

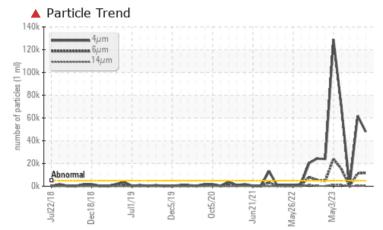
PROBLEM SUMMARY

Area #7 Blast Furnace TUYERE MACHINE HYD (IRN050) (S/N 1000033154)

Hydraulic System

HOUGHTON HOUGHTO-SAFE 620 (--- GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

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 recommend you service the filters on this component. Resample in 30-45 days to monitor this situation. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

PROBLEMATIC TEST RESULTS							
Sample Status			SEVERE	SEVERE	SEVERE		
Particles >4µm	ASTM D7647	>5000	47881	6 1847	63		
Particles >6µm	ASTM D7647	>1300	11773	1 1262	63		
Particles >14µm	ASTM D7647	>160	🔺 505	▲ 535	63		
Oil Cleanliness	ISO 4406 (c)	>19/17/14	4 23/21/16	▲ 23/21/16	13/13/13		

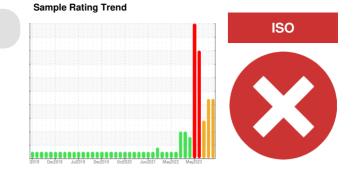
Customer Id: ALGSSM Sample No.: WC0813618 Lab Number: 02628454 Test Package: IND 2



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 <u>gloria.gonzalez@wearcheck.com</u>



RECOMMENDED ACTIONS							
Action	Status	Date	Done By	Description			
Change Filter			?	We recommend you service the filters on this component.			
Resample			?	Resample in 30-45 days to monitor this situation.			
Information Required			?	NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.			
Check Breathers			?	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.			
Check Seals			?	Check seals and/or filters for points of contaminant entry.			

HISTORICAL DIAGNOSIS





We advise that you check all areas where contaminants can enter the system. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. 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. Resample in 30-45 days to monitor this situation. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.All component wear rates are normal. There is a high amount of particulates (2 to 100 microns in size) present in the oil. 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.



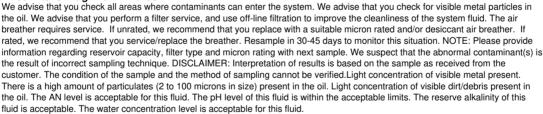
view report

23 Oct 2023 Diag: Wes Davis



We advise that you check all areas where contaminants can enter the system. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. 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. Resample in 30-45 days to monitor this situation. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. All component wear rates are normal. There is a high amount of particulates (2 to 100 microns in size) present in the oil. 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.

27 Jun 2023 Diag: Kevin Marson







OIL ANALYSIS REPORT

Area #7 Blast Furnace TUYERE MACHINE HYD (IRN050) (S/N 1000033154)

Hydraulic System

HOUGHTON HOUGHTO-SAFE 620 (--- GAL)

DIAGNOSIS

Recommendation

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 recommend you service the filters on this component. Resample in 30-45 days to monitor this situation. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

Wear

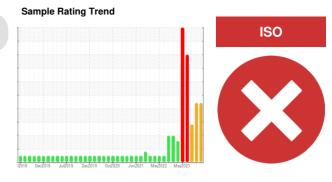
All component wear rates are normal.

Contamination

There is a high 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 oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

