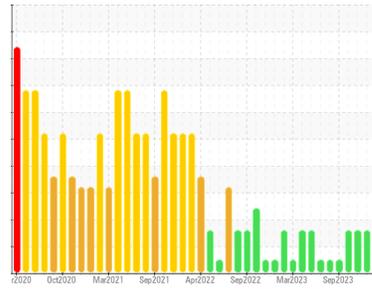




OIL ANALYSIS REPORT

Sample Rating Trend



WATER



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

We advise that you check for the source of water entry. Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We advise that you use off-line filtration with water adsorbent filters to attempt to remove the water from this oil. We recommend you service the filters on this component. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using IND 3 test kits, this testkit includes Analytical Ferrography which provides a detailed morphological analysis of wear particles present in the fluid.

Wear

Iron ppm levels are noted. A sharp increase in the iron level is noted. All other component wear rates are normal.

Contamination

There is a light amount of silt (particulates < 14 microns in size) present in the oil. There is a moderate concentration of water present in the oil.

Fluid Condition

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0837485	WC0837546	WC0837577
Sample Date	Client Info		16 Apr 2024	28 Feb 2024	18 Jan 2024
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			ABNORMAL	ABNORMAL	ABNORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >150	96	88	87
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	<1
Copper	ppm	ASTM D5185(m) >50	<1	<1	<1
Tin	ppm	ASTM D5185(m) >10	2	2	3
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) 50	2	2	1
Barium	ppm	ASTM D5185(m) 15	0	0	0
Molybdenum	ppm	ASTM D5185(m) 15	0	0	0
Manganese	ppm	ASTM D5185(m)	<1	0	0
Magnesium	ppm	ASTM D5185(m) 50	<1	<1	<1
Calcium	ppm	ASTM D5185(m) 50	3	4	4
Phosphorus	ppm	ASTM D5185(m) 350	156	168	171
Zinc	ppm	ASTM D5185(m) 100	6	5	5
Sulfur	ppm	ASTM D5185(m) 12500	8189	9419	9042
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

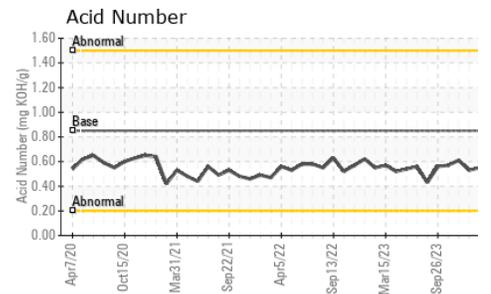
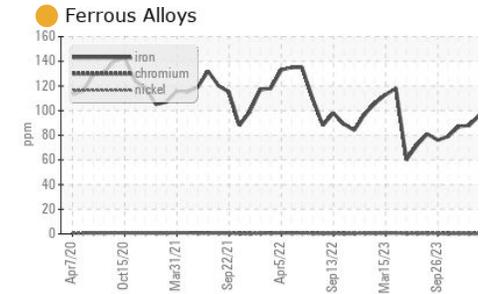
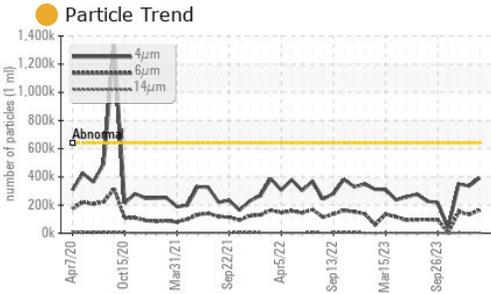
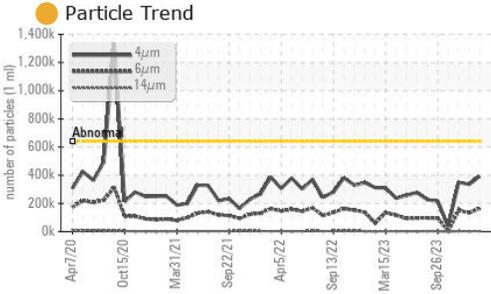
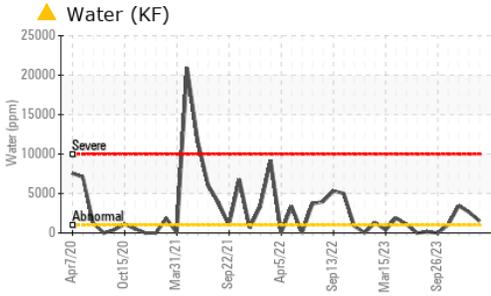
CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >50	3	2	3
Sodium	ppm	ASTM D5185(m)	4	4	3
Potassium	ppm	ASTM D5185(m) >20	2	2	2
Water	%	ASTM D6304* >0.1	0.150	0.262	0.344
ppm Water	ppm	ASTM D6304* >1000	1503	2626	3441

