



OIL ANALYSIS REPORT

Sample Rating Trend

VISCOSITY

Area
11

Machine Id

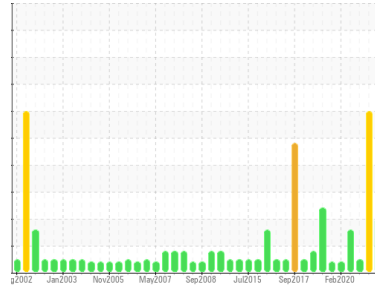
11-0130-030-000 STRAPPER HYD UNIT

Component

11 Hydraulic System

Fluid

SHELL TELLUS S2 MX 32 (110 GAL)



DIAGNOSIS

Recommendation

We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

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.

Fluid Condition

Viscosity of sample indicates oil is within ISO 46 range, advise investigate. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0857972	WC0582654	WC0520121
Sample Date	Client Info		06 Mar 2024	24 Jun 2021	23 Oct 2020
Machine Age	hrs	Client Info	0	0	0
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		Filtered	N/A	N/A
Sample Status			ABNORMAL	SEVERE	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.05	NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>20	1	<1	<1
Chromium	ppm	ASTM D5185(m)	>20	0	0	0
Nickel	ppm	ASTM D5185(m)	>20	<1	<1	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	<1	0
Aluminum	ppm	ASTM D5185(m)	>20	<1	<1	<1
Lead	ppm	ASTM D5185(m)	>20	0	0	0
Copper	ppm	ASTM D5185(m)	>20	2	<1	1
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)		<1	<1	<1
Barium	ppm	ASTM D5185(m)		2	0	0
Molybdenum	ppm	ASTM D5185(m)		0	<1	0
Manganese	ppm	ASTM D5185(m)		0	0	0
Magnesium	ppm	ASTM D5185(m)		35	<1	<1
Calcium	ppm	ASTM D5185(m)		8	25	9
Phosphorus	ppm	ASTM D5185(m)		301	265	233
Zinc	ppm	ASTM D5185(m)		298	290	194
Sulfur	ppm	ASTM D5185(m)		668	686	1116
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>15	0	<1	<1
Sodium	ppm	ASTM D5185(m)		0	<1	<1
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	<1

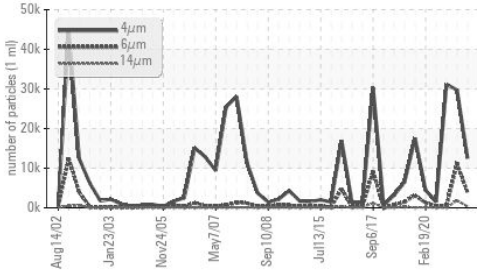
FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		12531	29699	31158
Particles >6µm	ASTM D7647	>640	3839	11196	622
Particles >14µm	ASTM D7647	>160	311	1886	41
Particles >21µm	ASTM D7647	>40	76	346	14
Particles >38µm	ASTM D7647	>10	4	10	1
Particles >71µm	ASTM D7647	>3	0	1	0
Oil Cleanliness	ISO 4406 (c)	>--/16/14	21/19/15	22/21/18	22/16/13

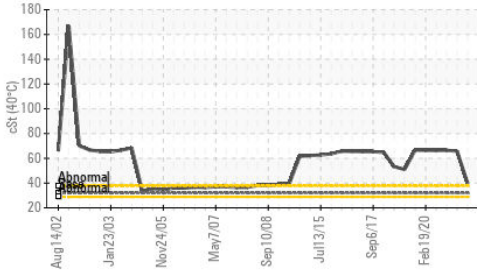


OIL ANALYSIS REPORT

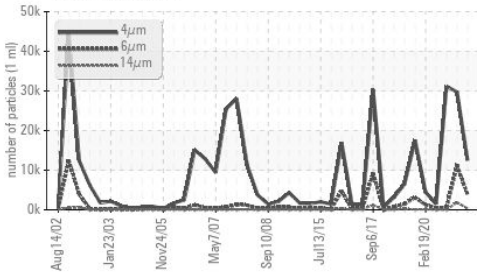
▲ Particle Trend



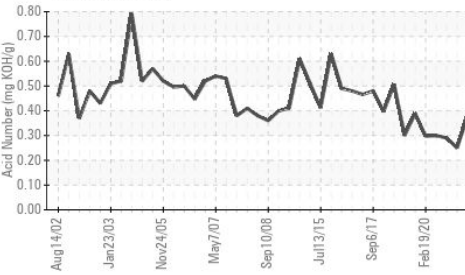
▲ Viscosity @ 40°C



▲ Particle Trend



Acid Number



FLUID DEGRADATION	method	limit/base	current	history1	history2
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Acid Number (AN)	mg KOH/g	ASTM D974*	0.38	0.25	0.29
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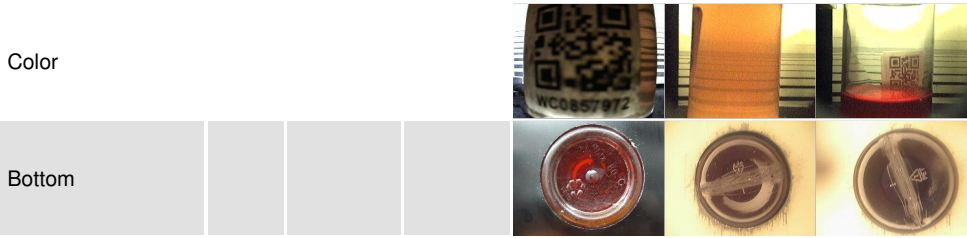
VISUAL	method	limit/base	current	history1	history2
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White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	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*	>0.05	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
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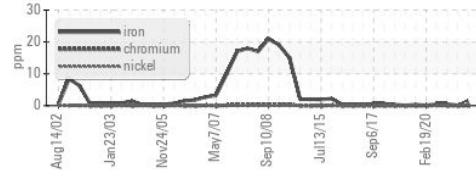
Visc @ 40°C	cSt	ASTM D7279(m)	32.0	▲ 39.7	65.7	66.4
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SAMPLE IMAGES	method	limit/base	current	history1	history2
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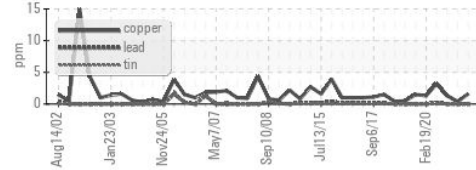


GRAPHS

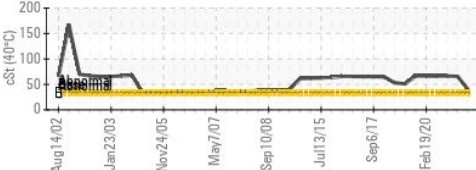
Ferrous Alloys



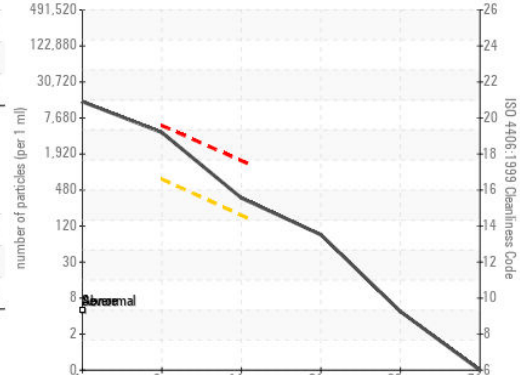
Non-ferrous Metals



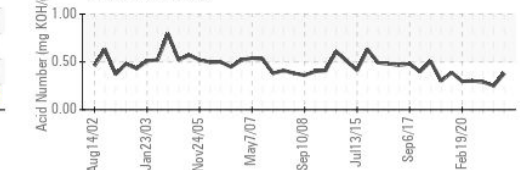
▲ Viscosity @ 40°C



▲ Particle Count



Acid Number



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0857972 **Received** : 14 Mar 2024
Lab Number : **02621994** **Tested** : 15 Mar 2024
Unique Number : 5747113 **Diagnosed** : 15 Mar 2024 - Kevin Marson
Test Package : IND 2

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 Pembroke, ON
 CA K8A 6W5
 Contact: Dan Havis
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 T: (613)732-3939
 F: (613)732-2869

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.