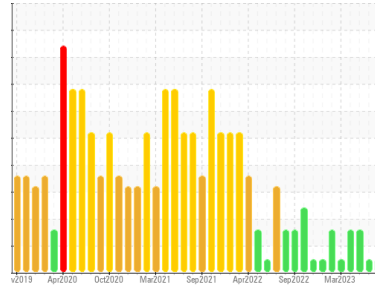




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
Direct Strip Mill/Finishing
 Machine Id
PL3-F1 TO F4 MORGOIL SYSTEM (DSC018) (S/N 1000016957)
 Component
Gear Lube System
 Fluid
GEAR OIL ISO 680 (25000 LTR)

DIAGNOSIS

Recommendation

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

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The water content is negligible. 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		WC0780840	WC0813689	WC0780849
Sample Date	Client Info		08 Aug 2023	21 Jun 2023	15 May 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	ABNORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >150	81	72	60
Chromium	ppm	ASTM D5185(m) >10	<1	<1	<1
Nickel	ppm	ASTM D5185(m) >10	<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) >50	<1	<1	<1
Tin	ppm	ASTM D5185(m) >10	2	3	3
Antimony	ppm	ASTM D5185(m) >5	0	0	<1
Vanadium	ppm	ASTM D5185(m)	0	0	<1
Beryllium	ppm	ASTM D5185(m)	0	0	0
Cadmium	ppm	ASTM D5185(m)	0	0	0

ADDITIVES

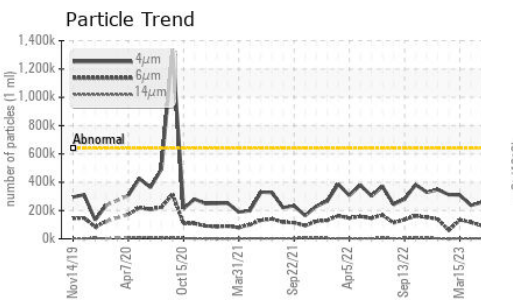
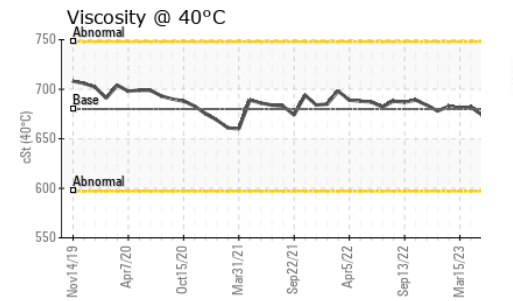
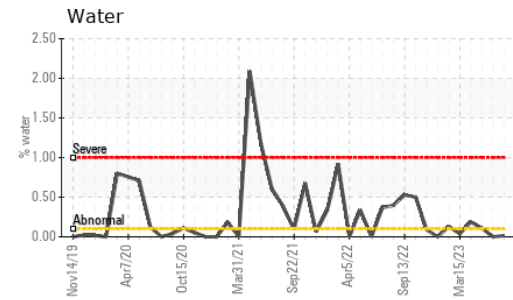
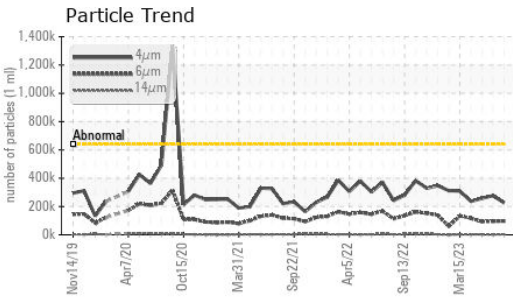
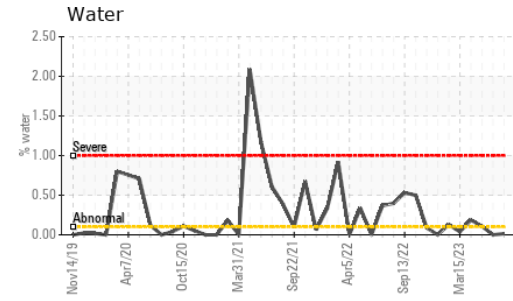
	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m) 50	1	1	2
Barium	ppm	ASTM D5185(m) 15	0	0	0
Molybdenum	ppm	ASTM D5185(m) 15	<1	<1	0
Manganese	ppm	ASTM D5185(m)	<1	<1	<1
Magnesium	ppm	ASTM D5185(m) 50	<1	<1	<1
Calcium	ppm	ASTM D5185(m) 50	3	3	2
Phosphorus	ppm	ASTM D5185(m) 350	215	217	253
Zinc	ppm	ASTM D5185(m) 100	7	7	5
Sulfur	ppm	ASTM D5185(m) 12500	8592	8537	8899
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >50	3	2	5
Sodium	ppm	ASTM D5185(m)	2	2	2
Potassium	ppm	ASTM D5185(m) >20	<1	<1	<1
Water	%	ASTM D6304* >0.1	0.014	---	▲ 0.107
ppm Water	ppm	ASTM D6304* >1000	149.0	---	▲ 1079.3

