



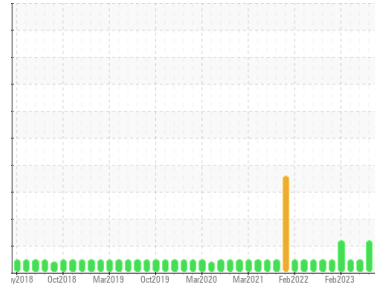
# OIL ANALYSIS REPORT

## Sample Rating Trend

ISO



Area  
**#7 Blast Furnace**  
 Machine Id  
**STOVE HOUSE HYD (IRN038) (S/N 1000036694)**  
 Component  
**Hydraulic System**  
 Fluid  
**HOUGHTON HOUGHTO-SAFE 620 (3000 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	<b>WC0780653</b>	WC0689832	WC0689956
Sample Date	Client Info	<b>14 Jan 2024</b>	23 Oct 2023	27 Jun 2023
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	<b>N/A</b>	N/A	N/A
Sample Status		<b>ATTENTION</b>	ABNORMAL	NORMAL

### WEAR METALS

method	limit/base	current	history1	history2		
Iron	ppm	ASTM D5185(m)	>20	<b>0</b>	0	2
Chromium	ppm	ASTM D5185(m)	>20	<b>0</b>	0	3
Nickel	ppm	ASTM D5185(m)	>20	<b>0</b>	0	0
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>0</b>	0	0
Lead	ppm	ASTM D5185(m)	>20	<b>0</b>	0	6
Copper	ppm	ASTM D5185(m)	>20	<b>0</b>	0	3
Tin	ppm	ASTM D5185(m)	>20	<b>0</b>	0	2
Antimony	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	2
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Beryllium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185(m)		<b>0</b>	0	0

### ADDITIVES

method	limit/base	current	history1	history2		
Boron	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1
Barium	ppm	ASTM D5185(m)		<b>&lt;1</b>	0	2
Molybdenum	ppm	ASTM D5185(m)		<b>0</b>	0	3
Manganese	ppm	ASTM D5185(m)		<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Calcium	ppm	ASTM D5185(m)		<b>&lt;1</b>	0	2
Phosphorus	ppm	ASTM D5185(m)		<b>1</b>	2	0
Zinc	ppm	ASTM D5185(m)		<b>0</b>	0	0
Sulfur	ppm	ASTM D5185(m)		<b>61</b>	56	0
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	0

### CONTAMINANTS

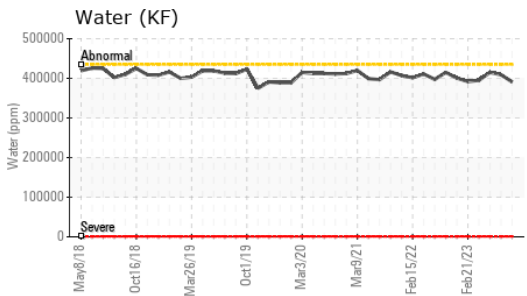
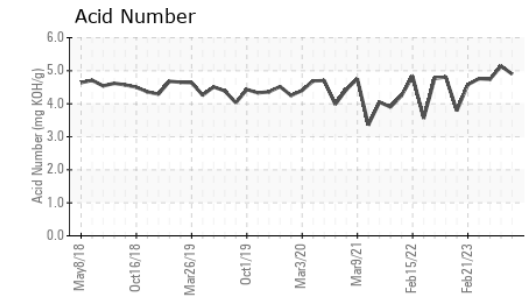
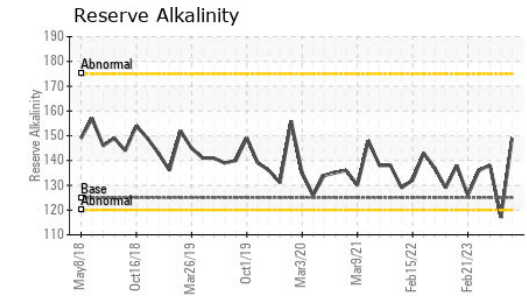
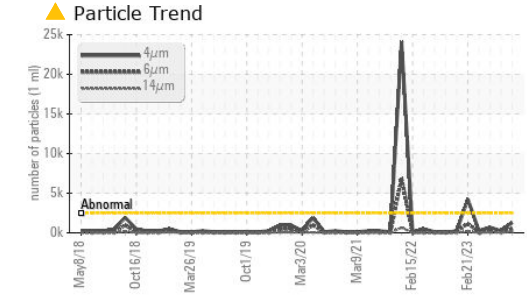
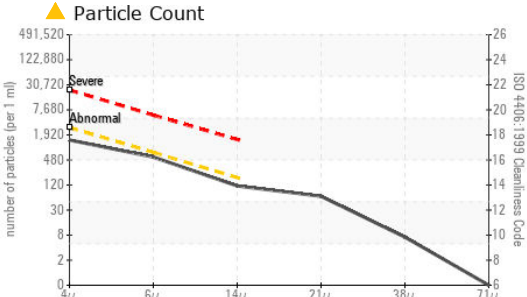
method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185(m)	>15	<b>&lt;1</b>	<1	0
Sodium	ppm	ASTM D5185(m)		<b>25</b>	24	26
Potassium	ppm	ASTM D5185(m)	>20	<b>32</b>	23	0
Water	%	ASTM D6304*	>43.5	<b>39.1</b>	40.9	41.5
ppm Water	ppm	ASTM D6304*	>435000	<b>391000</b>	409000	415000

### FLUID CLEANLINESS

method	limit/base	current	history1	history2	
Particles >4µm	ASTM D7647	>2500	<b>1269</b>	240	694
Particles >6µm	ASTM D7647	>640	<b>496</b>	120	250
Particles >14µm	ASTM D7647	>160	<b>101</b>	30	43
Particles >21µm	ASTM D7647	>40	<b>▲ 57</b>	3	13
Particles >38µm	ASTM D7647	>10	<b>6</b>	0	0
Particles >71µm	ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>18/16/14	<b>17/16/14</b>	12/12/12	17/15/13



# OIL ANALYSIS REPORT



FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*		<b>4.90</b>	5.14	4.74
Alkiline Reserve (Oils)	ml KOH/g	ASTM D1121*	125	<b>149</b>	▲ 117	138

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

FLUID PROPERTIES		method	limit/base	current	history1	history2
pH	Scale 0-14	ASTM D1287*		<b>9.58</b>	9.50	9.37
Visc @ 40°C	cSt	ASTM D7279(m)		<b>43.0</b>	43.5	42.9

SAMPLE IMAGES		method	limit/base	current	history1	history2
Color						
Bottom						
PrtFilter						



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **ALGOMA STEEL INC. - STORES DEPT.**  
**Sample No.** : WC0780653 **Received** : 15 Jan 2024 **301 WALLACE TERRACE**  
**Lab Number** : **02608818** **Diagnosed** : 30 Jan 2024 **SAULT STE MARIE, ON**  
**Unique Number** : 5709904 **Diagnostician** : Kevin Marson **CA P6C 1K8**  
**Test Package** : IND 2 ( Additional Tests: KF, pH, ReserveAlk, 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.

**T: (705)206-1059**  
**F: (705)945-3585**