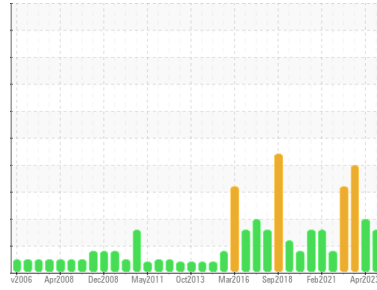


Area
1311
Machine Id
CRUSHER APRON FEEDER
Component
Gearbox
Fluid
PETRO CANADA ENDURATEX EP 460 (200 LTR)



DIAGNOSIS

Recommendation
We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

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
The AN level is acceptable for this fluid. 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			PC0077295	PC0057682	PC0040231
Sample Date	Client Info			27 Feb 2024	29 Apr 2023	12 Jul 2022
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				ABNORMAL	ABNORMAL	SEVERE

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

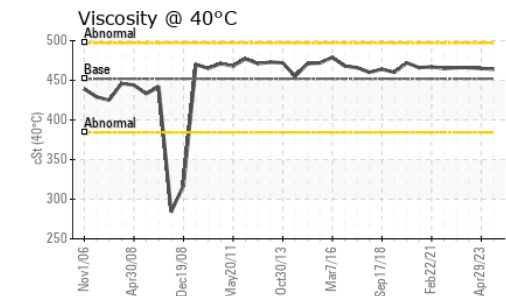
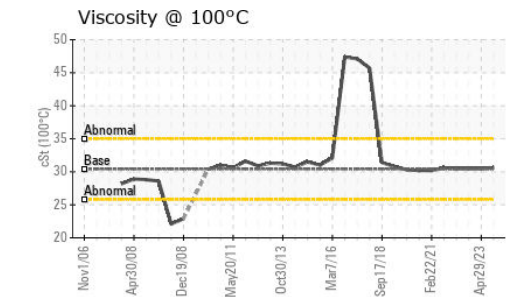
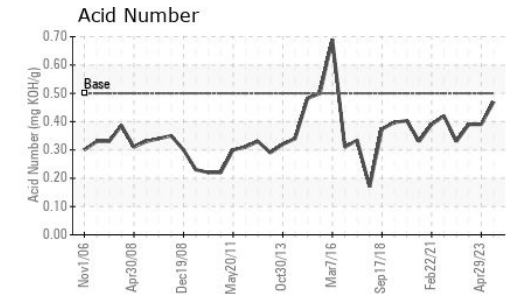
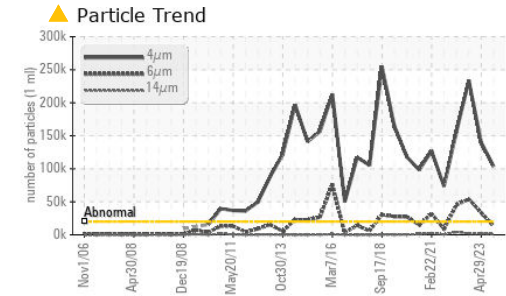
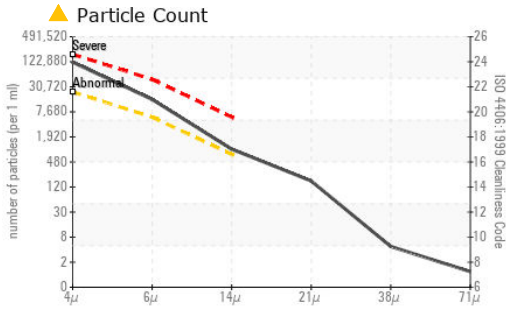
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>200	4	5	7
Chromium	ppm	ASTM D5185(m)	>15	0	0	0
Nickel	ppm	ASTM D5185(m)	>15	<1	0	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>25	<1	<1	<1
Lead	ppm	ASTM D5185(m)	>100	0	0	0
Copper	ppm	ASTM D5185(m)	>200	<1	<1	1
Tin	ppm	ASTM D5185(m)	>25	0	0	0
Antimony	ppm	ASTM D5185(m)	>5	0	<1	<1
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	50	55	55
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	1
Calcium	ppm	ASTM D5185(m)	6	2	0	2
Phosphorus	ppm	ASTM D5185(m)	240	233	275	250
Zinc	ppm	ASTM D5185(m)	3	2	2	3
Sulfur	ppm	ASTM D5185(m)	10310	13704	13427	14666
Lithium	ppm	ASTM D5185(m)		2	2	2

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>50	7	11	10
Sodium	ppm	ASTM D5185(m)		0	0	<1
Potassium	ppm	ASTM D5185(m)	>20	1	<1	<1

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>20000	▲ 103608	▲ 140004	▲ 233506
Particles >6µm		ASTM D7647	>5000	▲ 13252	▲ 33434	▲ 54205
Particles >14µm		ASTM D7647	>640	● 858	▲ 1810	▲ 1860
Particles >21µm		ASTM D7647	>160	148	● 320	188
Particles >38µm		ASTM D7647	>40	4	3	2
Particles >71µm		ASTM D7647	>10	1	3	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ 24/21/17	▲ 24/22/18	▲ 25/23/18

OIL ANALYSIS REPORT



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0077295
Lab Number : 02620938
Unique Number : 5746057
Test Package : IND 2 (Additional Tests: KV100, PrtCount, TAN Man, VI)

Received : 08 Mar 2024
Tested : 11 Mar 2024
Diagnosed : 11 Mar 2024 - Wes Davis

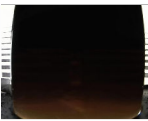


Vale - Voisey's Bay
 Voisey's Bay Mine Site, P.O. Box 7001, Stn. C Happy Valley
 Goose Bay, NL
 CA A0P 1C0
 Contact: Robert Feltham
 robert.feltham@vale.com

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.

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.5	0.47	0.39	0.39

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	VLITE	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*	>0.2	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)	452	464	465	466
Visc @ 100°C	cSt	ASTM D7279(m)	30.41	30.6	30.5	30.5
Viscosity Index (VI)	Scale	ASTM D2270*	97	95	94	94

SAMPLE IMAGES		method	limit/base	current	history1	history2
Color						
Bottom				