

OIL ANALYSIS REPORT

Area **9** Machine Id

9-739 Belt Conveyor to Top of Dock Silos

Component Conveyor

MOBIL SHC 632 (200 LTR)

2014 April 15 April 16 Februs Mark 1913 Juli 2020 Oct 2021 Mark 1923

Sample Rating Trend



DIAGNOSIS

Recommendation

Due to this condition we recommend the following action... We advise an early resample to confirm this situation. NOTE: The current sample results do not match this units historical trend, indicating the sample may not be from this component/unit.

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.

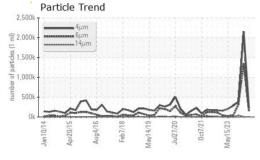
Fluid Condition

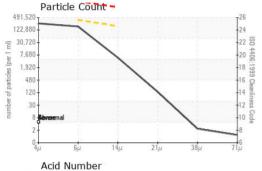
Viscosity of sample indicates oil is within ISO 680 range, advise investigate. The AN level is acceptable for this fluid.

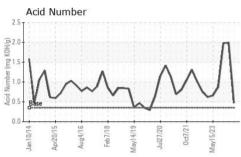
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0925392	WC0902126	WC0869935
Sample Date		Client Info		04 Apr 2024	12 Feb 2024	01 Nov 2023
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
CONTAMINATION	N	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>150	2	31	36
Chromium	ppm	ASTM D5185(m)	>10	0	<1	<1
Nickel	ppm	ASTM D5185(m)	>10	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	<1
Aluminum	ppm	ASTM D5185(m)	>25	0	1	<1
Lead	ppm	ASTM D5185(m)	>100	0	0	<1
Copper	ppm	ASTM D5185(m)	>50	0	1	2
Tin	ppm	ASTM D5185(m)	>10	0	0	0
Antimony	ppm	ASTM D5185(m)	>5	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)	0.6	<1	3	6
Barium	ppm	ASTM D5185(m)	0.0	0	0	<1
Molybdenum	ppm	ASTM D5185(m)	0.0	0	0	0
Molybdenum Manganese	ppm ppm	ASTM D5185(m) ASTM D5185(m)	0.0	0	0	0
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Manganese	ppm	ASTM D5185(m)	0.0	0	0	0
Manganese Magnesium	ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0.0	0 <1	0 <1	0 <1
Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0.0 0.0 0.0	0 <1 <1	0 <1 14 220 4	0 <1 13 187 5
Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0.0 0.0 0.0 807	0 <1 <1 384 1 221	0 <1 14 220 4 6272	0 <1 13 187 5 7865
Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium	ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	0.0 0.0 0.0 807 0.6 153	0 <1 <1 384	0 <1 14 220 4 6272 <1	0 <1 13 187 5 7865 <1
Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) METHOD	0.0 0.0 0.0 807 0.6 153	0 <1 <1 384 1 221 <1 current	0 <1 14 220 4 6272 <1 history1	0 <1 13 187 5 7865 <1 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) MASTM D5185(m) MASTM D5185(m) MASTM D5185(m)	0.0 0.0 0.0 807 0.6 153	0 <1 <1 384 1 221 <1 current	0 <1 14 220 4 6272 <1 history1 7	0 <1 13 187 5 7865 <1 history2 6
Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) METHOD ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0.0 0.0 0.0 807 0.6 153	0 <1 <1 384 1 221 <1 current 19 0	0 <1 14 220 4 6272 <1 history1 7 <1	0 <1 13 187 5 7865 <1 history2 6 2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) MASTM D5185(m) MASTM D5185(m) MASTM D5185(m)	0.0 0.0 0.0 807 0.6 153	0 <1 <1 384 1 221 <1 current	0 <1 14 220 4 6272 <1 history1 7	0 <1 13 187 5 7865 <1 history2 6
Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) METHOD ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0.0 0.0 0.0 807 0.6 153	0 <1 <1 384 1 221 <1 current 19 0	0 <1 14 220 4 6272 <1 history1 7 <1	0 <1 13 187 5 7865 <1 history2 6 2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) MASTM D5185(m) METHOD ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0.0 0.0 0.0 807 0.6 153	0 <1 <1 384 1 221 <1 current 19 0 0	0 <1 14 220 4 6272 <1 history1 7 <1 1	0 <1 13 187 5 7865 <1 history2 6 2 1
Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) METHOD ASTM D5185(m)	0.0 0.0 0.0 807 0.6 153 limit/base >50 >20	0 <1 <1 <21 384 1 221 <1 current 19 0 0 current	0 <1 14 220 4 6272 <1 history1 7 <1 1 history1	0 <1 13 187 5 7865 <1 history2 6 2 1 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) METHOD ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0.0 0.0 0.0 807 0.6 153 limit/base >50 >20	0	0 <1 14 220 4 6272 <1 history1 7 <1 1 1 1 2151676	0 <1 13 187 5 7865 <1 history2 6 2 1 history2 381694
Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) METHOD METHOD ASTM D5185(m) METHOD ASTM D5185(m)	0.0 0.0 0.0 807 0.6 153 limit/base >50 >20 limit/base >320000	0 <1 <1 <1 384 1 221 <1 current 19 0 current 219438 154601	0 <1 14 220 4 6272 <1 history1 7 <1 1 history1 2151676 ▲ 1353917	0 <1 13 187 5 7865 <1 history2 6 2 1 history2 381694 315185
Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) METHOD METHOD ASTM D5185(m) METHOD ASTM D5185(m) ASTM D7647 ASTM D7647	0.0 0.0 0.0 807 0.6 153 limit/base	0 <1 <1 <1 384 1 221 <1 current 19 0 0 current 219438 154601 4992	0 <1 14 220 4 6272 <1 history1 7 <1 1 1 1 2151676 ▲ 1353917 2447	0 <1 13 187 5 7865 <1 history2 6 2 1 history2 381694 315185 41815
Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) METHOD METHOD ASTM D5185(m) METHOD ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647	0.0 0.0 0.0 807 0.6 153 limit/base	0 <1 <1 <1 384 1 221 <1 current 19 0 current 219438 154601 4992 116	0 <1 14 220 4 6272 <1 history1 7 <1 1 1 history1 2151676 ▲ 1353917 2447 33	0 <1 13 187 5 7865 <1 history2 6 2 1 history2 381694 315185 41815 379

