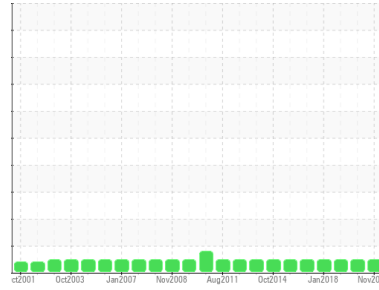


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
Cargo [450219495]
Machine Id
Offloading Hose Reel - A (S/N Sample Tag XX-32201A-S1)
Component
Gear Drive
Fluid
PETRO CANADA ENDURATEX EP 220 (16 LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

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		PC0076632	PC	PC
Sample Date	Client Info		01 Nov 2023	17 Jan 2020	21 Dec 2018
Machine Age	hrs	Client Info	0	0	0
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184*		0	44	40
Iron	ppm	ASTM D5185(m) >161	4	84	53
Chromium	ppm	ASTM D5185(m) >2	0	<1	0
Nickel	ppm	ASTM D5185(m) >2	0	<1	0
Titanium	ppm	ASTM D5185(m)	0	<1	0
Silver	ppm	ASTM D5185(m)	<1	<1	0
Aluminum	ppm	ASTM D5185(m) >3	1	<1	0
Lead	ppm	ASTM D5185(m) >9	0	<1	<1
Copper	ppm	ASTM D5185(m) >5	<1	1	<1
Tin	ppm	ASTM D5185(m) >2	0	0	0
Antimony	ppm	ASTM D5185(m) >5	0	<1	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	19	48	52
Barium	ppm	ASTM D5185(m) 0	<1	<1	<1
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	<1	1
Calcium	ppm	ASTM D5185(m) 0	7	2	2
Phosphorus	ppm	ASTM D5185(m) 270	245	244	230
Zinc	ppm	ASTM D5185(m) 0	3	34	22
Sulfur	ppm	ASTM D5185(m) 11200	7509	10847	10234
Lithium	ppm	ASTM D5185(m)	<1	<1	0

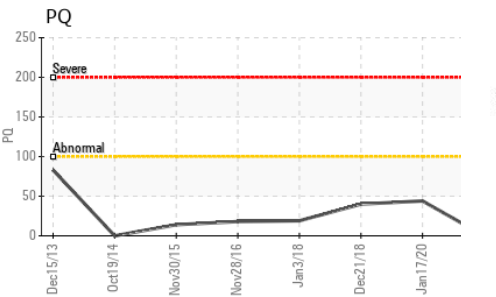
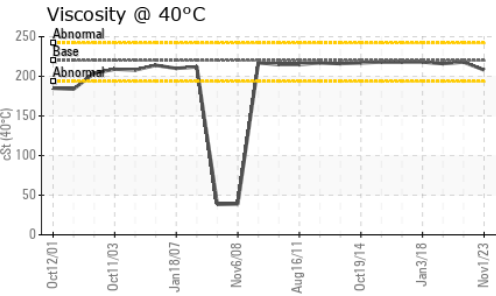
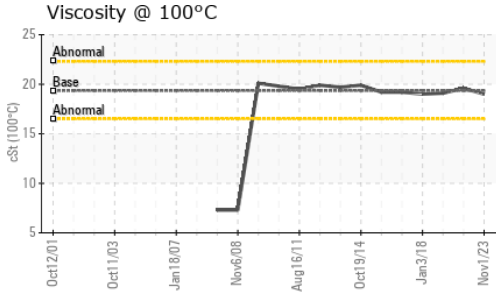
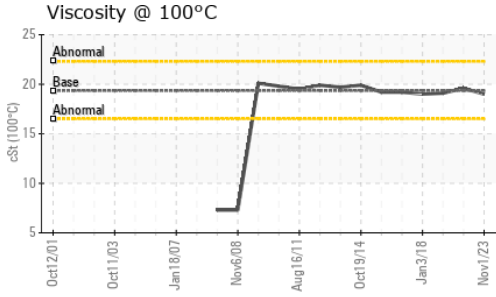
CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >23	6	8	7
Sodium	ppm	ASTM D5185(m)	<1	1	1
Potassium	ppm	ASTM D5185(m) >20	0	<1	<1

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974* 0.40	0.40	0.327	0.20

OIL ANALYSIS REPORT

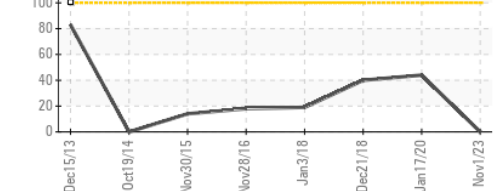
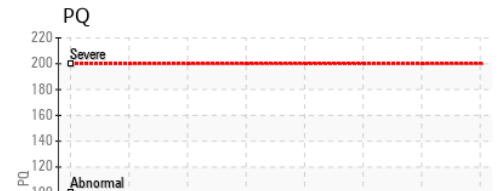
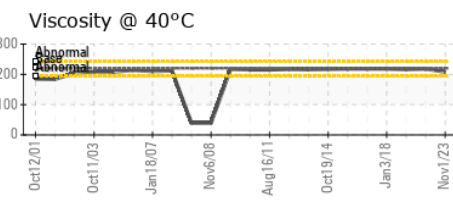
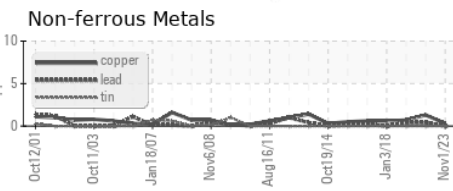
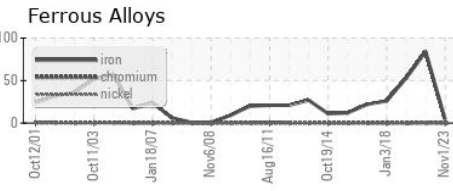


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	VLITE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	VLITE
Debris	scalar	Visual*	NONE	VLITE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	220	208	218
Visc @ 100°C	cSt	ASTM D7279(m)	19.35	19.0	19.6
Viscosity Index (VI)	Scale	ASTM D2270*	99	102	99

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color				no image	
Bottom				no image	
PrtFilter				no image	no image

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0076632 **Received** : 27 Nov 2023
Lab Number : 02599122 **Diagnosed** : 29 Nov 2023
Unique Number : 5684202 **Diagnostician** : Kevin Marson
Test Package : MAR 2 (Additional Tests: BottomAnalysis, FILTERPATCH, KV100, TAN Man, VI)

Suncor - Terra Nova Projects
 Scotia Centre, 235 Water Street
 St. John's, NL
 CA A1C 1B6
 Contact: Josh Hynes
 joshhynes@suncor.com
 T: (709)778-3575
 F: (709)724-2835

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.