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>640000	226686	277108	257825
Particles >6µm	ASTM D7647	>160000	97512	96363	93308
Particles >14µm	ASTM D7647	>40000	3527	2265	2764
Particles >21µm	ASTM D7647	>10000	415	282	442
Particles >38µm	ASTM D7647	>2500	3	2	9
Particles >71µm	ASTM D7647	>640	0	1	0
Oil Cleanliness	ISO 4406 (c)	>26/24/22	25/24/19	25/24/18	25/24/19

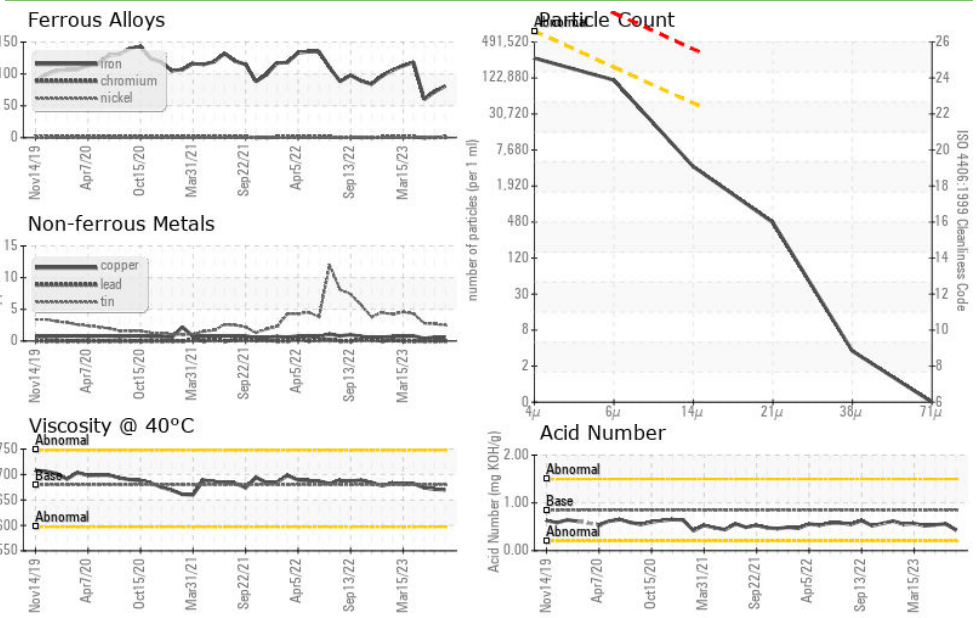


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.85	0.43	0.56	0.54
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	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*	>0.1	.2%	NEG	▲.2%
Free Water	scalar	Visual*		NEG	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	680	670	671	674

SAMPLE IMAGES		method	limit/base	current	history1	history2
Color						
Bottom						

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **ALGOMA STEEL INC. - STORES DEPT.**
Sample No. : WC0780840 **Received** : 11 Aug 2023 301 WALLACE TERRACE
Lab Number : **02575466** **Diagnosed** : 14 Aug 2023 SAULT STE MARIE, ON
Unique Number : 5620517 **Diagnostician** : Wes Davis CA P6C 1K8
Test Package : IND 2 (Additional Tests: KF)
 Contact: Algoma Reliability
 algomareliability@algoma.com
 T: (705)206-1059
 F: (705)945-3585

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.