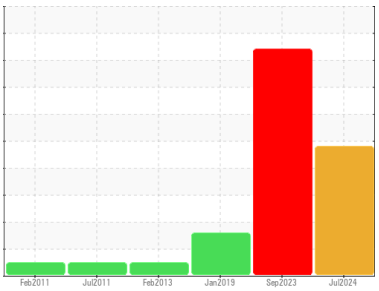
PROBLEM SUMMARY

Sample Rating Trend

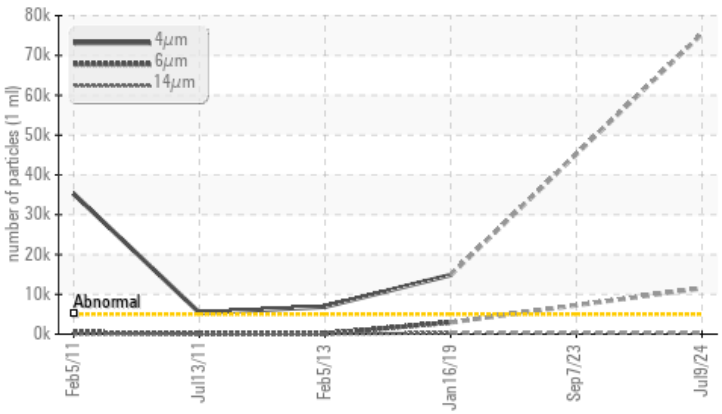


ISO

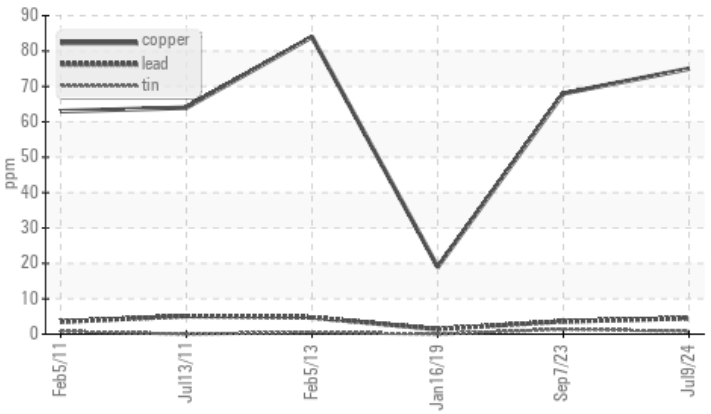
Machine Id
#3 SCHWING (S/N 0000203548)
Component
Hydraulic System
Fluid
PETRO CANADA HYDREX AW 46 (1200 LTR)

COMPONENT CONDITION SUMMARY

▲ Particle Trend



▲ Non-ferrous Metals



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 IND 3 test kits, this testkit includes Analytical Ferrography which provides a detailed morphological analysis of wear particles present in the fluid.

PROBLEMATIC TEST RESULTS

Sample Status				**SEVERE**	SEVERE	ABNORMAL
Copper	ppm	ASTM D5185(m)	>60	▲ **75**	▲ 68	19
Particles >4µm		ASTM D7647	>5000	▲ **75456**	---	▲ 14868
Particles >6µm		ASTM D7647	>1300	▲ **11564**	---	▲ 2944
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **23/21/15**	---	▲ 21/19/15

Customer Id: ONT130MIS
Sample No.: PC0058412
Lab Number: 02647804
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 IND 3 test kits,
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

07 Sep 2023 Diag: Kevin Marson

We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. Re-sampling is suggested to confirm test results prior to significant maintenance activities being performed. Please indicate that this is a resample on your Sample Information Form (SIF). Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using MOB 3 test kits, this testkit includes Particle Count to determine the ISO cleanliness of the fluid. this testkit includes Analytical Ferrography which provides a detailed morphological analysis of wear particles present in the fluid.Chromium ppm levels are severe. Copper ppm levels are abnormal. Aluminum ppm levels are noted. Cylinder liner, rod or spool wear is indicated. Oil cooler core leaching or motor piston wear is indicated. There is a moderate amount of visible silt present in the sample. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

view report

ISO

16 Jan 2019 Diag: Wes Davis

We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. We recommend an early resample to monitor this condition.All component wear rates are normal. Particles >21µm are abnormally high. Particles >4µm are abnormally high. Particles >6µm are abnormally high. Particles >14µm are notably high. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

NORMAL

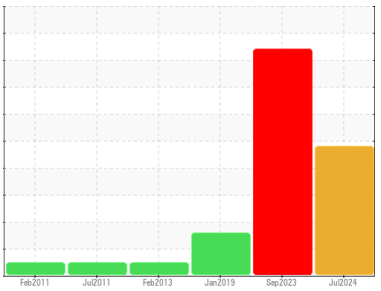
05 Feb 2013 Diag: Bill Quesnel

Resample at the next service interval to monitor.All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The TAN 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

Machine Id
#3 SCHWING (S/N 0000203548)
Component
Hydraulic System
Fluid
PETRO CANADA HYDREX AW 46 (1200 LTR)

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 IND 3 test kits, this testkit includes Analytical Ferrography which provides a detailed morphological analysis of wear particles present in the fluid.

Wear

Copper ppm levels are abnormal. Oil cooler core leaching or motor piston wear is indicated.

