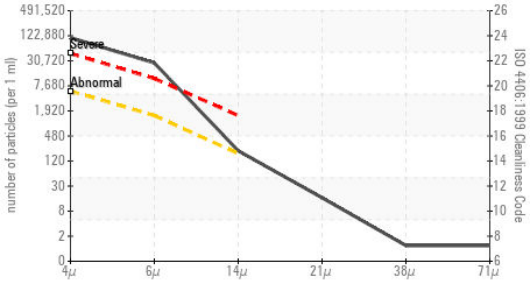
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	**<1**	<1	<1
Barium	ppm	ASTM D5185(m)	0	**<1**	<1	<1
Molybdenum	ppm	ASTM D5185(m)	0	**0**	0	0
Manganese	ppm	ASTM D5185(m)	0	**1**	1	1
Magnesium	ppm	ASTM D5185(m)	0	**66**	61	58
Calcium	ppm	ASTM D5185(m)	50	**108**	106	102
Phosphorus	ppm	ASTM D5185(m)	330	**598**	596	569
Zinc	ppm	ASTM D5185(m)	430	**534**	533	531
Sulfur	ppm	ASTM D5185(m)	760	**1834**	1937	2000
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	**2**	2	3
Sodium	ppm	ASTM D5185(m)		**4**	4	3
Potassium	ppm	ASTM D5185(m)	>20	**<1**	<1	<1

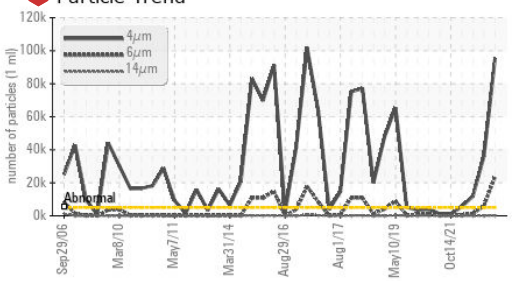
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	⬢ **95394**	▲ 36251	▲ 11926
Particles >6µm		ASTM D7647	>1300	⬢ **23627**	▲ 5993	▲ 1478
Particles >14µm		ASTM D7647	>160	▲ **187**	115	75
Particles >21µm		ASTM D7647	>40	**14**	17	13
Particles >38µm		ASTM D7647	>10	**1**	2	1
Particles >71µm		ASTM D7647	>3	**1**	1	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	⬢ **24/22/15**	▲ 22/20/14	▲ 21/18/13

OIL ANALYSIS REPORT

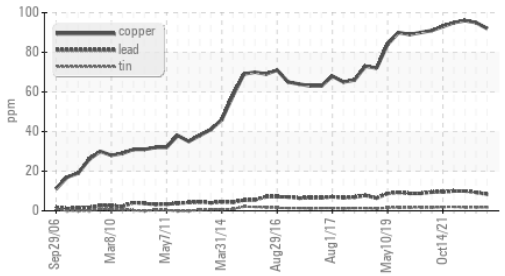
Particle Count



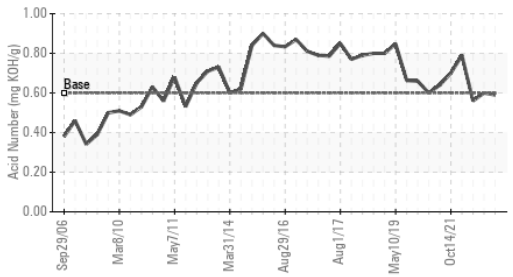
Particle Trend



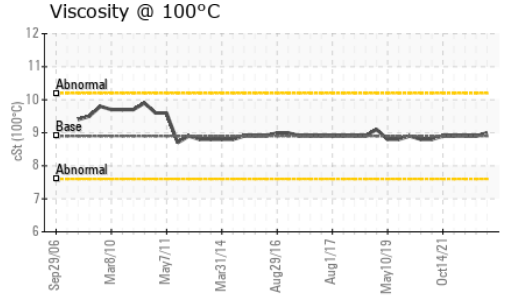
Non-ferrous Metals



Acid Number



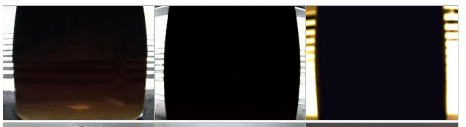
Viscosity @ 100°C



FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.60	**0.59**	0.60	0.56

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**NONE**	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	VLITE
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	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	67.4	**66.4**	66.2	65.6
Visc @ 100°C	cSt	ASTM D7279(m)	8.9	**9**	8.9	8.9
Viscosity Index (VI)	Scale	ASTM D2270*	105	**110**	108	109

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0076109 **Received** : 07 Jun 2023
Lab Number : 02562613 **Diagnosed** : 08 Jun 2023
Unique Number : 5591654 **Diagnostician** : Kevin Marson
Test Package : IND 2 (Additional Tests: KV100, PQ, VI)

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.

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