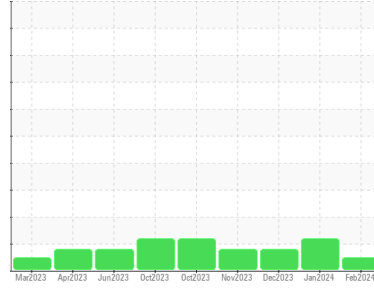


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
1851
Machine Id
1851-5419-8002
Component
Gearbox
Fluid
PETRO CANADA SYNDURO SHB ISO150 (15 LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

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	PC0070739	PC0070684	PC0070679
Sample Date	Client Info	20 Feb 2024	23 Jan 2024	26 Dec 2023
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	N/A	Not Changd	Not Changd
Sample Status		NORMAL	ATTENTION	ATTENTION

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	0	0
Iron	ppm ASTM D5185(m) >200	6	6	5
Chromium	ppm ASTM D5185(m) >15	0	0	0
Nickel	ppm ASTM D5185(m) >15	0	<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	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

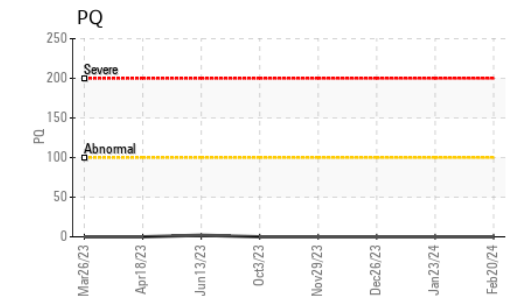
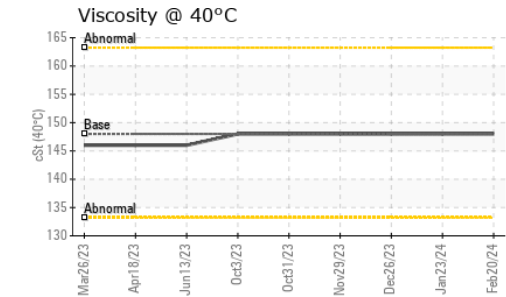
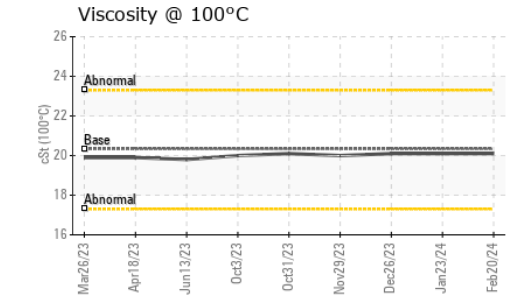
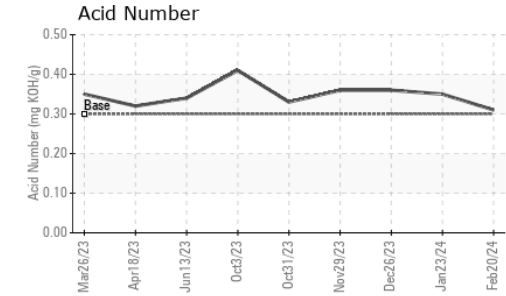
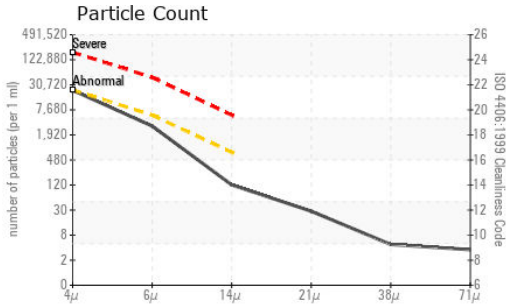
ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185(m)	<1	<1	<1
Barium	ppm ASTM D5185(m) 5.0	0	0	0
Molybdenum	ppm ASTM D5185(m)	0	0	0
Manganese	ppm ASTM D5185(m)	0	0	0
Magnesium	ppm ASTM D5185(m) 5.0	<1	<1	0
Calcium	ppm ASTM D5185(m) 5.0	<1	<1	<1
Phosphorus	ppm ASTM D5185(m) 100	86	88	85
Zinc	ppm ASTM D5185(m) 5.0	2	2	2
Sulfur	ppm ASTM D5185(m) 1900	2000	2022	1953
Lithium	ppm ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >50	4	4	4
Sodium	ppm ASTM D5185(m)	<1	0	<1
Potassium	ppm ASTM D5185(m) >20	<1	<1	<1

OIL ANALYSIS REPORT



FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	19716	39009	22547	
Particles >6µm	ASTM D7647	>5000	2741	7315	3580	
Particles >14µm	ASTM D7647	>640	107	502	186	
Particles >21µm	ASTM D7647	>160	25	140	46	
Particles >38µm	ASTM D7647	>40	4	17	5	
Particles >71µm	ASTM D7647	>10	3	9	3	
Oil Cleanliness	ISO 4406 (c)	>21/19/16	21/19/14	22/20/16	22/19/15	

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.3	0.31	0.35	0.36

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	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	VLITE	VLITE
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)	148	148	148	148
Visc @ 100°C	cSt	ASTM D7279(m)	20.34	20.1	20.1	20.1
Viscosity Index (VI)	Scale	ASTM D2270*	159	157	157	157

SAMPLE IMAGES		method	limit/base	current	history1	history2
Color						
Bottom						



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0070739
Lab Number : **02620284**
Unique Number : 5737394
Test Package : IND 2 (Additional Tests: KV100, PQ, PrtCount, VI)
Received : 06 Mar 2024
Tested : 08 Mar 2024
Diagnosed : 08 Mar 2024 - Wes Davis

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.