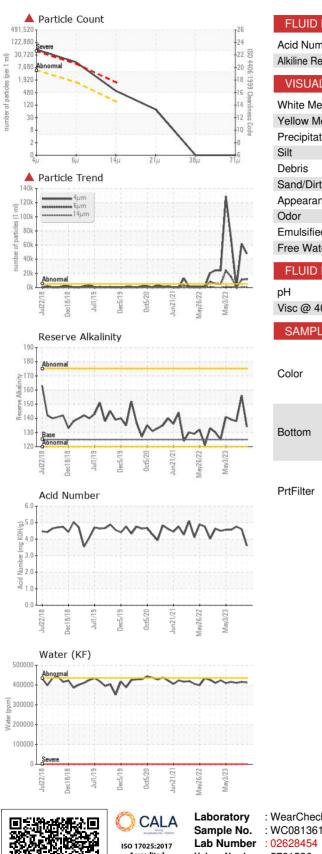


Sample Date Client Info 11 Apr 2024 14 Jan 2024 23 Oct 203 Machine Age hrs Client Info 0 0 0 Oil Age hrs Client Info 0 0 0 Oil Changed Client Info N/A N/A NA Sample Status Client Info N/A N/A N/A Severe Severe Severe Severe Severe WEAR METALS method limit/base current history1 history1 Iron ppm ASTM 0585(m) >20 0 0 0 Othornium ppm ASTM 0585(m) >20 0 0 0 Silver ppm ASTM 0585(m) >20 0 0 0 Capper ppm ASTM 0585(m) >20 0 0 0 Astmostist(m ppm ASTM 0585(m) 20 0 0 0 Capper ppm ASTM 0585(m) >20	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 0 0 0 Oil Age hrs Client Info N/A N/A N/A Sample Status I SEVERE SEVERE SEVERE WEAR METALS method Imit/base current history1 history1 Iron ppm ASTM 05185(m) >20 0 0 0 Nickel ppm ASTM 05185(m) >20 0 0 0 Silver ppm ASTM 05185(m) >20 0 0 0 Copper ppm ASTM 05185(m) 20 0 0 0 Vanadium ppm ASTM 05185(m) 0 0 0 0 Bariump	Sample Number		Client Info		WC0813618	WC0780656	WC0714505
Oil Age hrs Client Info 0 0 0 Oil Changed Client Info N/A N/A N/A N/A Sample Status Client Info N/A SEVERE SEVERE SEVERE WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185(m) >20 0 0 0 Chromium ppm ASTM D5185(m) >20 0 0 0 Nickel ppm ASTM D5185(m) >20 0 0 0 Aluminum ppm ASTM D5185(m) >20 0 0 0 Lead ppm ASTM D5185(m) >20 0 0 0 Antimony ppm ASTM D5185(m) >20 0 0 0 Antimony ppm ASTM D5185(m) 0 <1	Sample Date		Client Info		11 Apr 2024	14 Jan 2024	23 Oct 2023
Oli Changed Client Info N/A N/A N/A N/A Sample Status method limit/base current history1 history1 Iron ppm ASTM D5185(m) >20 0 0 0 Chromium ppm ASTM D5185(m) >20 0 0 0 Nickel ppm ASTM D5185(m) >20 0 0 0 Silver ppm ASTM D5185(m) >20 0 0 0 Lead ppm ASTM D5185(m) >20 0 0 0 Auminum ppm ASTM D5185(m) >20 0 0 0 Vanadium ppm ASTM D5185(m) >20 0 0 0 Auminum ppm ASTM D5185(m) 0 0 0 0 Vanadium ppm ASTM D5185(m) 0 0 0 0 Cotramum ppm ASTM D5185(m) 0 <1	Machine Age	hrs	Client Info		0	0	0
Sample Status Imit bits SEVERE SEVERE SEVERE WEAR METALS method limit/base current history1 history1 Iron ppm ASTM 05185(m) >20 0 0 0 Nickel ppm ASTM 05185(m) >20 0 0 0 Nickel ppm ASTM 05185(m) >20 0 0 0 Silver ppm ASTM 05185(m) >20 0 0 0 Aluminum ppm ASTM 05185(m) >20 0 0 0 Copper ppm ASTM 05185(m) >20 0 0 0 Cadmium ppm ASTM 05185(m) >20 0 0 0 Cadmium ppm ASTM 05185(m) 0 0 0 0 Cadmium ppm ASTM 05185(m) 0 0 0 0 Cadmium ppm ASTM 05185(m) 0 <1	Oil Age	hrs	Client Info		0	0	0
WEAR METALS method limit/base current history1 history1 Iron ppm ASTM 05188(m) >20 0 0 0 Nickel ppm ASTM 05188(m) 0 0 0 0 Nickel ppm ASTM 05188(m) 0 0 0 0 Silver ppm ASTM 05188(m) 20 0 0 0 Aluminum ppm ASTM 05188(m) >20 0 0 0 Copper ppm ASTM 05188(m) >20 0 0 0 Tin ppm ASTM 05188(m) >20 0 0 0 Cadmium ppm ASTM 05188(m) 0 0 0 0 Cadmium ppm ASTM 05188(m) 0 <1	Oil Changed		Client Info		N/A	N/A	N/A
Iron ppm ASTM D5185(m) >20 0 0 0 Nickel ppm ASTM D5185(m) >20 0 0 0 Nickel ppm ASTM D5185(m) >20 0 0 0 Silver ppm ASTM D5185(m) 0 0 0 0 Aluminum ppm ASTM D5185(m) >20 0 0 0 Lead ppm ASTM D5185(m) >20 0 0 0 Antimony ppm ASTM D5185(m) >20 0 0 0 Vanadium ppm ASTM D5185(m) 0 0 0 0 Antimony ppm ASTM D5185(m) 0 0 0 0 Cadmium ppm ASTM D5185(m) 0 0 0 0 Barium ppm ASTM D5185(m) 0 0 0 0 Molybdenum ppm ASTM D5185(m) 0 <1	Sample Status				SEVERE	SEVERE	SEVERE