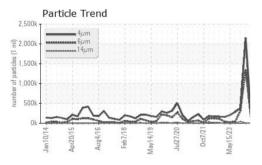


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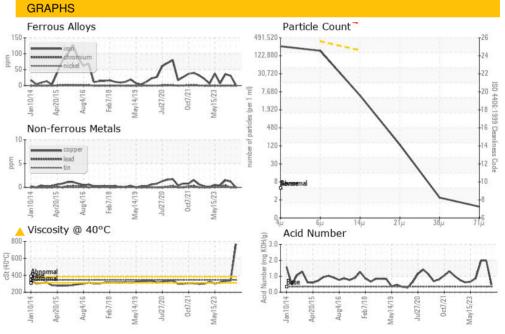








FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.35	0.47	▲ 1.99	▲ 1.98
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	VLITE	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*	>0.1	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)	345	△ 766	338	335
SAMPLE IMAGES		method	limit/base	current	history1	history2
Color						
Bottom				mile in C		(nax 80 °)





CALA ISO 17025:2017 Accredited

Laboratory

Laboratory

Sample No. Lab Number : 02629334 Unique Number : 5762466

: WC0925392

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Received

: 16 Apr 2024 **Tested** : 18 Apr 2024 Diagnosed : 18 Apr 2024 - Kevin Marson

Test Package : IND 2 (Additional Tests: PrtCount, 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.

ST. MARYS CEMENT CO.

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Submitted By: ?