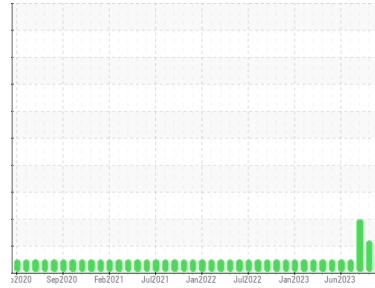




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
Direct Strip Mill/Finishing
 Machine Id
PH4 HYDRAULIC SYSTEM - CONDITIONING (DSC005) (S/N 1000015320)
 Component
Hydraulic System
 Fluid
SHELL TELLUS S2 MX 46 (12000 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			WC0837448	WC0837330	WC0837405
Sample Date	Client Info			18 Jan 2024	13 Nov 2023	26 Sep 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	ATTENTION	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water	WC Method		>0.05	NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>40	<1	<1	<1
Chromium	ppm	ASTM D5185(m)	>4	0	0	0
Nickel	ppm	ASTM D5185(m)	>20	<1	<1	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	<1	<1
Aluminum	ppm	ASTM D5185(m)	>4	<1	0	0
Lead	ppm	ASTM D5185(m)	>10	0	<1	▲ 12
Copper	ppm	ASTM D5185(m)	>60	<1	<1	<1
Tin	ppm	ASTM D5185(m)	>4	0	0	0
Antimony	ppm	ASTM D5185(m)		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)	0	0	1	<1
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)	70	64	65	66
Calcium	ppm	ASTM D5185(m)	10	13	13	13
Phosphorus	ppm	ASTM D5185(m)	300	291	288	288
Zinc	ppm	ASTM D5185(m)	325	337	353	343
Sulfur	ppm	ASTM D5185(m)	665	701	1242	718
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

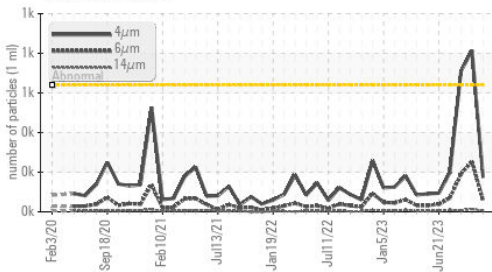
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>20	0	3	<1
Sodium	ppm	ASTM D5185(m)		0	<1	<1
Potassium	ppm	ASTM D5185(m)	>20	1	0	0

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>640	174	▲ 813	▲ 710
Particles >6µm		ASTM D7647	>160	57	▲ 254	▲ 190
Particles >14µm		ASTM D7647	>20	5	14	6
Particles >21µm		ASTM D7647	>4	1	3	2
Particles >38µm		ASTM D7647	>3	0	0	1
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>16/14/11	15/13/10	▲ 17/15/11	▲ 17/15/10

