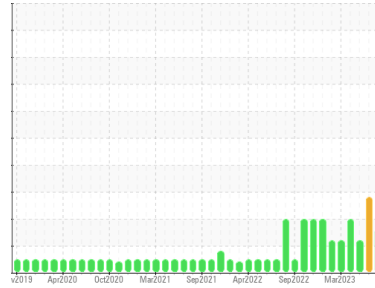




PROBLEM SUMMARY

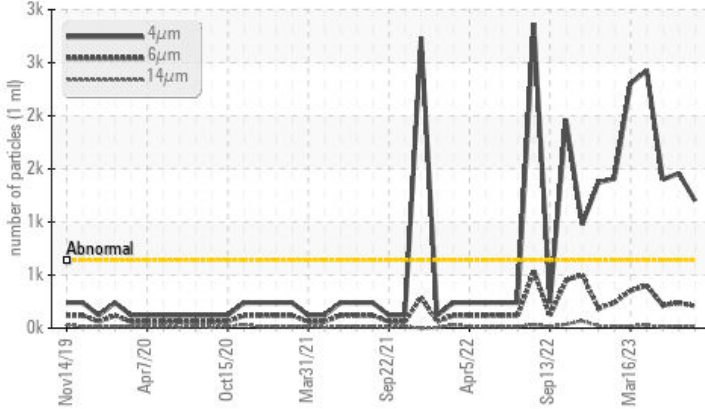
Area
Direct Strip Mill/Caster
 Machine Id
TSC SOUTH GLYCOL (DSC204)
 Component
Hydraulic System
 Fluid
HOUGHTON HOUGHTO-SAFE 620 (4500 LTR)

Sample Rating Trend



COMPONENT CONDITION SUMMARY

▲ Particle Trend



RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status			ATTENTION	ABNORMAL	ABNORMAL
Particles >4µm	ASTM D7647	>640	▲ 1201	▲ 1458	▲ 1399
Particles >6µm	ASTM D7647	>160	▲ 207	▲ 239	▲ 216
Particles >21µm	ASTM D7647	>4	▲ 9	▲ 9	3
Oil Cleanliness	ISO 4406 (c)	>16/14/11	▲ 17/15/11	▲ 18/15/11	▲ 18/15/11

Customer Id: ALGSSM
 Sample No.: WC0780855
 Lab Number: 02575521
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Kevin Marson +1 (289)291-4644 x4644
Kevin.Marson@wearcheck.com

To change component or sample information:
 Gloria Gonzalez +1 (289)291-4643 x4643
gloria.gonzalez@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	---	---	?	We recommend you service the filters on this component.

HISTORICAL DIAGNOSIS

22 Jun 2023 Diag: Kevin Marson

DEGRADATION



We recommend you service the filters on this component. We recommend an early resample to monitor this condition. 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. All component wear rates are normal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The system cleanliness is above the acceptable limit for the target ISO 4406 cleanliness code. 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 oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

view report



16 May 2023 Diag: Kevin Marson

ISO



We recommend you service the filters on this component. We recommend an early resample to monitor this condition. 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. Component wear rates appear to be normal (unconfirmed). There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The system cleanliness is above the acceptable limit for the target ISO 4406 cleanliness code. 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 oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

view report



19 Apr 2023 Diag: Kevin Marson

ISO



This is the baseline readout on this new (unused) oil. The fluid is suitable for service. We recommend an early resample to monitor this condition. NOTE: New oils are not generally filtered or guaranteed to a certain cleanliness code. We advise that you verify the target cleanliness code for your application and recommend the use of a portable filter cart to fill any system with a target code below the ISO cleanliness code of this product. {not applicable} There is a moderate amount of particulates (2 to 100 microns in size) present in the oil. The system cleanliness is above the acceptable limit for the target ISO 4406 cleanliness code. 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 service. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

view report

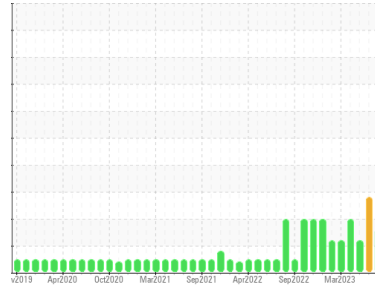




OIL ANALYSIS REPORT

Sample Rating Trend

ISO



Area
Direct Strip Mill/Caster
Machine Id
TSC SOUTH GLYCOL (DSC204)
Component
Hydraulic System
Fluid
HOUGHTON HOUGHTO-SAFE 620 (4500 LTR)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

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

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		WC0780855	WC0813711	WC0780801
Sample Date	Client Info		09 Aug 2023	22 Jun 2023	16 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			ATTENTION	ABNORMAL	ABNORMAL

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>20	0	<1	7
Chromium	ppm	ASTM D5185(m)	>20	0	<1	<1
Nickel	ppm	ASTM D5185(m)	>20	0	0	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		<1	0	2
Aluminum	ppm	ASTM D5185(m)	>20	0	0	1
Lead	ppm	ASTM D5185(m)	>20	0	0	0
Copper	ppm	ASTM D5185(m)	>20	0	1	2
Tin	ppm	ASTM D5185(m)	>20	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)		2	1	2
Barium	ppm	ASTM D5185(m)		1	0	0
Molybdenum	ppm	ASTM D5185(m)		0	<1	<1
Manganese	ppm	ASTM D5185(m)		0	0	0
Magnesium	ppm	ASTM D5185(m)		2	<1	1
Calcium	ppm	ASTM D5185(m)		1	<1	5
Phosphorus	ppm	ASTM D5185(m)		<1	<1	3
Zinc	ppm	ASTM D5185(m)		0	0	0
Sulfur	ppm	ASTM D5185(m)		52	7	14
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

