

Machine Id  
**68HYDPACK026**

Component  
**Reduction Gear**

Fluid  
**PETRO CANADA ENDURATEX EP 320 (--- LTR)**

**DIAGNOSIS**

**Recommendation**

Resample at the next service interval to monitor.  
NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with 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 acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>PC0052999</b>	PC0051822	PC0051890
Sample Date	Client Info			<b>31 Oct 2023</b>	02 May 2023	25 Oct 2022
Machine Age	hrs	Client Info		<b>0</b>	0	0
Oil Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed	Client Info			<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

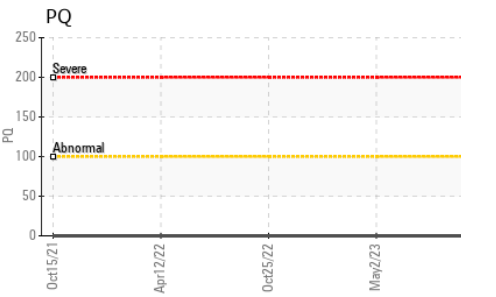
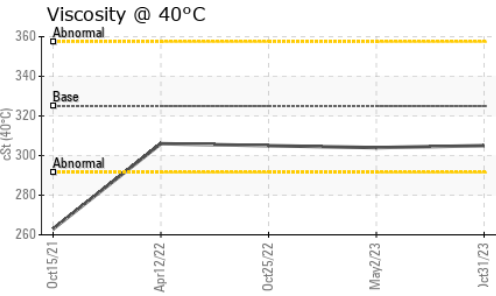
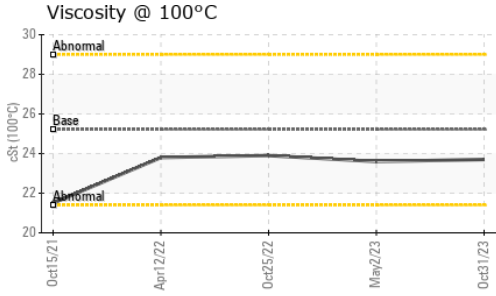
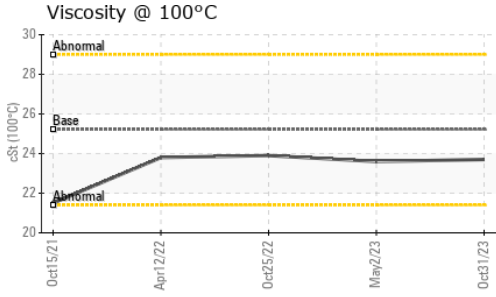
WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*		<b>0</b>	0	0
Iron	ppm	ASTM D5185(m)	>150	<b>12</b>	10	9
Chromium	ppm	ASTM D5185(m)	>10	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m)	>10	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)		<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>25	<b>0</b>	<1	<1
Lead	ppm	ASTM D5185(m)	>100	<b>0</b>	0	0
Copper	ppm	ASTM D5185(m)	>50	<b>&lt;1</b>	0	<1
Tin	ppm	ASTM D5185(m)	>10	<b>0</b>	0	0
Antimony	ppm	ASTM D5185(m)	>5	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Beryllium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185(m)		<b>0</b>	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	55	<b>18</b>	15	16
Barium	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)	0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	0	<1
Calcium	ppm	ASTM D5185(m)	0	<b>8</b>	7	8
Phosphorus	ppm	ASTM D5185(m)	240	<b>242</b>	250	253
Zinc	ppm	ASTM D5185(m)	1	<b>4</b>	4	4
Sulfur	ppm	ASTM D5185(m)	13700	<b>8353</b>	8748	8685
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>50	<b>2</b>	1	1
Sodium	ppm	ASTM D5185(m)		<b>&lt;1</b>	0	<1
Potassium	ppm	ASTM D5185(m)	>20	<b>0</b>	<1	0

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.4	<b>0.52</b>	0.59	0.50

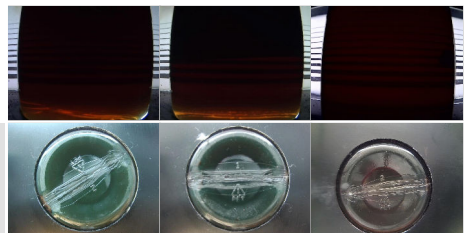
# OIL ANALYSIS REPORT



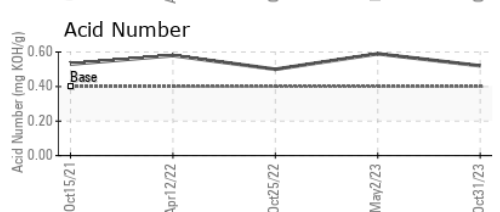
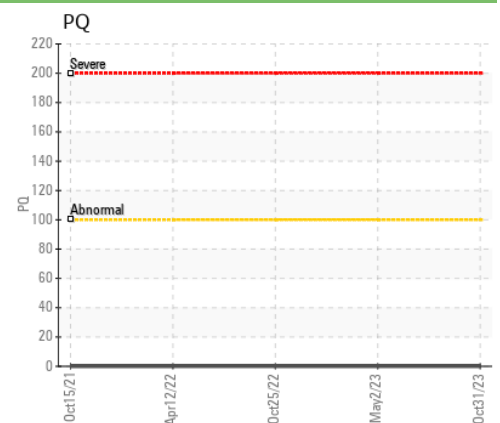
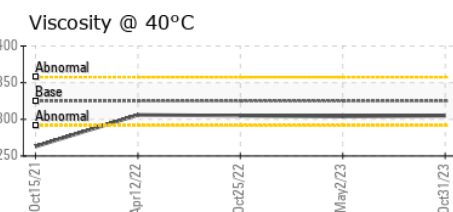
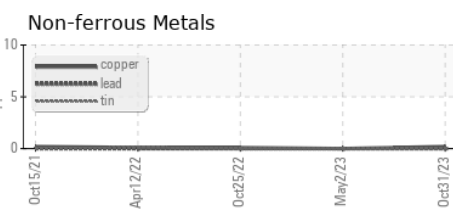
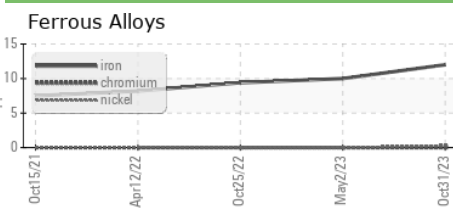
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	325	304	305
Visc @ 100°C	cSt	ASTM D7279(m)	25.22	23.6	23.9
Viscosity Index (VI)	Scale	ASTM D2270*	100	97	98

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					



## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0052999 **Received** : 01 Nov 2023  
**Lab Number** : 02593405 **Diagnosed** : 03 Nov 2023  
**Unique Number** : 5670484 **Diagnostician** : Kevin Marson  
**Test Package** : IND 2 ( Additional Tests: KV100, VI )

**Glencore Canada – Fraser Mine**  
 85 Regional Road 8  
 Onaping, ON  
 CA P0M 2R0  
 Contact: Marc-Andre Marseille  
 marcandre.marseille@dmcmining.com

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.