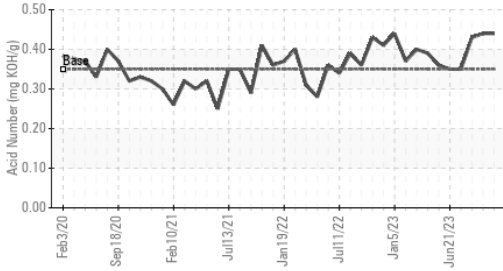


OIL ANALYSIS REPORT

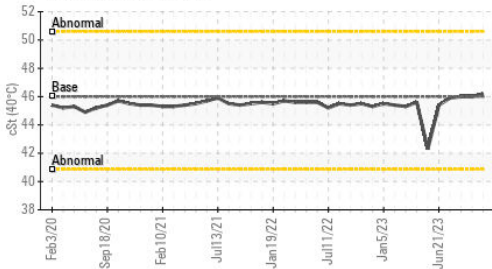
Particle Trend



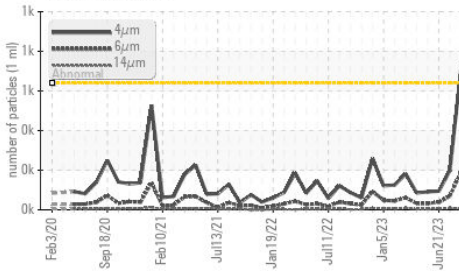
Acid Number



Viscosity @ 40°C



Particle Trend

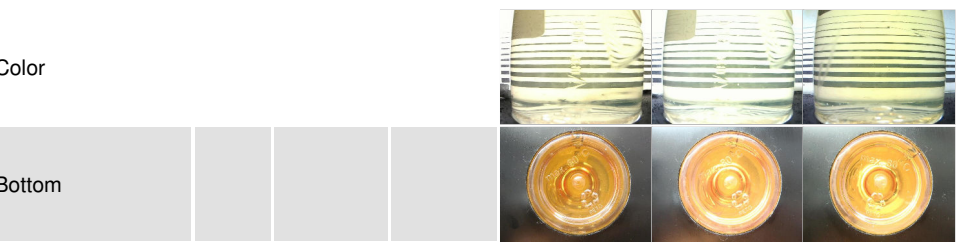


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.35	0.44	0.44	0.43

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*	>0.05	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG

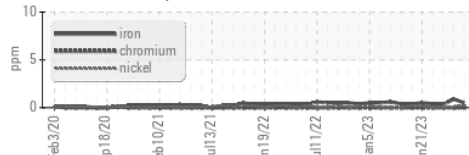
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	46.0	46.2	46.0	46.0

SAMPLE IMAGES

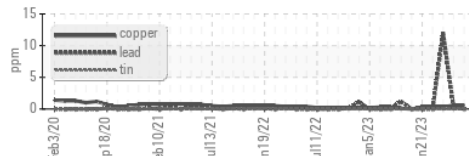


GRAPHS

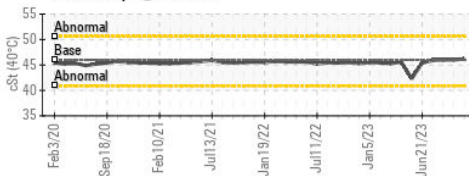
Ferrous Alloys



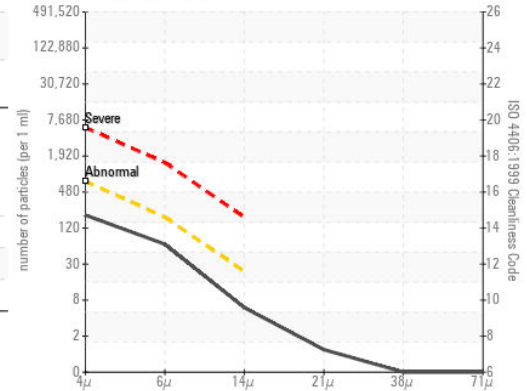
Non-ferrous Metals



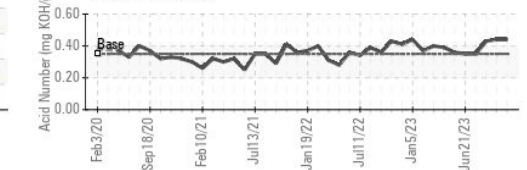
Viscosity @ 40°C



Particle Count



Acid Number



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **ALGOMA STEEL INC. - STORES DEPT.**
Sample No. : WC0837448 **Received** : 22 Jan 2024 301 WALLACE TERRACE
Lab Number : 02610281 **Diagnosed** : 23 Jan 2024 SAULT STE MARIE, ON
Unique Number : 5711367 **Diagnostician** : Wes Davis CA P6C 1K8
Test Package : IND 2 (Additional Tests: TAN Man)

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.

Contact: Algoma Reliability
algomareliability@algoma.com

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F: (705)945-3585