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 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		**PC0058412**	PC0075631	PC383593
Sample Date		Client Info		**09 Jul 2024**	07 Sep 2023	16 Jan 2019
Machine Age	hrs	Client Info		**66085**	61898	36157
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**Not Changd**	Not Changd	Not Changd
Sample Status				**SEVERE**	SEVERE	ABNORMAL

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

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>40	**4**	25	<1
Chromium	ppm	ASTM D5185(m)	>4	**3**	▲ 10	1
Nickel	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Titanium	ppm	ASTM D5185(m)		**0**	<1	0
Silver	ppm	ASTM D5185(m)		**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>4	**<1**	● 3	0
Lead	ppm	ASTM D5185(m)	>10	**4**	4	1
Copper	ppm	ASTM D5185(m)	>60	▲ **75**	▲ 68	19
Tin	ppm	ASTM D5185(m)	>4	**<1**	1	0
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	<1

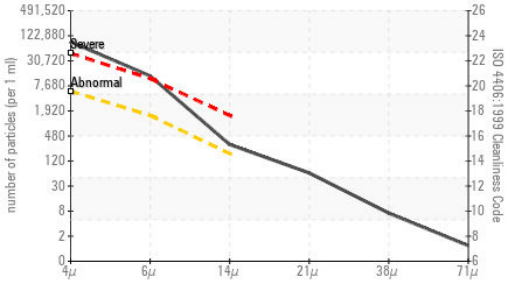
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	**0**	0	0
Barium	ppm	ASTM D5185(m)	0	**0**	0	0
Molybdenum	ppm	ASTM D5185(m)	0	**0**	0	0
Manganese	ppm	ASTM D5185(m)	0	**0**	<1	<1
Magnesium	ppm	ASTM D5185(m)	0	**<1**	2	<1
Calcium	ppm	ASTM D5185(m)	50	**51**	82	46
Phosphorus	ppm	ASTM D5185(m)	330	**323**	337	292
Zinc	ppm	ASTM D5185(m)	430	**378**	352	377
Sulfur	ppm	ASTM D5185(m)	760	**822**	886	1379
Lithium	ppm	ASTM D5185(m)		**<1**	<1	0

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>20	**2**	8	<1
Sodium	ppm	ASTM D5185(m)		**0**	1	0
Potassium	ppm	ASTM D5185(m)	>20	**<1**	2	0

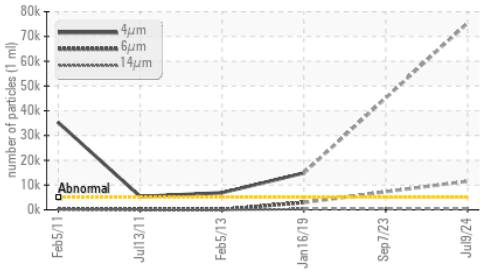
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	▲ **75456**	---	▲ 14868
Particles >6µm		ASTM D7647	>1300	▲ **11564**	---	▲ 2944
Particles >14µm		ASTM D7647	>160	● **263**	---	● 288
Particles >21µm		ASTM D7647	>40	**55**	---	▲ 86
Particles >38µm		ASTM D7647	>10	**6**	---	1
Particles >71µm		ASTM D7647	>3	**1**	---	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **23/21/15**	---	▲ 21/19/15

OIL ANALYSIS REPORT

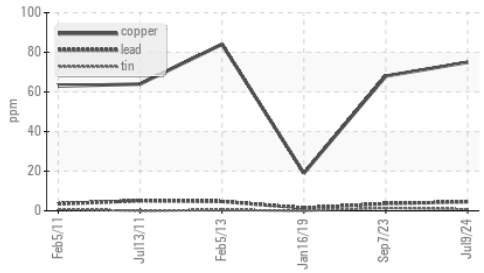
Particle Count



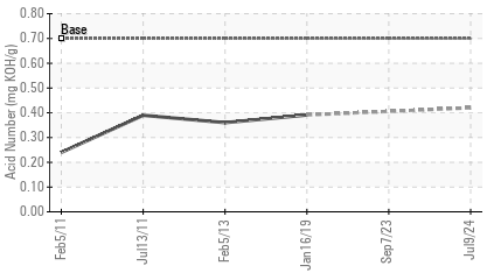
Particle Trend



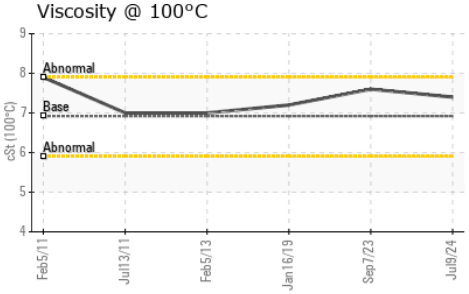
Non-ferrous Metals



Acid Number



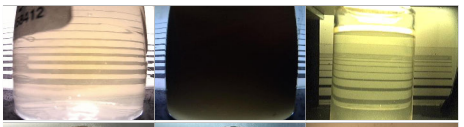
Viscosity @ 100°C



FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.70	**0.42**	---	0.391

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**VLITE**	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Precipitate	scalar	Visual*	NONE	**NONE**	NONE	NONE
Silt	scalar	Visual*	NONE	**NONE**	▲ HEAVY	NONE
Debris	scalar	Visual*	NONE	**NONE**	VLITE	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)	46.4	**45.9**	46.7	47.9
Visc @ 100°C	cSt	ASTM D7279(m)	6.92	**7.4**	7.6	7.2
Viscosity Index (VI)	Scale	ASTM D2270*	104	**124**	128	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. : PC0058412
Lab Number : 02647804
Unique Number : 5813356
Test Package : IND 2 (Additional Tests: Bottom, KV100, VI)

Received : 15 Jul 2024
Tested : 16 Jul 2024
Diagnosed : 16 Jul 2024 - Kevin Marson

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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