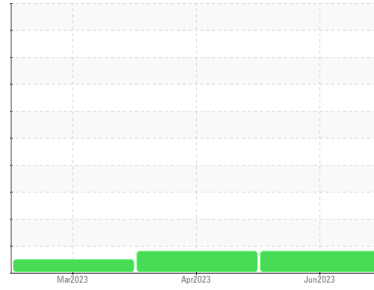


PROBLEM SUMMARY

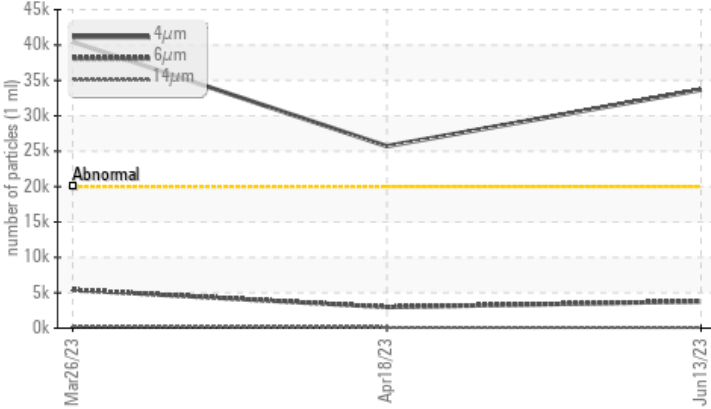
Area
1851
Machine Id
1851-5419-8002
Component
Gearbox
Fluid
NOT GIVEN (15 LTR)

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. Please specify the brand, type, and viscosity of the oil on your next sample.

PROBLEMATIC TEST RESULTS

Sample Status		ATTENTION	ATTENTION	NORMAL
Particles >4µm	ASTM D7647 >20000	▲ 33689	▲ 25715	40453
Oil Cleanliness	ISO 4406 (c) >21/19/16	▲ 22/19/14	▲ 22/19/14	23/20/15

Customer Id: INCVOS
Sample No.: PC0040491
Lab Number: 02567632
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
Wes Davis +1 905-569-8600 x223
wesd@wearcheck.ca

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.
Information Required	---	---	?	Please specify the brand, type, and viscosity of the oil on your next sample.

HISTORICAL DIAGNOSIS

ISO



18 Apr 2023 Diag: Kevin Marson

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. We recommend you service the filters on this component. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample. All component wear rates are normal. There is a light amount of silt (particulates < 14 microns in size) present in the oil. Viscosity of sample indicates oil is within ISO 150 range, advise investigate. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



NORMAL



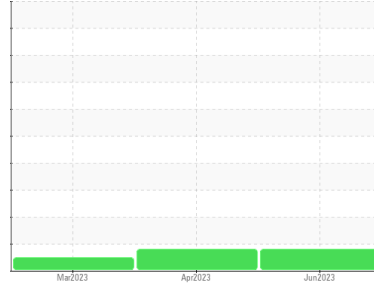
26 Mar 2023 Diag: Kevin Marson

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample. All component wear rates are normal. There is no indication of any contamination in the oil. Viscosity of sample indicates oil is within ISO 150 range, advise investigate. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



Area
1851
Machine Id
1851-5419-8002
Component
Gearbox
Fluid
NOT GIVEN (15 LTR)



DIAGNOSIS

Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

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	history 1	history 2
Sample Number	Client Info	PC0040491	PC0058645	PC0040296
Sample Date	Client Info	13 Jun 2023	18 Apr 2023	26 Mar 2023
Machine Age	hrs	0	0	0
Oil Age	hrs	0	0	0
Oil Changed	Client Info	N/A	N/A	Not Changd
Sample Status		ATTENTION	ATTENTION	NORMAL

WEAR METALS

method	limit/base	current	history 1	history 2	
PQ	ASTM D8184*	2	0	0	
Iron	ppm	ASTM D5185(m) >200	11	11	11
Chromium	ppm	ASTM D5185(m) >15	0	0	0
Nickel	ppm	ASTM D5185(m) >15	<1	<1	<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	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	history 1	history 2	
Boron	ppm	ASTM D5185(m)	1	<1	<1
Barium	ppm	ASTM D5185(m)	0	0	0
Molybdenum	ppm	ASTM D5185(m)	0	0	0
Manganese	ppm	ASTM D5185(m)	<1	<1	<1
Magnesium	ppm	ASTM D5185(m)	<1	0	<1
Calcium	ppm	ASTM D5185(m)	<1	0	0
Phosphorus	ppm	ASTM D5185(m)	82	81	81
Zinc	ppm	ASTM D5185(m)	3	2	3
Sulfur	ppm	ASTM D5185(m)	1820	1826	1838
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

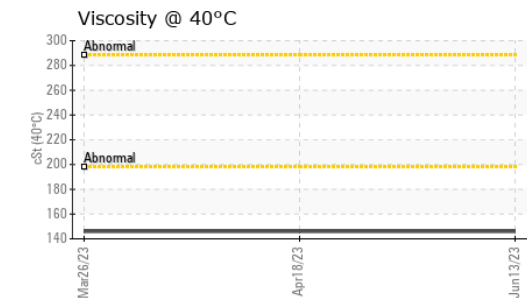
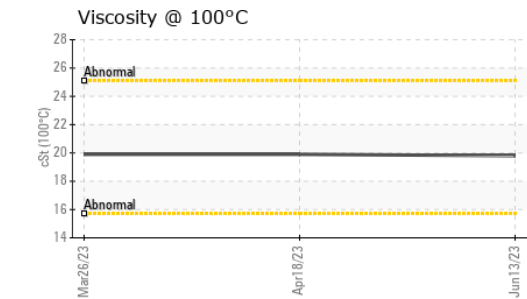
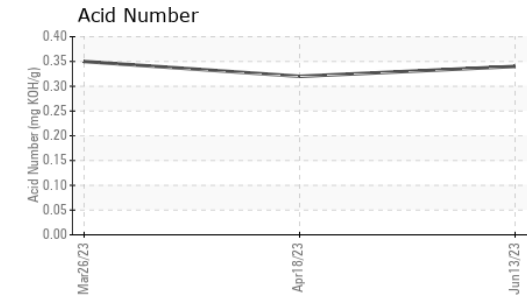
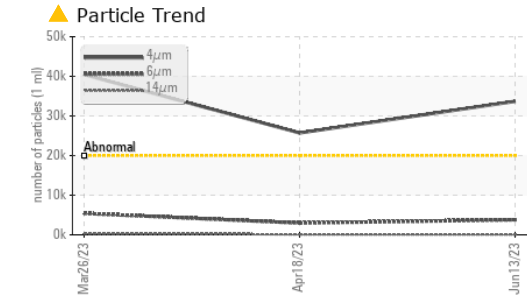
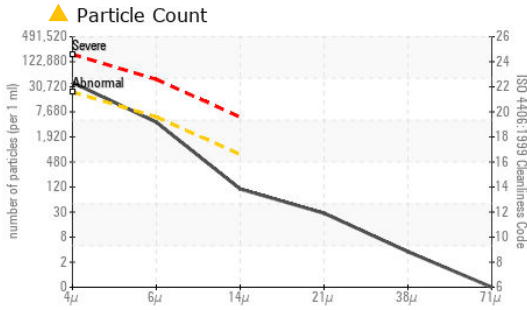
CONTAMINANTS

method	limit/base	current	history 1	history 2	
Silicon	ppm	ASTM D5185(m) >50	10	12	12
Sodium	ppm	ASTM D5185(m)	<1	<1	<1
Potassium	ppm	ASTM D5185(m) >20	<1	12	0

FLUID CLEANLINESS

method	limit/base	current	history 1	history 2	
Particles >4µm	ASTM D7647	>20000	▲ 33689	▲ 25715	40453
Particles >6µm	ASTM D7647	>5000	3789	2981	5414
Particles >14µm	ASTM D7647	>640	95	105	296
Particles >21µm	ASTM D7647	>160	25	25	69
Particles >38µm	ASTM D7647	>40	3	1	7
Particles >71µm	ASTM D7647	>10	0	1	5
Oil Cleanliness	ISO 4406 (c)	>21/19/16	▲ 22/19/14	▲ 22/19/14	23/20/15

OIL ANALYSIS REPORT



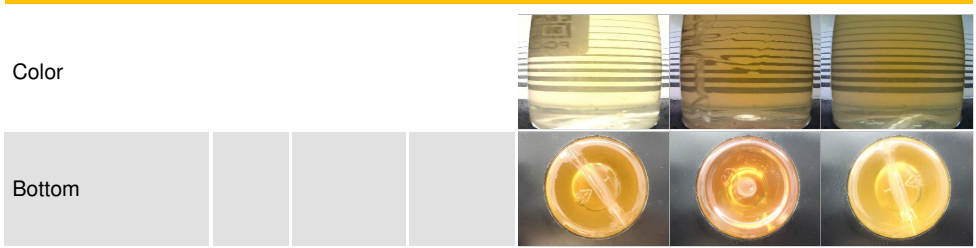
FLUID DEGRADATION

method	limit/base	current	history 1	history 2
Acid Number (AN) mg KOH/g	ASTM D974*	0.34	0.32	0.35
VISUAL				
method	limit/base	current	history 1	history 2
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	NEG

FLUID PROPERTIES

method	limit/base	current	history 1	history 2
Visc @ 40°C	cSt ASTM D7279(m)	146	146	146
Visc @ 100°C	cSt ASTM D7279(m)	19.8	19.9	19.9
Viscosity Index (VI)	Scale ASTM D2270*	156	157	157

SAMPLE IMAGES



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0040491
Lab Number : **02567632**
Unique Number : 5604678
Test Package : IND 2 (Additional Tests: KV100, PQ, PrtCount, TAN Man, VI)

Vale - Voisey's Bay
 Voisey's Bay Mine Site, P.O. Box 7001, Str. 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: