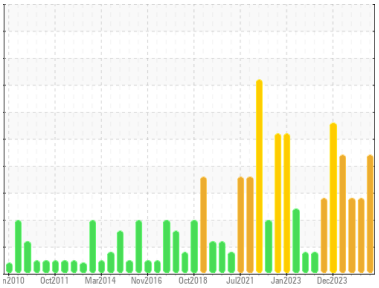
PROBLEM SUMMARY

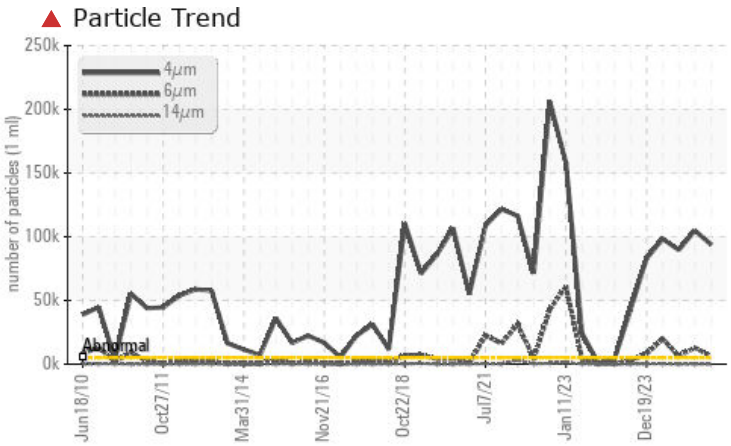
Area
[VALVE]
Machine Id
PRESS #8
Component
Hydraulic System
Fluid
PETRO CANADA HYDREX AW 68 (10000 GAL)

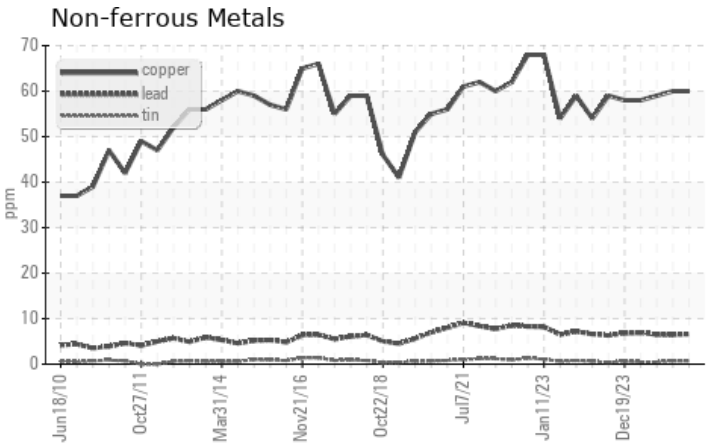
Sample Rating Trend



ISO

COMPONENT CONDITION SUMMARY





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. Confirm the source of the lubricant being utilized for top-up/fill. 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**	SEVERE	SEVERE
Particles >4µm		ASTM D7647	>5000	▲ **104866**	▲ 93866	▲ 89650
Particles >6µm		ASTM D7647	>1300	▲ **12877**	▲ 6353	▲ 6411
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **24/21/13**	▲ 24/20/13	▲ 24/20/13

Customer Id: EXTWOO
Sample No.: PC0081051
Lab Number: 02623044
Test Package: IND 2

To manage this report scan the QR code

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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 Fluid Source	---	---	?	Confirm the source of the lubricant being utilized for top-up/fill.
Check Seals	---	---	?	Check seals and/or filters for points of contaminant entry.

HISTORICAL DIAGNOSIS

ISO

14 Mar 2024 Diag: Kevin Marson

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. Confirm the source of the lubricant being utilized for top-up/fill. 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.Component wear rates appear to be normal (unconfirmed). There is a high amount of silt (particulates < 14 microns in size) present in the oil. Additive levels indicate the addition of a different brand, or type of oil. 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

ISO

09 Mar 2024 Diag: Kevin Marson

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. Confirm the source of the lubricant being utilized for top-up/fill. 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.All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. Additive levels indicate the addition of a different brand, or type of oil. 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

INSOLUBLES

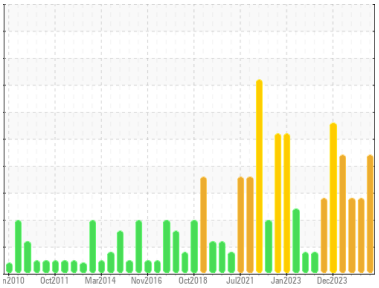
19 Dec 2023 Diag: Kevin Marson

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. We recommend that you use electrostatic filtration to remove insolubles from the oil and to reduce the levels of varnish in the system. Alternatively draining a percentage of the oil and topping up with fresh oil (sweetening the oil) may provide a reduction in the varnish potential level. Confirm the source of the lubricant being utilized for top-up/fill. 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.Copper ppm levels are noted. All other component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. MPC (Membrane Patch Colorimetry) test indicates a high concentration of varnish present. Additive levels indicate the addition of a different brand, or type of oil. 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

OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Area
[VALVE]
Machine Id
PRESS #8
Component
Hydraulic System
Fluid
PETRO CANADA HYDREX AW 68 (10000 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. Confirm the source of the lubricant being utilized for top-up/fill. 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

Component wear rates appear to be normal (unconfirmed).

Contamination

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

Fluid Condition

Additive levels indicate the addition of a different brand, or type of oil. 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		**PC0081051**	PC0081055	PC0081060
Sample Date		Client Info		**14 Mar 2024**	14 Mar 2024	09 Mar 2024
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**	SEVERE	SEVERE

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.05	**NEG**	NEG	NEG

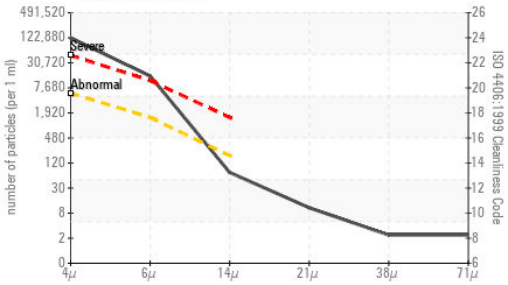
WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*		**0**	0	0
Iron	ppm	ASTM D5185(m)	>20	**33**	32	32
Chromium	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)		**0**	<1	0
Aluminum	ppm	ASTM D5185(m)	>20	**7**	7	7
Lead	ppm	ASTM D5185(m)	>20	**6**	7	6
Copper	ppm	ASTM D5185(m)	>20	**60**	60	59
Tin	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Antimony	ppm	ASTM D5185(m)		**0**	0	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	**0**	0	0
Barium	ppm	ASTM D5185(m)	0	**<1**	<1	<1
Molybdenum	ppm	ASTM D5185(m)	0	**0**	0	0
Manganese	ppm	ASTM D5185(m)	0	**0**	0	0
Magnesium	ppm	ASTM D5185(m)	0	**52**	52	52
Calcium	ppm	ASTM D5185(m)	50	**78**	78	77
Phosphorus	ppm	ASTM D5185(m)	330	**600**	603	603
Zinc	ppm	ASTM D5185(m)	430	**501**	503	503
Sulfur	ppm	ASTM D5185(m)	760	**1897**	1909	1909
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

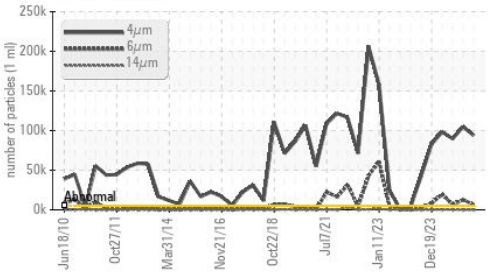
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	**3**	4	3
Sodium	ppm	ASTM D5185(m)		**2**	2	2
Potassium	ppm	ASTM D5185(m)	>20	**<1**	<1	1

OIL ANALYSIS REPORT

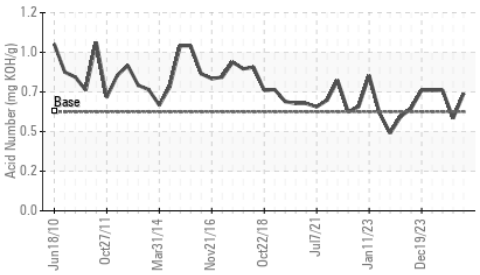
Particle Count



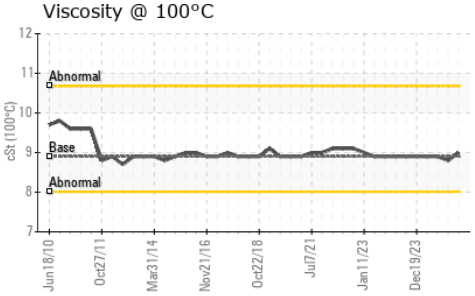
Particle Trend



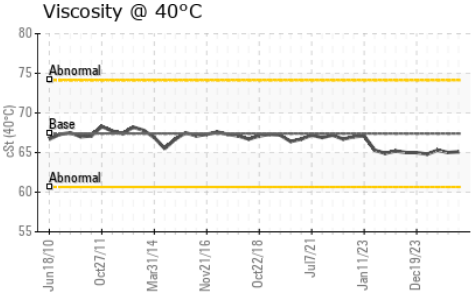
Acid Number



Viscosity @ 100°C



Viscosity @ 40°C

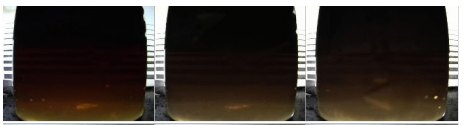


FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	▲ **104866**	▲ 93866	▲ 89650
Particles >6µm		ASTM D7647	>1300	▲ **12877**	▲ 6353	▲ 6411
Particles >14µm		ASTM D7647	>160	**63**	55	43
Particles >21µm		ASTM D7647	>40	**9**	13	8
Particles >38µm		ASTM D7647	>10	**2**	3	2
Particles >71µm		ASTM D7647	>3	**2**	1	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **24/21/13**	▲ 24/20/13	▲ 24/20/13

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.60	**0.71**	0.56	0.73

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	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	**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	**65.1**	65.0	65.3
Visc @ 100°C	cSt	ASTM D7279(m)	8.9	**9.0**	8.8	8.9
Viscosity Index (VI)	Scale	ASTM D2270*	105	**113**	108	110

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					
MPC			*no image*	*no image*	*no image*

ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0081051 **Received** : 19 Mar 2024
Lab Number : 02623044 **Tested** : 20 Mar 2024
Unique Number : 5748163 **Diagnosed** : 20 Mar 2024 - Kevin Marson
Test Package : IND 2 (Additional Tests: KV100, PQ, TAN Man, 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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