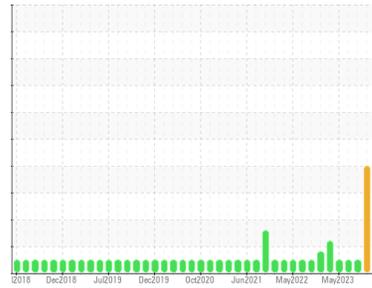




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area

#7 Blast Furnace

Machine Id

TOP HYD (IRN036) (S/N 1000033785)

Component

Hydraulic System

Fluid

HOUGHTON HOUGHTO-SAFE 620 (2000 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 pH level of this fluid is within the acceptable limits. The reserve alkalinity of this fluid is acceptable. The water concentration 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	WC0813617	WC0780655	WC0714506
Sample Date	Client Info	11 Apr 2024	14 Jan 2024	23 Oct 2023
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		NORMAL	SEVERE	NORMAL

WEAR METALS

method	limit/base	current	history1	history2		
Iron	ppm	ASTM D5185(m)	>20	0	0	0
Chromium	ppm	ASTM D5185(m)	>20	0	0	0
Nickel	ppm	ASTM D5185(m)	>20	0	0	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	<1	<1
Aluminum	ppm	ASTM D5185(m)	>20	0	0	0
Lead	ppm	ASTM D5185(m)	>20	0	0	0
Copper	ppm	ASTM D5185(m)	>20	0	0	0
Tin	ppm	ASTM D5185(m)	>20	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)		0	2	2
Barium	ppm	ASTM D5185(m)		<1	<1	<1
Molybdenum	ppm	ASTM D5185(m)		0	0	0
Manganese	ppm	ASTM D5185(m)		0	0	0
Magnesium	ppm	ASTM D5185(m)		0	<1	<1
Calcium	ppm	ASTM D5185(m)		0	1	1
Phosphorus	ppm	ASTM D5185(m)		2	8	2
Zinc	ppm	ASTM D5185(m)		2	0	0
Sulfur	ppm	ASTM D5185(m)		5	61	58
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

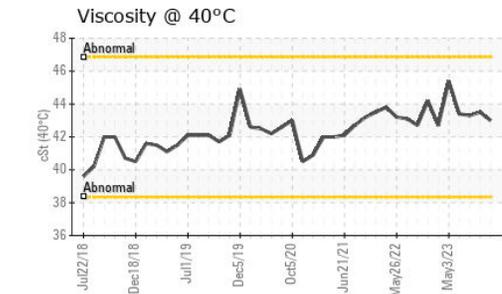
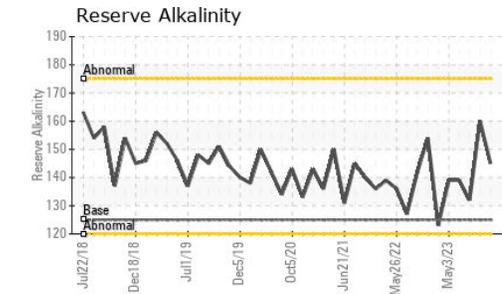
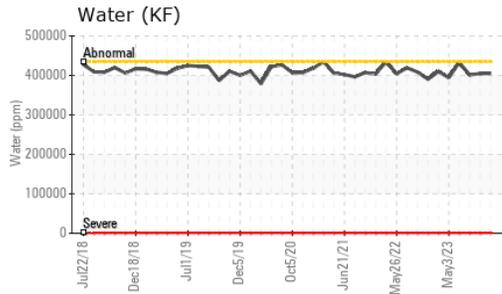
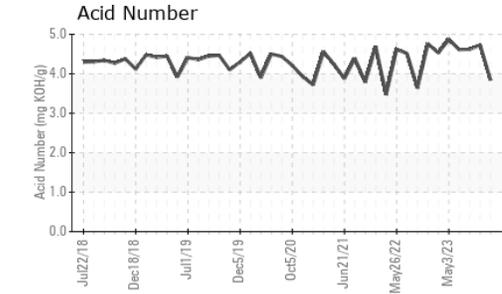
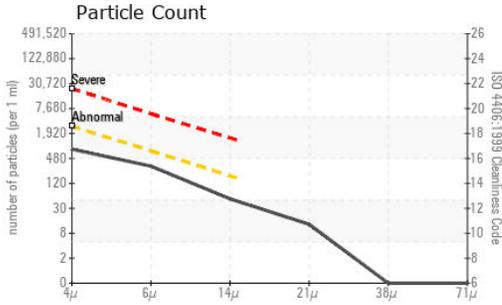
method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185(m)	>15	0	<1	<1
Sodium	ppm	ASTM D5185(m)		0	24	25
Potassium	ppm	ASTM D5185(m)	>20	<1	73	31
Water	%	ASTM D6304*	>43.5	40.5	40.5	40.1
ppm Water	ppm	ASTM D6304*	>435000	405000	405000	401000

FLUID CLEANLINESS

method	limit/base	current	history1	history2	
Particles >4µm	ASTM D7647	>2500	703	▲ 21559	480
Particles >6µm	ASTM D7647	>640	275	▲ 6010	240
Particles >14µm	ASTM D7647	>160	45	● 311	60
Particles >21µm	ASTM D7647	>40	11	45	7
Particles >38µm	ASTM D7647	>10	0	0	0
Particles >71µm	ASTM D7647	>3	0	0	0
Oil Cleanliness	ISO 4406 (c)	>18/16/14	17/15/13	▲ 22/20/15	16/15/13



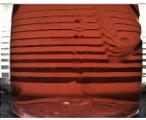
OIL ANALYSIS REPORT



FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*		3.84	4.73	4.62
Alkiline Reserve (Oils)	ml KOH/g	ASTM D1121*	125	145	160	132

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	FRGLY	FRGLY	FRGLY
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>43.5	>10%	>10%	>10%
Free Water	scalar	Visual*		NEG	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
pH	Scale 0-14	ASTM D1287*		9.65	9.63	9.50
Visc @ 40°C	cSt	ASTM D7279(m)		43.0	43.5	43.3

SAMPLE IMAGES		method	limit/base	current	history1	history2
Color						
Bottom						
PrtFilter				no image	no image	



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0813617
Lab Number : 02628451
Unique Number : 5761583
Test Package : IND 2 (Additional Tests: KF, pH, ReserveAlk)

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 algomareliability@algoma.com
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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.