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>640000	391969	335494	349626
Particles >6µm	ASTM D7647	>160000	163191	133190	151005
Particles >14µm	ASTM D7647	>40000	3778	3023	3869
Particles >21µm	ASTM D7647	>10000	380	358	432
Particles >38µm	ASTM D7647	>2500	5	6	12
Particles >71µm	ASTM D7647	>640	1	0	2
Oil Cleanliness	ISO 4406 (c)	>26/24/22	26/25/19	26/24/19	26/24/19

OIL ANALYSIS REPORT

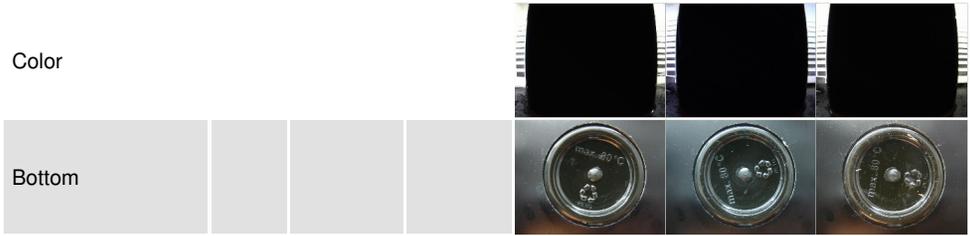


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.85	0.55	0.53	0.61

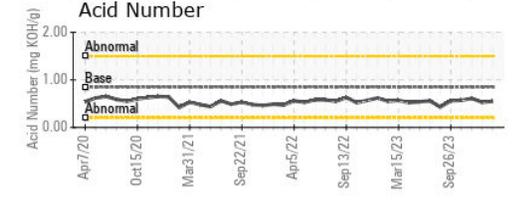
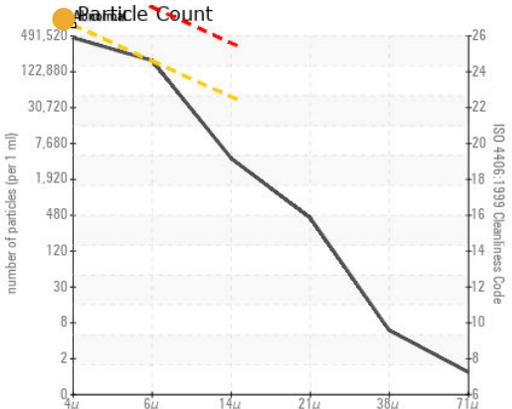
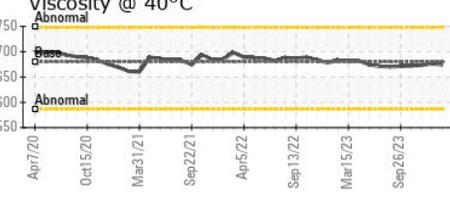
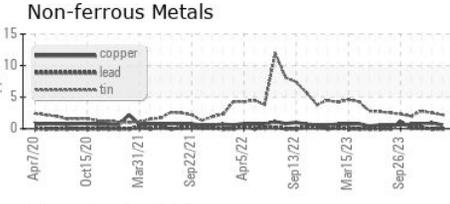
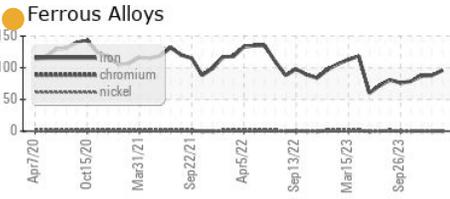
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	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%	▲.2%	▲.2%
Free Water	scalar	Visual*		NEG	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	680	674	676	673

SAMPLE IMAGES		method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **ALGOMA STEEL INC. - STORES DEPT.**
Sample No. : WC0837485 **Received** : 22 Apr 2024 **301 WALLACE TERRACE**
Lab Number : **02630753** **Tested** : 24 Apr 2024 **SAULT STE MARIE, ON**
Unique Number : 5763885 **Diagnosed** : 24 Apr 2024 - Kevin Marson **CA P6C 1K8**
Test Package : IND 2 (Additional Tests: KF, TAN Man) **Contact: Algoma Reliability**
algomareliability@algoma.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.