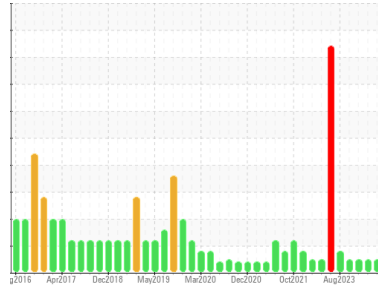


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
1420
Machine Id
1420-5671-4001 - SAG MILL TRUNNION/PINION LUBE
Component
Bulk Fluid Tank
Fluid
PETRO CANADA ENDURATEX EP 320 (1000 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			PC0077287	PC0070746	PC0058533
Sample Date	Client Info			01 Jun 2024	31 Jan 2024	14 Nov 2023
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			NEG	NEG	NEG

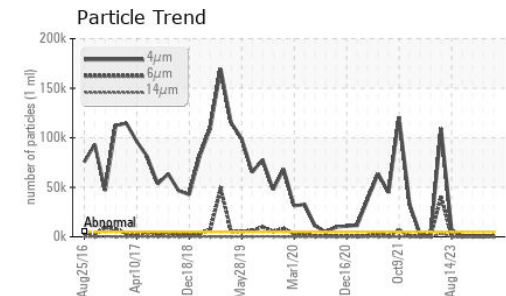
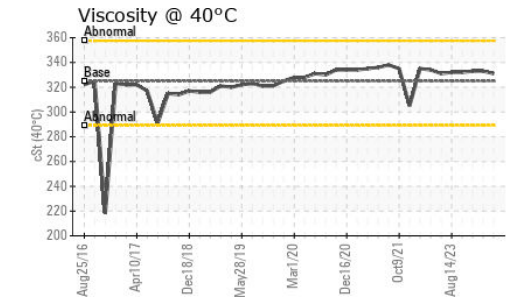
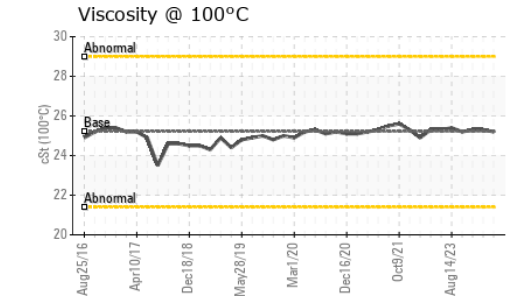
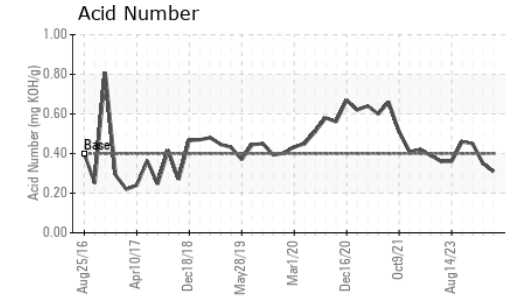
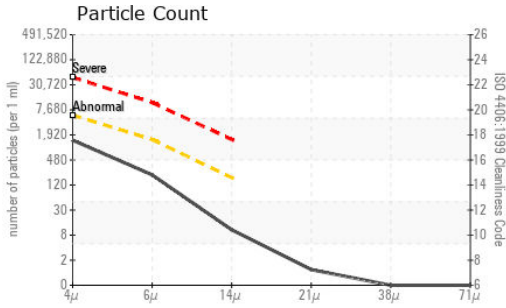
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)		4	4	4
Chromium	ppm	ASTM D5185(m)		0	0	0
Nickel	ppm	ASTM D5185(m)		0	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	<1
Aluminum	ppm	ASTM D5185(m)		0	<1	0
Lead	ppm	ASTM D5185(m)		0	<1	<1
Copper	ppm	ASTM D5185(m)		1	1	2
Tin	ppm	ASTM D5185(m)		0	0	0
Antimony	ppm	ASTM D5185(m)		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)	55	17	17	15
Barium	ppm	ASTM D5185(m)	0	0	<1	<1
Molybdenum	ppm	ASTM D5185(m)	0	0	0	0
Manganese	ppm	ASTM D5185(m)	0	0	0	0
Magnesium	ppm	ASTM D5185(m)	0	<1	1	<1
Calcium	ppm	ASTM D5185(m)	0	2	2	2
Phosphorus	ppm	ASTM D5185(m)	240	225	229	225
Zinc	ppm	ASTM D5185(m)	1	5	5	5
Sulfur	ppm	ASTM D5185(m)	13700	4754	5150	5002
Lithium	ppm	ASTM D5185(m)		6	5	5

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)		1	2	1
Sodium	ppm	ASTM D5185(m)		4	2	2
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	<1

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	1255	418	1149
Particles >6µm		ASTM D7647	>1300	186	124	308
Particles >14µm		ASTM D7647	>160	9	17	24
Particles >21µm		ASTM D7647	>40	1	6	6
Particles >38µm		ASTM D7647	>10	0	1	2
Particles >71µm		ASTM D7647	>3	0	0	1
Oil Cleanliness		ISO 4406 (c)	>19/17/14	17/15/10	16/14/11	17/15/12

OIL ANALYSIS REPORT

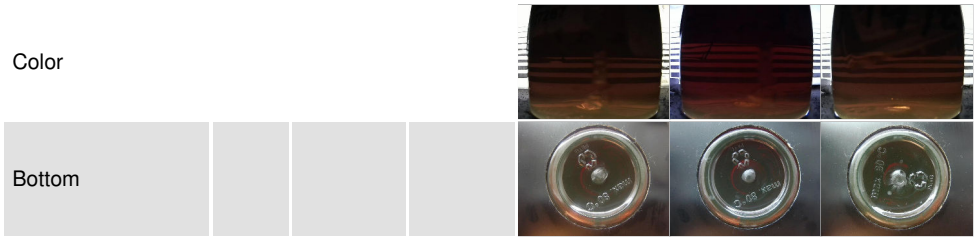


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.4	0.31	0.35	0.45

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	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*		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)	325	331	333	333
Visc @ 100°C	cSt	ASTM D7279(m)	25.22	25.2	25.3	25.3
Viscosity Index (VI)	Scale	ASTM D2270*	100	98	98	98

SAMPLE IMAGES



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0077287
Lab Number : **02640586**
Unique Number : 5789748
Test Package : IND 2 (Additional Tests: KV100, VI)
Received : 07 Jun 2024
Tested : 11 Jun 2024
Diagnosed : 11 Jun 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.