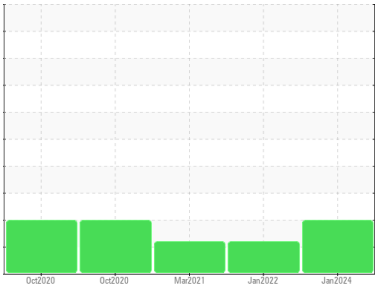
OIL ANALYSIS REPORT

Sample Rating Trend



DEGRADATION

Machine Id
OR638
Component
Front Differential
Fluid
PETRO CANADA ENDURATEX EP 220 (30 LTR)

DIAGNOSIS

▲ Recommendation

The oil change at the time of sampling has been noted. Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. The fluid was specified as PETRO CANADA ENDURATEX EP 220, however, a fluid match indicates that this fluid is SAE 80W140 Gear Oil. Please confirm the oil type and grade on your next sample.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

▲ Fluid Condition

The AN level is above the recommended limit. Additive levels indicate the addition of a different brand, or type of oil. The oil is no longer serviceable.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PC0080576**	PC0058836	PC0047564
Sample Date		Client Info		**12 Jan 2024**	06 Jan 2022	30 Mar 2021
Machine Age	hrs	Client Info		**18127**	15633	14658
Oil Age	hrs	Client Info		**500**	1100	0
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**ABNORMAL**	ATTENTION	ATTENTION

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>.2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*		**31**	---	---
Iron	ppm	ASTM D5185(m)	>500	**102**	145	153
Chromium	ppm	ASTM D5185(m)	>10	**3**	4	3
Nickel	ppm	ASTM D5185(m)	>10	**<1**	<1	<1
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)		**0**	<1	<1
Aluminum	ppm	ASTM D5185(m)	>25	**<1**	<1	<1
Lead	ppm	ASTM D5185(m)	>25	**0**	0	0
Copper	ppm	ASTM D5185(m)	>100	**1**	2	<1
Tin	ppm	ASTM D5185(m)	>10	**0**	0	0
Antimony	ppm	ASTM D5185(m)	>5	**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

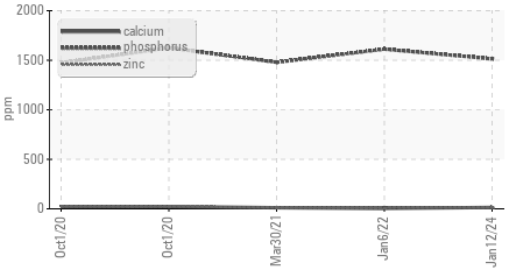
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	60	**32**	34	33
Barium	ppm	ASTM D5185(m)	0	**0**	0	0
Molybdenum	ppm	ASTM D5185(m)	0	**8**	▲ 21	▲ 25
Manganese	ppm	ASTM D5185(m)	0	**<1**	1	2
Magnesium	ppm	ASTM D5185(m)	0	**<1**	<1	<1
Calcium	ppm	ASTM D5185(m)	0	**14**	4	11
Phosphorus	ppm	ASTM D5185(m)	270	▲ **1514**	▲ 1612	▲ 1479
Zinc	ppm	ASTM D5185(m)	0	**9**	6	11
Sulfur	ppm	ASTM D5185(m)	11200	▲ **4803**	▲ 4617	▲ 4911
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>75	**8**	8	6
Sodium	ppm	ASTM D5185(m)		**2**	<1	1
Potassium	ppm	ASTM D5185(m)	>20	**1**	<1	<1

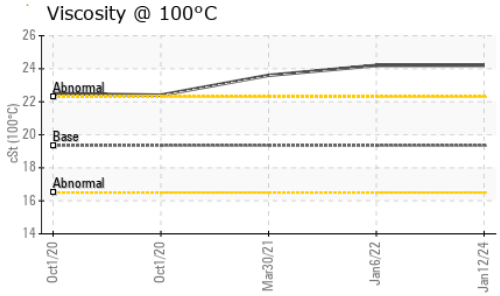
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.40	▲ **3.44**	---	---

