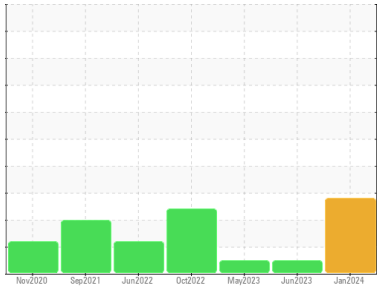
OIL ANALYSIS REPORT

Sample Rating Trend



ADDITIVES

Machine Id
DR182
Component
Hydraulic System
Fluid
PETRO CANADA HYDREX MV 46 (100 LTR)

DIAGNOSIS

Recommendation

The filter change at the time of sampling has been noted. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition. The fluid was specified as PETRO CANADA HYDREX MV 46, however, a fluid match indicates that this fluid is ISO 46 Environmental Oil. Please confirm the oil type and grade on your next sample.

Wear

All component wear rates are normal.

Contamination

There is a moderate 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 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		**PC0080574**	PC0078057	PC0075248
Sample Date		Client Info		**20 Jan 2024**	07 Jun 2023	15 May 2023
Machine Age	hrs	Client Info		**9010**	8028	7750
Oil Age	hrs	Client Info		**250**	0	0
Oil Changed		Client Info		**Changed**	Not Changd	Not Changd
Sample Status				**ABNORMAL**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.1	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>20	**4**	4	3
Chromium	ppm	ASTM D5185(m)	>10	**0**	0	0
Nickel	ppm	ASTM D5185(m)	>10	**0**	0	<1
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)		**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>10	**<1**	<1	<1
Lead	ppm	ASTM D5185(m)	>10	**2**	2	2
Copper	ppm	ASTM D5185(m)	>75	**<1**	<1	0
Tin	ppm	ASTM D5185(m)	>10	**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	<1
Barium	ppm	ASTM D5185(m)	0	**0**	0	0
Molybdenum	ppm	ASTM D5185(m)	0	**0**	0	0
Manganese	ppm	ASTM D5185(m)	1	**0**	0	0
Magnesium	ppm	ASTM D5185(m)	0	**2**	2	2
Calcium	ppm	ASTM D5185(m)	50	▲ **4**	4	2
Phosphorus	ppm	ASTM D5185(m)	330	**379**	402	410
Zinc	ppm	ASTM D5185(m)	430	▲ **15**	16	15
Sulfur	ppm	ASTM D5185(m)	760	▲ **1745**	1717	1801
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

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

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	▲ **10271**	---	---
Particles >6µm		ASTM D7647	>1300	▲ **3239**	---	---
Particles >14µm		ASTM D7647	>160	▲ **184**	---	---
Particles >21µm		ASTM D7647	>40	**34**	---	---
Particles >38µm		ASTM D7647	>10	**2**	---	---
Particles >71µm		ASTM D7647	>3	**0**	---	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **21/19/15**	---	---

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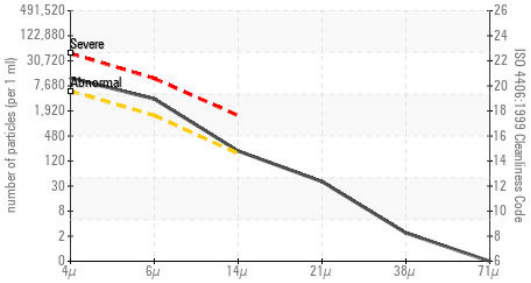
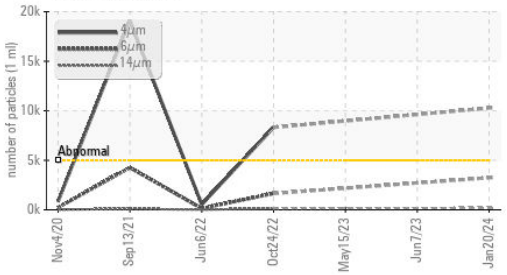
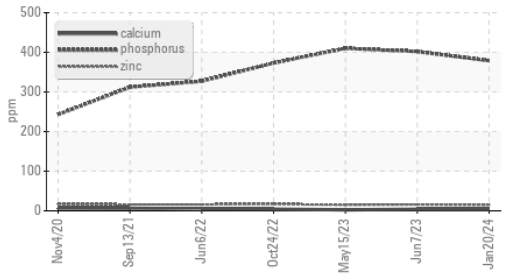
Particle Count



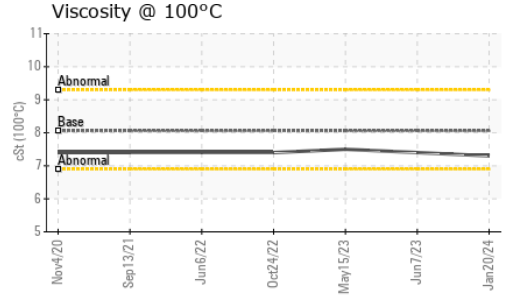
Particle Trend



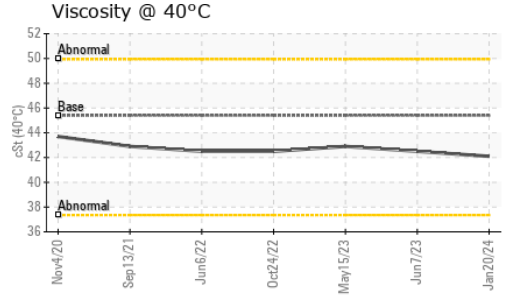
Additives



Viscosity @ 100°C



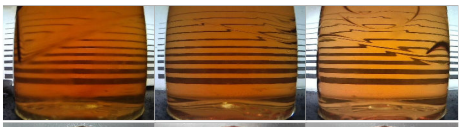
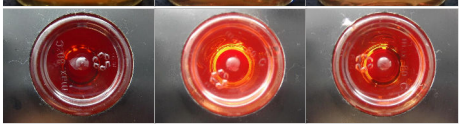
Viscosity @ 40°C



FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.70	**0.07**	---	---

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*	>0.1	**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)	45.4	**42.1**	42.5	42.9
Visc @ 100°C	cSt	ASTM D7279(m)	8.06	**7.3**	7.4	7.5
Viscosity Index (VI)	Scale	ASTM D2270*	151	**137**	139	142

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 Green Infrastructure and Partners Inc (GIPI) - 286 - Shoring & Foundations
Sample No. : PC0080574 **Recieved** : 01 Feb 2024
Lab Number : 02612823 **Diagnosed** : 03 Feb 2024
Unique Number : 5721918 **Diagnostician** : Bill Quesnel
Test Package : IND 2 (Additional Tests: KV100, VI)

151 Ram Forest Rd,
Stouffville, ON
CA L4A 2G8
Contact: Shannon Abbott
sabbott@gipi.com
T: (905)750-5900
F:

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.