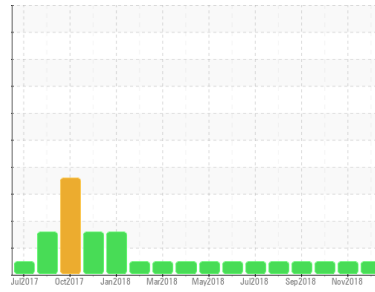




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area

Direct Strip Mill/Caster

Machine Id

CH2.4 HYDRAULIC SYSTEM (DSC193) (S/N 1000024515)

Component

Hydraulic System

Fluid

HOUGHTON HOUGHTO-SAFE 620 (2730 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		WC0293434	WC0300263	WC0300467
Sample Date	Client Info		03 Dec 2018	07 Nov 2018	09 Oct 2018
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	NORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>20	0	0
Chromium	ppm	ASTM D5185(m)	>20	0	0
Nickel	ppm	ASTM D5185(m)	>20	0	0
Titanium	ppm	ASTM D5185(m)		0	0
Silver	ppm	ASTM D5185(m)		0	0
Aluminum	ppm	ASTM D5185(m)	>20	0	<1
Lead	ppm	ASTM D5185(m)	>20	0	0
Copper	ppm	ASTM D5185(m)	>20	0	0
Tin	ppm	ASTM D5185(m)	>20	0	0
Antimony	ppm	ASTM D5185(m)		<1	52
Vanadium	ppm	ASTM D5185(m)		0	0
Beryllium	ppm	ASTM D5185(m)		0	0
Cadmium	ppm	ASTM D5185(m)		0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		0	<1
Barium	ppm	ASTM D5185(m)		0	0
Molybdenum	ppm	ASTM D5185(m)		<1	0
Manganese	ppm	ASTM D5185(m)		0	0
Magnesium	ppm	ASTM D5185(m)		<1	<1
Calcium	ppm	ASTM D5185(m)		<1	<1
Phosphorus	ppm	ASTM D5185(m)		0	0
Zinc	ppm	ASTM D5185(m)		0	0
Sulfur	ppm	ASTM D5185(m)		0	0
Lithium	ppm	ASTM D5185(m)		0	0

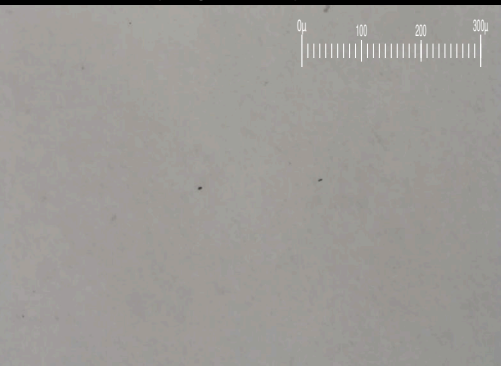
CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	0	0
Sodium	ppm	ASTM D5185(m)		13	13
Potassium	ppm	ASTM D5185(m)	>20	0	10
Water	%	ASTM D6304*	>43.5	43.1	39.9
ppm Water	ppm	ASTM D6304*		431000	399000

FLUID CLEANLINESS

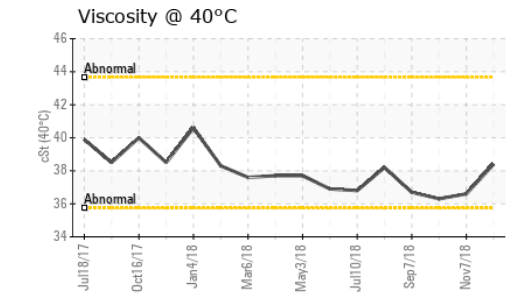
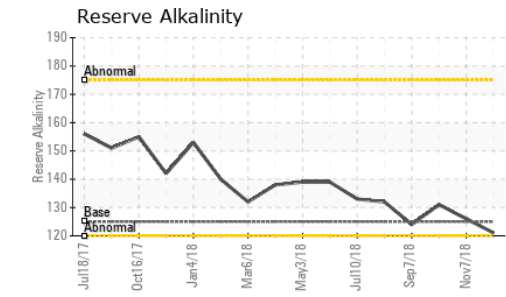
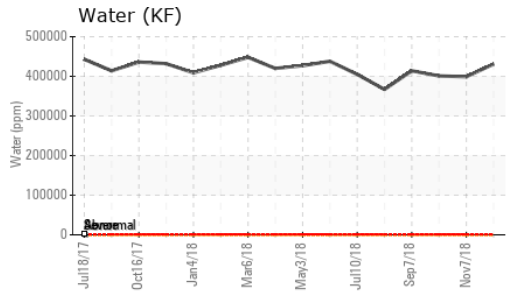
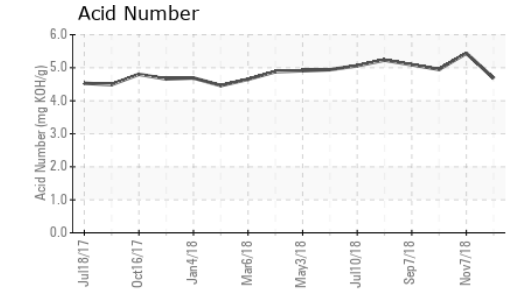
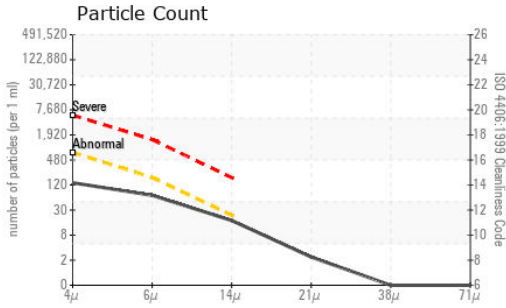
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>640	120	120	120
Particles >6µm	ASTM D7647	>160	60	60	60
Particles >14µm	ASTM D7647	>20	15	15	7
Particles >21µm	ASTM D7647	>4	2	2	0
Particles >38µm	ASTM D7647	>3	0	0	0
Particles >71µm	ASTM D7647	>3	0	0	0
Oil Cleanliness	ISO 4406 (c)	>16/14/11	14/13/11	14/13/11	14/13/10

Particle Filter (Magn: 100 x)





OIL ANALYSIS REPORT



FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*		4.68	5.44	4.95
Alkiline Reserve (Oils)	ml KOH/g	ASTM D1121*	125	121	126	131

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*	>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*		9.32	9.30	9.20
Visc @ 40°C	cSt	ASTM D7279(m)		38.4	36.6	36.3

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



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **ALGOMA STEEL INC. - STORES DEPT.**
Sample No. : WC0293434 **Received** : 06 Dec 2018 301 WALLACE TERRACE
Lab Number : **02256026** **Tested** : 10 Dec 2018 SAULT STE MARIE, ON
Unique Number : 4795221 **Diagnosed** : 10 Dec 2018 - Bill Quesnel CA P6C 1K8
Test Package : IND 2 (Additional Tests: KF, pH, PrtFilter, PrtFilterPrep, ReserveAlk, TAN) **Contact:** Algoma Reliability
algomareliability@algoma.com

To discuss this sample report, contact Customer Service at 1-800-268-2131. T: (705)206-1059
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. F: (705)945-3585
 Validity of results and interpretation are based on the sample and information as supplied.