OIL ANALYSIS REPORT

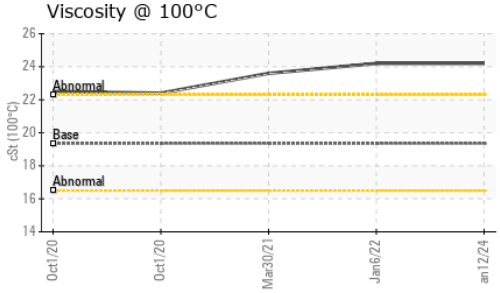
Additives



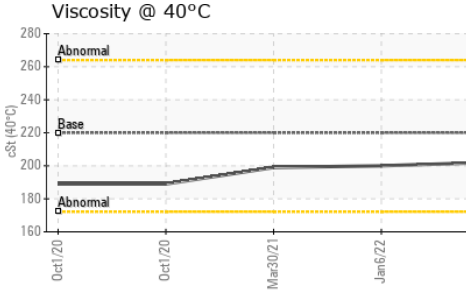
Viscosity @ 100°C



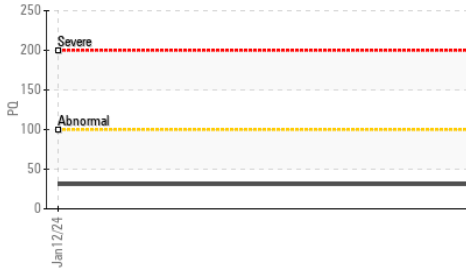
Viscosity @ 100°C



Viscosity @ 40°C



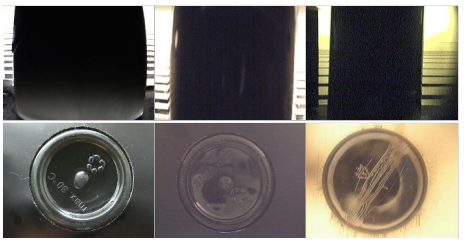
PQ



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	LIGHT
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*	>.2	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

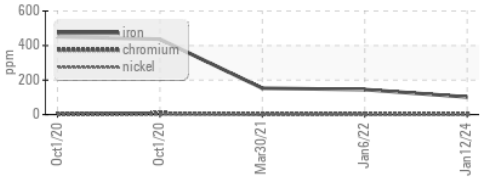
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	220	**202**	200	199
Visc @ 100°C	cSt	ASTM D7279(m)	19.35	**24.2**	24.2	23.6
Viscosity Index (VI)	Scale	ASTM D2270*	99	**148**	150	146

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

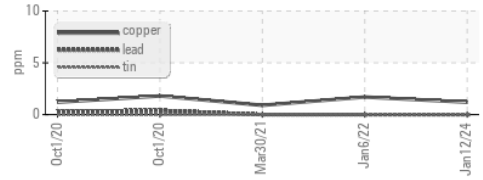


GRAPHS

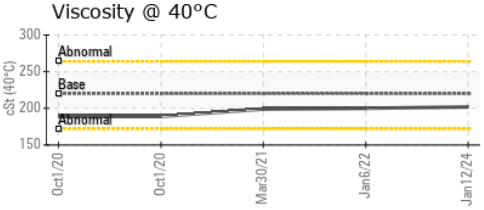
Ferrous Alloys



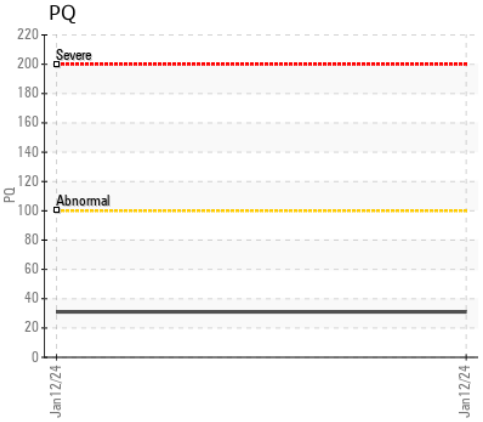
Non-ferrous Metals



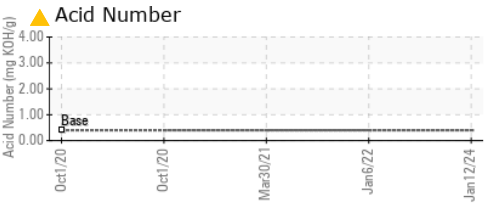
Viscosity @ 40°C



PQ



Acid Number



CALA Testing Accreditation No. 1005078
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. : PC0080576 **Recieved** : 26 Jan 2024
Lab Number : 02611619 **Diagnosed** : 29 Jan 2024
Unique Number : 5720714 **Diagnostician** : Bill Quesnel
Test Package : IND 2 (Additional Tests: KV100, TAN Man, 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.