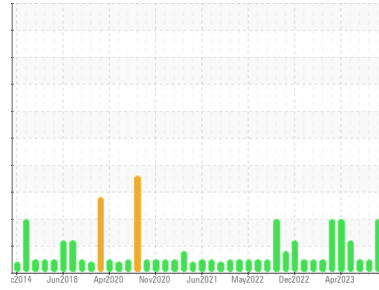


PROBLEM SUMMARY

Sample Rating Trend



ISO



Area
TEAM 3

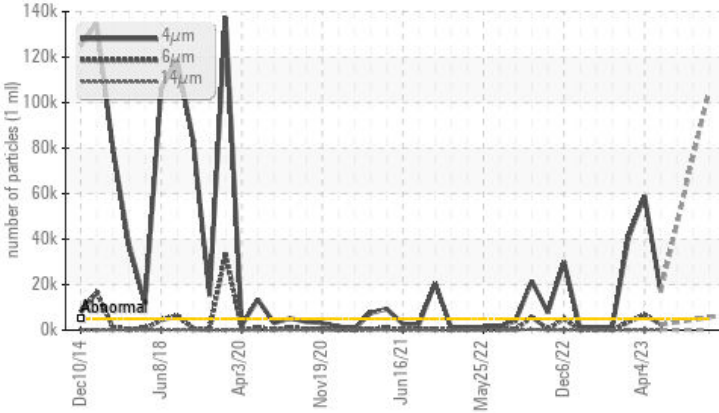
Machine Id
166125

Component
Hydraulic System

Fluid
PETRO CANADA HYDREX AW 46 (3900 LTR)

COMPONENT CONDITION SUMMARY

Particle Trend



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.

PROBLEMATIC TEST RESULTS

Sample Status			SEVERE	NORMAL	NORMAL
Particles >4µm	ASTM D7647	>5000	105211	---	---
Particles >6µm	ASTM D7647	>1300	5634	---	---
Oil Cleanliness	ISO 4406 (c)	>19/17/14	24/20/12	---	---

Customer Id: CANDRY
Sample No.: PC0069890
Lab Number: 02585876
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:
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.
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

08 Aug 2023 Diag: Wes Davis

NORMAL



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 condition of the oil is acceptable for the time in service.

view report



19 Jul 2023 Diag: Wes Davis

NORMAL



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 condition of the oil is acceptable for the time in service.

view report



24 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.

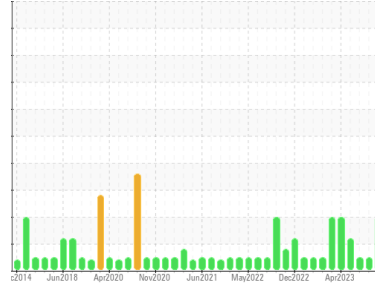
view report



Area
TEAM 3
Machine Id
166125

Component
Hydraulic System
Fluid

PETRO CANADA HYDREX AW 46 (3900 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.

Wear

All 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 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	PC0069890	PC0074812	PC0074857
Sample Date	Client Info	27 Sep 2023	08 Aug 2023	19 Jul 2023
Machine Age	mths	Client Info	0	0
Oil Age	mths	Client Info	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		SEVERE	NORMAL	NORMAL

WEAR METALS

method	limit/base	current	history1	history2		
Iron	ppm	ASTM D5185(m)	>20	<1	<1	<1
Chromium	ppm	ASTM D5185(m)	>20	0	0	0
Nickel	ppm	ASTM D5185(m)	>20	<1	0	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	0	<1	0
Lead	ppm	ASTM D5185(m)	>20	0	0	0
Copper	ppm	ASTM D5185(m)	>20	1	1	1
Tin	ppm	ASTM D5185(m)	>20	0	0	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	0

ADDITIVES

method	limit/base	current	history1	history2		
Boron	ppm	ASTM D5185(m)	0	<1	<1	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	0	0
Magnesium	ppm	ASTM D5185(m)	0	0	<1	<1
Calcium	ppm	ASTM D5185(m)	50	13	13	15
Phosphorus	ppm	ASTM D5185(m)	330	325	346	352
Zinc	ppm	ASTM D5185(m)	430	290	288	301
Sulfur	ppm	ASTM D5185(m)	760	825	843	837
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185(m)	>15	<1	0	0
Sodium	ppm	ASTM D5185(m)		<1	<1	0
Potassium	ppm	ASTM D5185(m)	>20	0	0	0

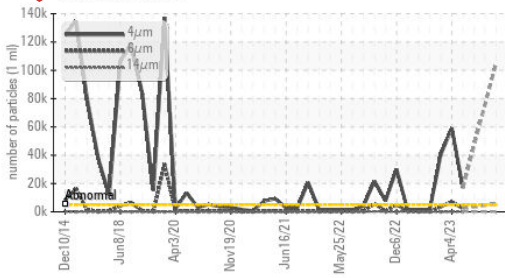
FLUID CLEANLINESS

method	limit/base	current	history1	history2	
Particles >4µm	ASTM D7647	>5000	105211	---	---
Particles >6µm	ASTM D7647	>1300	5634	---	---
Particles >14µm	ASTM D7647	>160	37	---	---
Particles >21µm	ASTM D7647	>40	11	---	---
Particles >38µm	ASTM D7647	>10	1	---	---
Particles >71µm	ASTM D7647	>3	0	---	---
Oil Cleanliness	ISO 4406 (c)	>19/17/14	24/20/12	---	---

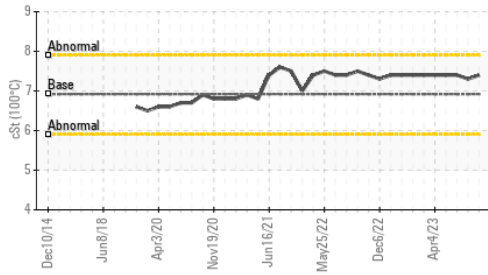
FLUID DEGRADATION

method	limit/base	current	history1	history2		
Acid Number (AN)	mg KOH/g	ASTM D974*	0.70	0.34	---	---

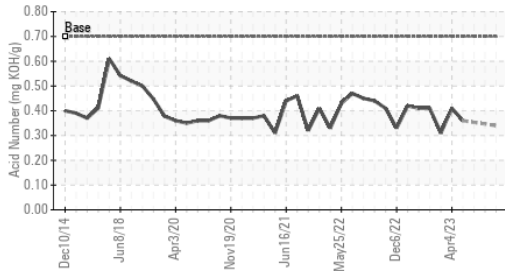
Particle Trend



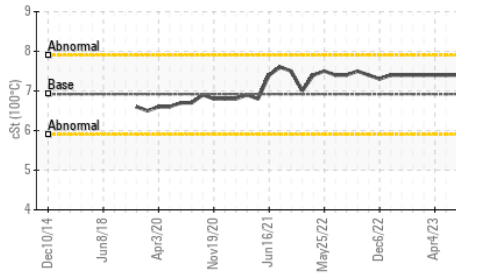
Viscosity @ 100°C



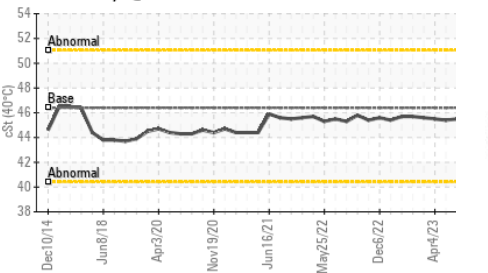
Acid Number



Viscosity @ 100°C



Viscosity @ 40°C



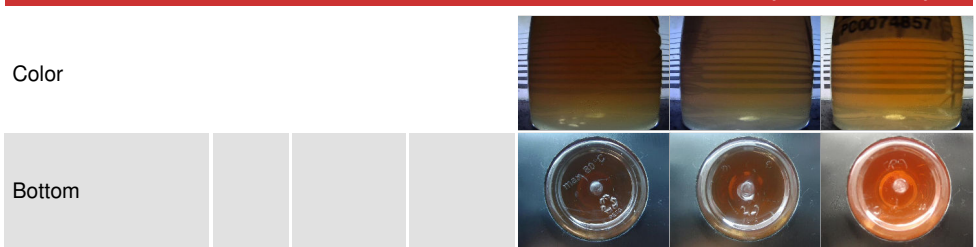
VISUAL

	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

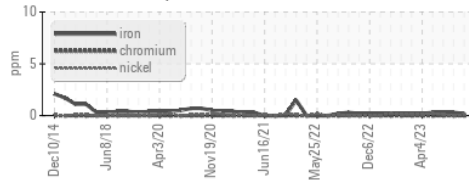
	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	46.4	45.6	45.4
Visc @ 100°C	cSt	ASTM D7279(m)	6.92	7.4	7.3
Viscosity Index (VI)	Scale	ASTM D2270*	104	125	122

SAMPLE IMAGES

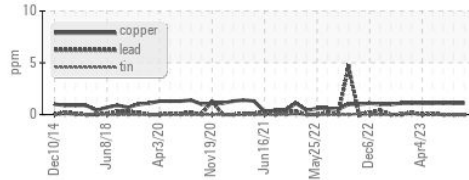


GRAPHS

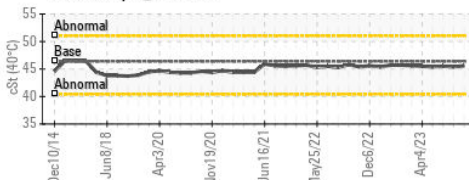
Ferrous Alloys



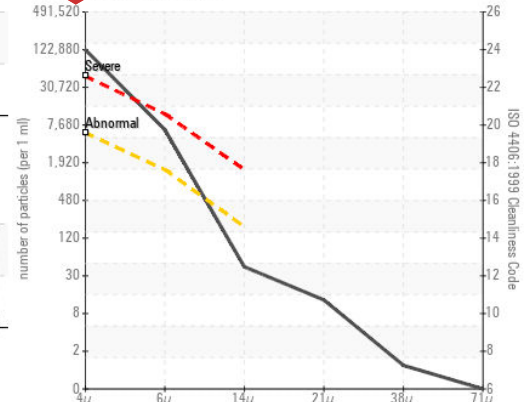
Non-ferrous Metals



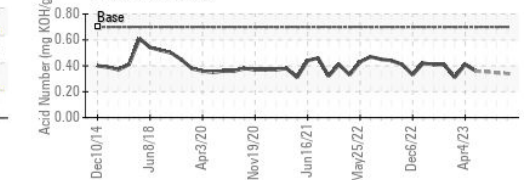
Viscosity @ 40°C



Particle Count



Acid Number



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0069890 **Received** : 28 Sep 2023
Lab Number : 02585876 **Diagnosed** : 02 Oct 2023
Unique Number : 5654942 **Diagnostician** : Wes Davis
Test Package : IND 2 (Additional Tests: KV100, 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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