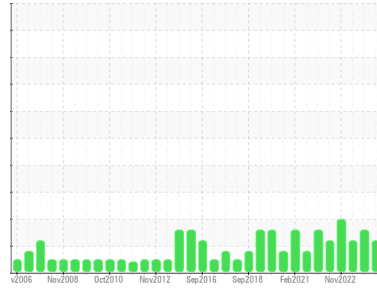


PROBLEM SUMMARY

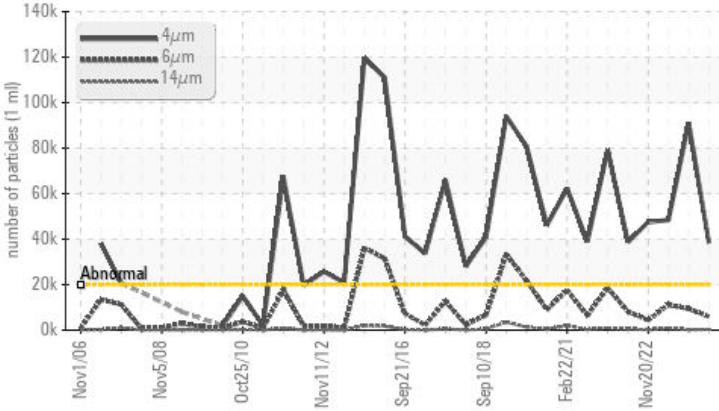
Area
1313
Machine Id
RECLAIM FEEDER 2
Component
Gearbox
Fluid
PETRO CANADA ENDURATEX EP 460 (300 LTR)

Sample Rating Trend



COMPONENT CONDITION SUMMARY

▲ Particle Trend



RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status			ATTENTION	ABNORMAL	ABNORMAL
Particles >4µm	ASTM D7647	>20000	▲ 38438	▲ 48438	▲ 91115
Particles >6µm	ASTM D7647	>5000	▲ 5926	▲ 11168	▲ 9392
Oil Cleanliness	ISO 4406 (c)	>21/19/16	▲ 22/20/16	▲ 23/21/17	▲ 24/20/15

Customer Id: INCVOS
Sample No.: PC0070108
Lab Number: 02582971
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
Bill Quesnel CLS,OMA II,MLA-III,LLA-I +1
(289)291-4641 x4641
Bill.Quesnel@wearcheck.com

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.

HISTORICAL DIAGNOSIS

29 Apr 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



29 Apr 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



20 Nov 2022 Diag: Kevin Marson

OFF SPEC

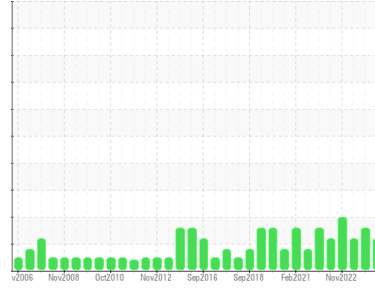


We recommend you service the filters on this component. We recommend an early resample to monitor this condition. All component wear rates are normal. Particles >4µm and oil cleanliness are abnormally high. Viscosity of sample indicates oil is within ISO 150 range, advise investigate. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

view report



Area
1313
Machine Id
RECLAIM FEEDER 2
Component
Gearbox
Fluid
PETRO CANADA ENDURATEX EP 460 (300 LTR)



DIAGNOSIS

Recommendation
We recommend you service the filters on this component. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
There is a light amount of silt (particulates < 14 microns in size) present 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			PC0070108	PC0057683	PC0057688
Sample Date	Client Info			13 Aug 2023	29 Apr 2023	29 Apr 2023
Machine Age	yrs	Client Info		0	0	0
Oil Age	yrs	Client Info		0	0	0
Oil Changed	Client Info			N/A	N/A	N/A
Sample Status				ATTENTION	ABNORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>200	8	7	13
Chromium	ppm	ASTM D5185(m)	>15	0	0	0
Nickel	ppm	ASTM D5185(m)	>15	3	3	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>25	<1	0	0
Lead	ppm	ASTM D5185(m)	>100	0	0	<1
Copper	ppm	ASTM D5185(m)	>200	2	3	<1
Tin	ppm	ASTM D5185(m)	>25	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)	55	11	12	17
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)	2	<1	0	0
Calcium	ppm	ASTM D5185(m)	6	1	0	0
Phosphorus	ppm	ASTM D5185(m)	240	250	256	256
Zinc	ppm	ASTM D5185(m)	3	7	7	1
Sulfur	ppm	ASTM D5185(m)	10310	8941	9001	9119
Lithium	ppm	ASTM D5185(m)		<1	<1	4

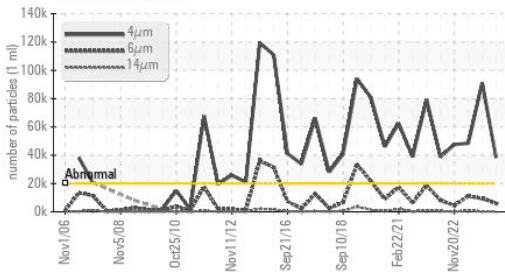
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>50	5	5	6
Sodium	ppm	ASTM D5185(m)		2	2	<1
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	<1

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	▲ 38438	▲ 48438	▲ 91115	
Particles >6µm	ASTM D7647	>5000	▲ 5926	▲ 11168	▲ 9392	
Particles >14µm	ASTM D7647	>640	324	▲ 839	212	
Particles >21µm	ASTM D7647	>160	54	127	28	
Particles >38µm	ASTM D7647	>40	0	2	1	
Particles >71µm	ASTM D7647	>10	0	1	0	
Oil Cleanliness	ISO 4406 (c)	>21/19/16	▲ 22/20/16	▲ 23/21/17	▲ 24/20/15	