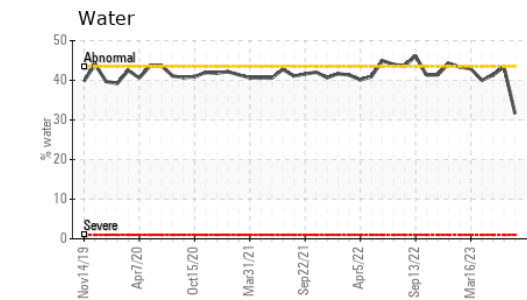
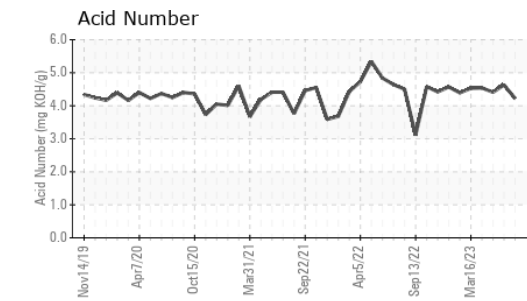
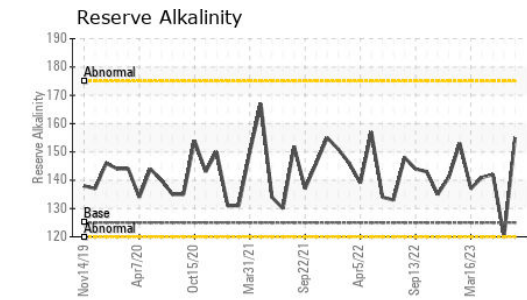
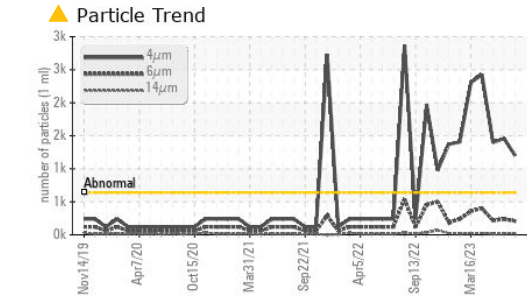
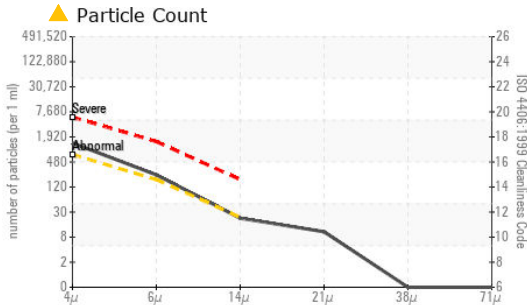
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>15	0	0	2
Sodium	ppm	ASTM D5185(m)		13	28	36
Potassium	ppm	ASTM D5185(m)	>20	21	35	46
Water	%	ASTM D6304*	>43.5	31.6	43.4	41.3
ppm Water	ppm	ASTM D6304*	>435000	316000	434000	413000

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>640	▲ 1201	▲ 1458	▲ 1399
Particles >6µm	ASTM D7647	>160	▲ 207	▲ 239	▲ 216
Particles >14µm	ASTM D7647	>20	19	20	14
Particles >21µm	ASTM D7647	>4	▲ 9	▲ 9	3
Particles >38µm	ASTM D7647	>3	0	4	1
Particles >71µm	ASTM D7647	>3	0	0	0
Oil Cleanliness	ISO 4406 (c)	>16/14/11	▲ 17/15/11	▲ 18/15/11	▲ 18/15/11



OIL ANALYSIS REPORT

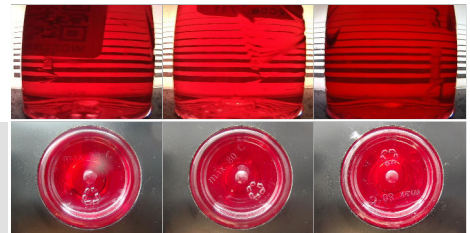


FLUID DEGRADATION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	4.22	4.63	4.41
Alkiline Reserve (Oils)	ml KOH/g	ASTM D1121*	155	▲ 120	142

VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	FRGLY	FRGLY
Odor	scalar	Visual*	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>43.5	>10%	>10%
Free Water	scalar	Visual*	NEG	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
pH	Scale 0-14	ASTM D1287*	9.61	9.30	9.54
Visc @ 40°C	cSt	ASTM D7279(m)	42.2	42.0	42.1

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **ALGOMA STEEL INC. - STORES DEPT.**
Sample No. : WC0780855 **Received** : 11 Aug 2023 301 WALLACE TERRACE
Lab Number : **02575521** **Diagnosed** : 22 Aug 2023 SAULT STE MARIE, ON
Unique Number : 5620572 **Diagnostician** : Kevin Marson CA P6C 1K8
Test Package : IND 2 (Additional Tests: KF, pH, ReserveAlk, TAN Man) Contact: Algoma Reliability

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.

algomareliability@algoma.com
 T: (705)206-1059
 F: (705)945-3585