Chromium ppm ASTM D5(85(m) >20 0 0 0 Nickel ppm ASTM D5(85(m) >20 0 0 0 0 Silver ppm ASTM D5(85(m) >20 0 0 0 0 Astm D5(85(m) >20 0 0 0 0 0 Lead ppm ASTM D5(85(m) >20 0 0 0 0 Astm D5(85(m) >20 0 0 0 0 0 0 Astmosy ppm ASTM D5(85(m) >20 0 0 0 0 Vanadium ppm ASTM D5(85(m) 0 <td>WEAR METALS</td> <td></td> <td>method</td> <td>limit/base</td> <th>current</th> <td>history1</td> <td>history2</td>	WEAR METALS		method	limit/base	current	history1	history2
Nickel ppm ASTM D5165(m) >20 0 0 0 Titanium ppm ASTM D5165(m) 0 <1	Iron	ppm	ASTM D5185(m)	>20	0	0	0
Tatauium ppm ASTM D5165(m) O O O Silver ppm ASTM D5165(m) >20 0 0 0 Aluminum ppm ASTM D5165(m) >20 0 0 0 Lead ppm ASTM D5165(m) >20 0 0 0 Copper ppm ASTM D5165(m) >20 0 0 0 Tin ppm ASTM D5165(m) >20 0 0 0 Vanadium ppm ASTM D5165(m) 0 0 0 0 Beryllium ppm ASTM D5165(m) 0 0 0 0 Boron ppm ASTM D5165(m) 0 <1	Chromium	ppm	ASTM D5185(m)	>20	0	0	0
Silver ppm ASTM D5185(m) 0 <1 <1 Aluminum ppm ASTM D5185(m) >20 0 0 0 Lead ppm ASTM D5185(m) >20 0 0 0 Copper ppm ASTM D5185(m) >20 0 0 0 Antimony ppm ASTM D5185(m) >20 0 0 0 Vanadium ppm ASTM D5185(m) 0 0 0 0 Vanadium ppm ASTM D5185(m) 0 0 0 0 Cadmium ppm ASTM D5185(m) 0 0 0 0 Boron ppm ASTM D5185(m) 0 <1	Nickel	ppm	ASTM D5185(m)	>20	0	0	0
Aluminum ppm ASTM D5185(m) >20 0 0 0 Lead ppm ASTM D5185(m) >20 0 0 0 Copper ppm ASTM D5185(m) >20 <1	Titanium	ppm	ASTM D5185(m)		0	0	0
Lead ppm ASTM D5185(m) >20 0 0 0 Copper ppm ASTM D5185(m) >20 <1	Silver	ppm	ASTM D5185(m)		0	<1	<1
Copper ppm ASTM D5185(m) >20 <1 0 0 Tin ppm ASTM D5185(m) >20 0 0 0 Antimony ppm ASTM D5185(m) 0 0 0 0 Vanadium ppm ASTM D5185(m) 0 0 0 0 Beryllium ppm ASTM D5185(m) 0 0 0 0 Cadmium ppm ASTM D5185(m) 0 -11 3 Boron ppm ASTM D5185(m) 0 -11 3 Barium ppm ASTM D5185(m) 0 -11 -1 Molybdenum ppm ASTM D5185(m) 0 0 0 0 Magnesium ppm ASTM D5185(m) 0 -11 -11 -1 Calcium ppm ASTM D5185(m) 0 -11 -1 -1 Calcium ppm ASTM D5185(m) 0 <1	Aluminum	ppm	ASTM D5185(m)	>20	0	0	0
Copper ppm ASTM D5185(m) >20 <1 0 0 Tin ppm ASTM D5185(m) >20 0 0 0 Antimony ppm ASTM D5185(m) 0 0 0 0 Vanadium ppm ASTM D5185(m) 0 0 0 0 Beryllium ppm ASTM D5185(m) 0 0 0 0 Cadmium ppm ASTM D5185(m) 0 <1	Lead	ppm	ASTM D5185(m)	>20	0	0	0
Tin ppm ASTM D5185(m) >20 0 0 0 Antimony ppm ASTM D5185(m) 0 <1	Copper		ASTM D5185(m)	>20	<1	0	0
Antimony ppm ASTM D5185(m) 0 <1 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 history1 Boron ppm ASTM D5185(m) 0 <1					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 Boron ppm ASTM D5185(m) 0 <1	Antimony				0	<1	0
Beryllium ppm ASTM D5185(m) 0 0 0 0 Cadmium ppm ASTM D5185(m) 0 0 0 0 ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185(m) 0 <1 3 Barium ppm ASTM D5185(m) 0 <1 3 Molybdenum ppm ASTM D5185(m) 0 <1 <1 Magnese ppm ASTM D5185(m) 0 <11 <1 Calcium ppm ASTM D5185(m) <11 0 0 Magnese ppm ASTM D5185(m) <11 0 0 Calcium ppm ASTM D5185(m) <11 0 0 Sulfur ppm ASTM D5185(m) <11 <1 <1 Contradminant ppm ASTM D5185(m) <1 <1 <1 <1 Sulfur ppm ASTM D5185(m) <15	Vanadium		ASTM D5185(m)		0	0	0
Cadmium ppm ASTM D5185(m) 0 0 0 0 ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185(m) 0 <1	Beryllium		. ,		0	0	0
Boron ppm ASTM D5185(m) 0 <1 3 Barium ppm ASTM D5185(m) 0 <1	,		()		0	0	0
Barium ppm ASTM D5185(m) 0 <1 <1 Molybdenum ppm ASTM D5185(m) 0 0 0 Manganese ppm ASTM D5185(m) 0 0 0 Magnesium ppm ASTM D5185(m) 0 <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185(m) 0 0 0 Manganese ppm ASTM D5185(m) 0 0 0 Magnesium ppm ASTM D5185(m) 0 <1	Boron	ppm	ASTM D5185(m)		0	<1	3
Manganese ppm ASTM D5185(m) 0 0 0 Magnesium ppm ASTM D5185(m) 0 <1	Barium	ppm	ASTM D5185(m)		0	<1	<1
Magnesium ppm ASTM D5185(m) 0 <1 <1 Calcium ppm ASTM D5185(m) 0 <1	Molybdenum	ppm	ASTM D5185(m)		0	0	0
Calcium ppm ASTM D5185(m) 0 <1 <1 Phosphorus ppm ASTM D5185(m) <1	Manganese	ppm	ASTM D5185(m)		0	0	0
Phosphorus ppm ASTM D5185(m) <1 1 2 Zinc ppm ASTM D5185(m) 1 0 0 Sulfur ppm ASTM D5185(m) 4 58 57 Lithium ppm ASTM D5185(m) 4 58 57 Lithium ppm ASTM D5185(m) <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	Magnesium	ppm	ASTM D5185(m)		0	<1	<1
Zinc ppm ASTM D5185(m) 1 0 0 Sulfur ppm ASTM D5185(m) 4 58 57 Lithium ppm ASTM D5185(m) 41 58 57 Lithium ppm ASTM D5185(m) <1	Calcium	ppm	ASTM D5185(m)		0	<1	<1
Sulfur ppm ASTM D5185(m) 4 58 57 Lithium ppm ASTM D5185(m) <1 <1 <1 <1 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185(m) >15 0 <1 <1 Sodium ppm ASTM D5185(m) >15 0 <1 <1 <1 Sodium ppm ASTM D5185(m) >15 0 <1 <1 <1 Sodium ppm ASTM D5185(m) >20 <1 34 35 Water % ASTM D6304* >43.5 41.2 41.5 41.1 ppm Water ppm ASTM D6304* >435000 412000 415000 411000 FLUID CLEANLINESS method limit/base current history1 history1 Particles >4µm ASTM D7647 >5000 4 47881 6 61847 63 Particles >6µm ASTM D7647 <td>Phosphorus</td> <td>ppm</td> <td>ASTM D5185(m)</td> <td></td> <th><1</th> <td>1</td> <td>2</td>	Phosphorus	ppm	ASTM D5185(m)		<1	1	2
Lithium ppm ASTM D5185(m) <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <td>Zinc</td> <td>ppm</td> <td>ASTM D5185(m)</td> <td></td> <th>1</th> <td>0</td> <td>0</td>	Zinc	ppm	ASTM D5185(m)		1	0	0
CONTAMINANTSmethodlimit/basecurrenthistory1history1SiliconppmASTM D5185(m)>150<1	Sulfur	ppm	ASTM D5185(m)		4	58	57
Silicon ppm ASTM D5185(m) >15 0 <1 <1 Sodium ppm ASTM D5185(m) 0 26 31 Potassium ppm ASTM D5185(m) >20 <1 34 35 Water % ASTM D6304* >43.5 41.2 41.5 41.1 ppm Water ppm ASTM D6304* >43500 412000 415000 411000 FLUID CLEANLINESS method limit/base current history1 history1 Particles >4µm ASTM D7647 >5000 4 47881 61847 63 Particles >6µm ASTM D7647 >1300 11773 11262 63 Particles >14µm ASTM D7647 >160 505 535 63 Particles >21µm ASTM D7647 >40 65 147 63 Particles >38µm ASTM D7647 >10 0 6 63 Particles >71µm ASTM D7647 >3 0 0 6	Lithium	ppm	ASTM D5185(m)		<1	<1	<1
Sodium ppm ASTM D5185(m) 0 26 31 Potassium ppm ASTM D5185(m) >20 <1	CONTAMINANTS	\$	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185(m) >20 <1 34 35 Water % ASTM D6304* >43.5 41.2 41.5 41.1 ppm Water ppm ASTM D6304* >43.5 41.2 41.5 41.1 ppm Water ppm ASTM D6304* >435000 412000 415000 411000 FLUID CLEANLINESS method limit/base current history1 history1 Particles >4µm ASTM D7647 >5000 ▲ 47881 ▲ 61847 63 Particles >6µm ASTM D7647 >1300 ▲ 11773 ▲ 11262 63 Particles >14µm ASTM D7647 >160 ▲ 505 ▲ 535 63 Particles >21µm ASTM D7647 >40 ● 65 ▲ 147 ● 63 Particles >38µm ASTM D7647 >10 0 ● 63 ● 63 Particles >71µm ASTM D7647 >3 0 0 ▲ 63	Silicon	ppm	ASTM D5185(m)	>15	0	<1	<1
Water % ASTM D6304* >43.5 41.2 41.5 41.1 ppm Water ppm ASTM D6304* >43500 412000 415000 411000 FLUID CLEANLINESS method limit/base current history1 history1 Particles >4µm ASTM D7647 >5000 A 47881 61847 63 Particles >6µm ASTM D7647 >1300 11773 11262 63 Particles >14µm ASTM D7647 >160 505 535 63 Particles >21µm ASTM D7647 >40 65 147 63 Particles >38µm ASTM D7647 >10 0 6 63 Particles >71µm ASTM D7647 >3 0 0 4	Sodium	ppm	ASTM D5185(m)		0	26	31
ppm Water ppm ASTM D6304* >435000 412000 415000 411000 FLUID CLEANLINESS method limit/base current history1 history1 Particles >4µm ASTM D7647 >5000 4 47881 61847 63 Particles >6µm ASTM D7647 >1300 11773 11262 63 Particles >14µm ASTM D7647 >160 505 535 63 Particles >21µm ASTM D7647 >40 65 147 63 Particles >38µm ASTM D7647 >10 0 6 63 Particles >71µm ASTM D7647 >3 0 0 63	Potassium	ppm	ASTM D5185(m)	>20	<1	34	35
FLUID CLEANLINESS method limit/base current history1 history1 Particles >4 μ m ASTM D7647 >5000 47881 61847 63 Particles >6 μ m ASTM D7647 >1300 11773 11262 63 Particles >14 μ m ASTM D7647 >160 505 535 63 Particles >21 μ m ASTM D7647 >40 65 147 63 Particles >38 μ m ASTM D7647 >10 0 6 63 Particles >71 μ m ASTM D7647 >3 0 0 4	Water	%	ASTM D6304*	>43.5	41.2	41.5	41.1
Particles >4μm ASTM D7647 >5000 47881 61847 63 Particles >6μm ASTM D7647 >1300 11773 11262 63 Particles >14μm ASTM D7647 >160 505 535 63 Particles >14μm ASTM D7647 >40 65 147 63 Particles >21μm ASTM D7647 >10 0 6 63 Particles >38μm ASTM D7647 >3 0 0 63	ppm Water	ppm	ASTM D6304*	>435000	412000	415000	411000
Particles >6μm ASTM D7647 >1300 11773 1262 63 Particles >14μm ASTM D7647 >160 505 535 63 Particles >21μm ASTM D7647 >40 65 147 63 Particles >21μm ASTM D7647 >10 0 6 63 Particles >38μm ASTM D7647 >10 0 6 63 Particles >71μm ASTM D7647 >3 0 0 4 63	FLUID CLEANLIN	IESS	method	limit/base	current	history1	history2
Particles >6μm ASTM D7647 >1300 11773 1262 63 Particles >14μm ASTM D7647 >160 505 535 63 Particles >21μm ASTM D7647 >40 65 147 63 Particles >21μm ASTM D7647 >10 0 6 63 Particles >38μm ASTM D7647 >10 0 6 63 Particles >71μm ASTM D7647 >3 0 0 63	Particles >4µm		ASTM D7647	>5000	47881	6 1847	63
Particles >14μm ASTM D7647 >160 ▲ 505 ▲ 535 63 Particles >21μm ASTM D7647 >40 ● 65 ▲ 147 ● 63 Particles >38μm ASTM D7647 >10 0 6 ▲ 63 Particles >71μm ASTM D7647 >3 0 0 ▲ 63	•		ASTM D7647	>1300		▲ 11262	63
Particles >21μm ASTM D7647 >40 65 147 63 Particles >38μm ASTM D7647 >10 0 6 63 Particles >71μm ASTM D7647 >3 0 0 63	•						
Particles >38μm ASTM D7647 >10 0 6 63 Particles >71μm ASTM D7647 >3 0 0 ▲ 63							
Particles >71μm ASTM D7647 >3 0 ▲ 63					-		-
$U_1 U_2 = 0.0000000000000000000000000000000000$	Oil Cleanliness		ISO 4406 (c)		▲ 23/21/16	▲ 23/21/16	13/13/13

Contact/Location: Maintenance Technology - Algoma Reliability - ALGSSM Page 3 of 4



OIL ANALYSIS REPORT



FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*		3.60	4.60	4.76
Alkiline Reserve (Oils)	ml KOH/g	ASTM D1121*	125	134	156	138
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	VLITE	VLITE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	FRGLY	FRGLY	FRGLY
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>43.5	>10%	>10%	>10%
Free Water	scalar	Visual*		NEG	NEG	NEG
FLUID PROPERTI	IES	method	limit/base	current	history1	history2
рН	Scale 0-14	ASTM D1287*		9.69	9.63	9.48
Visc @ 40°C	cSt	ASTM D7279(m)		42.4	44.8	42.1
SAMPLE IMAGES	;	method	limit/base	current	history1	history2
Color						
Bottom						(Haz. 80°C)
PrtFilter				no image	no image	no image

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 ALGOMA STEEL INC. - STORES DEPT. : WC0813618 Received : 12 Apr 2024 301 WALLACE TERRACE Tested : 17 Apr 2024 SAULT STE MARIE, ON Accredited Laboratory Unique Number : 5761586 Diagnosed : 17 Apr 2024 - Kevin Marson CA P6C 1K8 Test Package : IND 2 (Additional Tests: KF, pH, ReserveAlk) 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. Validity of results and interpretation are based on the sample and information as supplied. F: (705)945-3585

Report Id: ALGSSM [WCAMIS] 02628454 (Generated: 04/17/2024 14:21:07) Rev: 1

Contact/Location: Maintenance Technology - Algoma Reliability - ALGSSM