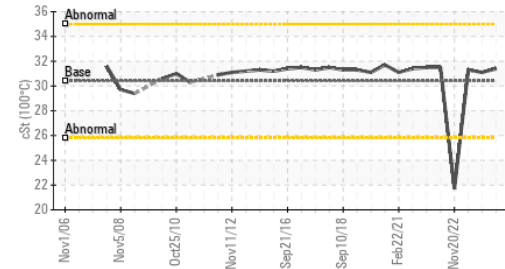
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.5	0.38	0.38	0.56

OIL ANALYSIS REPORT

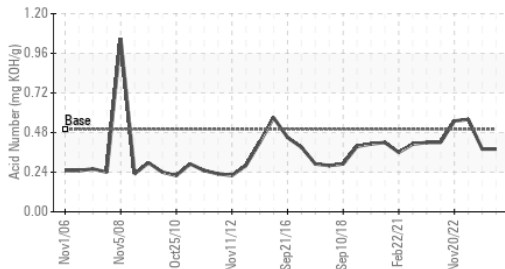
▲ Particle Trend



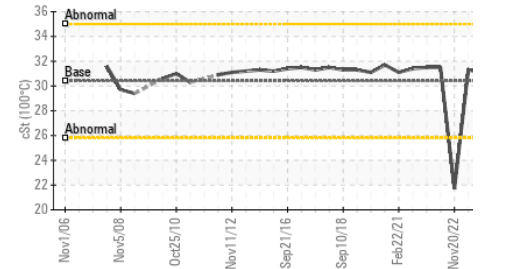
Viscosity @ 100°C



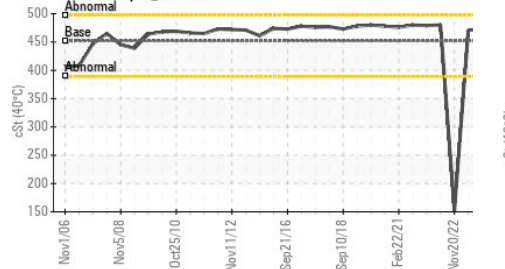
Acid Number



Viscosity @ 100°C



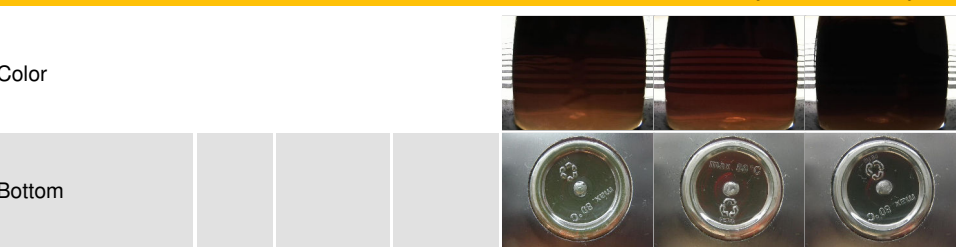
Viscosity @ 40°C



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*	>0.2	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

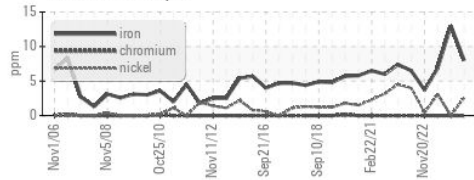
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	452	473	471
Visc @ 100°C	cSt	ASTM D7279(m)	30.41	31.1	31.3
Viscosity Index (VI)	Scale	ASTM D2270*	97	95	96

SAMPLE IMAGES

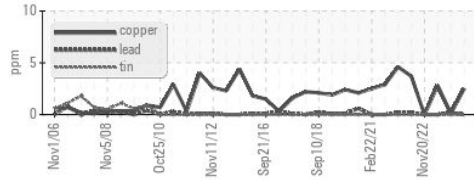


GRAPHS

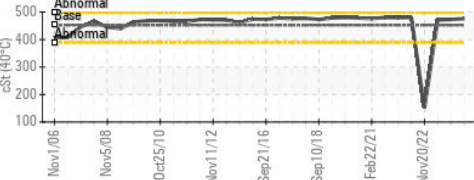
Ferrous Alloys



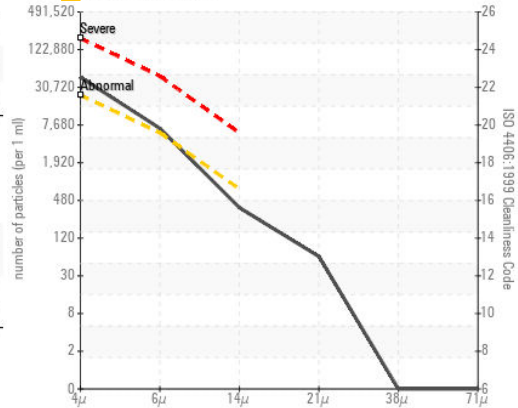
Non-ferrous Metals



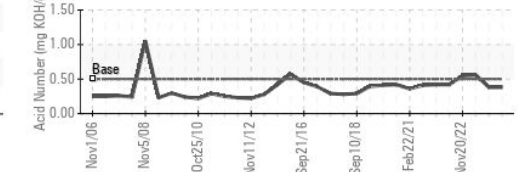
Viscosity @ 40°C



▲ Particle Count



Acid Number



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0070108
Lab Number : 02582971
Unique Number : 5644036
Test Package : IND 2 (Additional Tests: KV100, VI)

Vale - Voisey's Bay
 Voisey's Bay Mine Site, P.O. Box 7001, Stn. C Happy Valley
 Goose Bay, NL
 CA A0P 1C0
 Contact: Robert Feltham
 robert.feltham@vale.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.

T:
F: x: