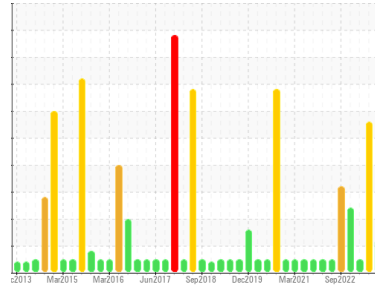




# PROBLEM SUMMARY

Sample Rating Trend



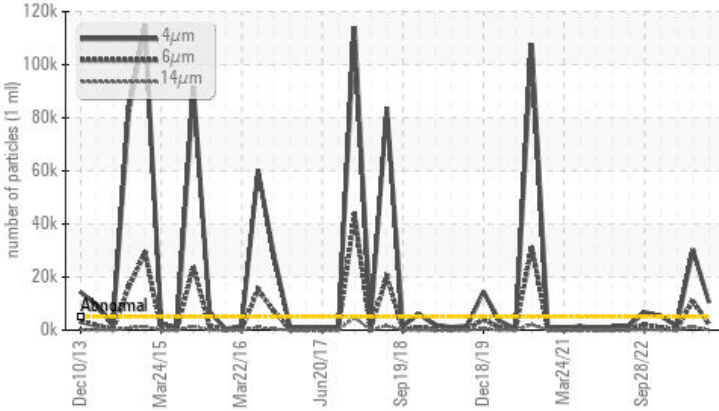
ISO



Area  
**1 Laminator**  
 Machine Id  
**50-164 1 Laminator Menzel Hydraulic Pump**  
 Component  
**Hydraulic System**  
 Fluid  
**SUNOCO SUNVIS 846 ISO 46 (36 GAL)**

## COMPONENT CONDITION SUMMARY

▲ Particle Trend



## RECOMMENDATION

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

## PROBLEMATIC TEST RESULTS

Sample Status			<b>ABNORMAL</b>	SEVERE	NORMAL
Particles >4µm	ASTM D7647	>5000	▲ <b>10521</b>	▲ 30306	1501
Particles >6µm	ASTM D7647	>1300	▲ <b>2292</b>	● 10967	231
Oil Cleanliness	ISO 4406 (c)	>19/17/14	▲ <b>21/18/14</b>	● 22/21/17	18/15/11

Customer Id: CAN52CAM  
 Sample No.: WC0837270  
 Lab Number: 02587598  
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:  
 Wes Davis +1 905-569-8600 x223  
[wesd@wearcheck.ca](mailto:wesd@wearcheck.ca)

To change component or sample information:  
 Gloria Gonzalez +1 (289)291-4643 x4643  
[gloria.gonzalez@wearcheck.com](mailto:gloria.gonzalez@wearcheck.com)

## RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	---	---	?	We recommend you service the filters on this component.
Resample	---	---	?	We recommend an early resample to monitor this condition.

## HISTORICAL DIAGNOSIS

### 07 Jul 2023 Diag: Wes Davis

ISO



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

view report



### 31 Mar 2023 Diag: Wes Davis

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



### 26 Jan 2023 Diag: Kevin Marson

WEAR



We recommend that you drain the oil from the component if this has not already been done. We recommend you service the filters on this component. We recommend an early resample to monitor this condition. Copper and iron ppm levels are abnormal. Oil cooler core leaching or motor piston wear is indicated. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion. There is a light amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

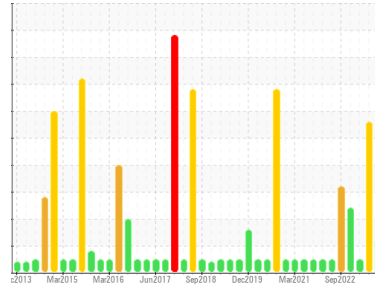
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area  
**1 Laminator**  
 Machine Id  
**50-164 1 Laminator Menzel Hydraulic Pump**  
 Component  
**Hydraulic System**  
 Fluid  
**SUNOCO SUNVIS 846 ISO 46 (36 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.

### Fluid Condition

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		<b>WC0837270</b>	WC0808280	WC0744086
Sample Date	Client Info		<b>04 Oct 2023</b>	07 Jul 2023	31 Mar 2023
Machine Age	hrs	Client Info	<b>0</b>	0	0
Oil Age	hrs	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>ABNORMAL</b>	SEVERE	NORMAL

## WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>20	<1	6	6
Chromium	ppm	ASTM D5185(m)	>20	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m)	>20	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)		<1	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>0</b>	0	<1
Lead	ppm	ASTM D5185(m)	>20	<1	<1	<1
Copper	ppm	ASTM D5185(m)	>20	<1	<1	<1
Tin	ppm	ASTM D5185(m)	>20	<b>0</b>	0	0
Antimony	ppm	ASTM D5185(m)		<b>0</b>	<1	0
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)		<1	<1
Barium	ppm	ASTM D5185(m)		<1	0
Molybdenum	ppm	ASTM D5185(m)		<b>0</b>	0
Manganese	ppm	ASTM D5185(m)		<b>0</b>	<1
Magnesium	ppm	ASTM D5185(m)		<1	<1
Calcium	ppm	ASTM D5185(m)		<b>36</b>	17
Phosphorus	ppm	ASTM D5185(m)		<b>249</b>	301
Zinc	ppm	ASTM D5185(m)		<b>304</b>	260
Sulfur	ppm	ASTM D5185(m)		<b>5180</b>	3134
Lithium	ppm	ASTM D5185(m)		<1	<1

## CONTAMINANTS

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

## FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	<b>▲ 10521</b>	▲ 30306	1501
Particles >6µm	ASTM D7647	>1300	<b>▲ 2292</b>	● 10967	231
Particles >14µm	ASTM D7647	>160	<b>110</b>	▲ 1229	17
Particles >21µm	ASTM D7647	>40	<b>23</b>	● 330	5
Particles >38µm	ASTM D7647	>10	<b>2</b>	7	1
Particles >71µm	ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	<b>▲ 21/18/14</b>	● 22/21/17	18/15/11

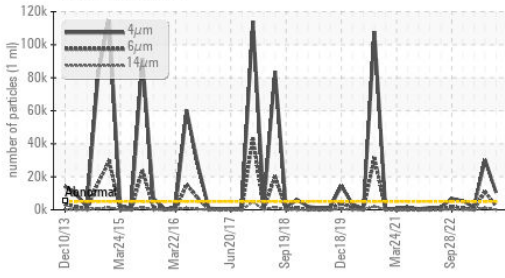
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	<b>0.34</b>	0.24	0.23

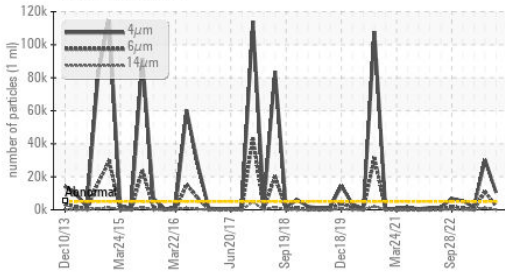


# OIL ANALYSIS REPORT

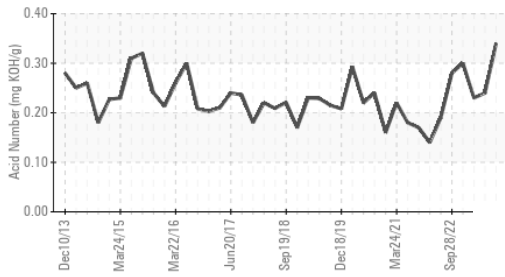
## ▲ Particle Trend



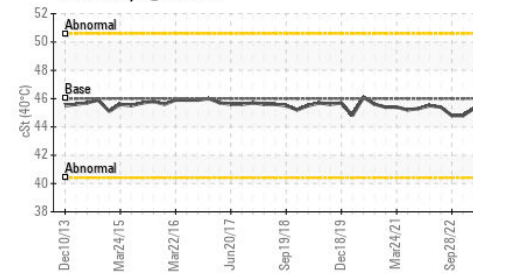
## ▲ Particle Trend



## Acid Number



## Viscosity @ 40°C

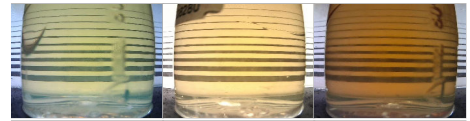


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.05	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	46.0	44.3	45.3

SAMPLE IMAGES	method	limit/base	current	history1	history2
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Color

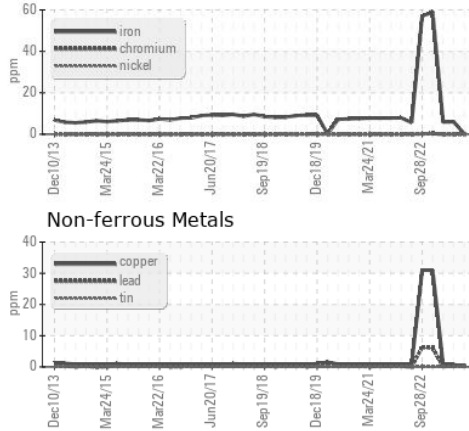


Bottom

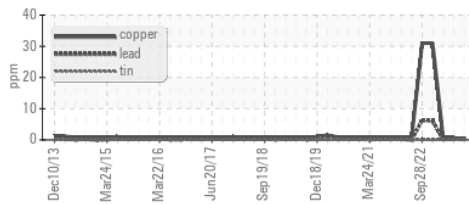


## GRAPHS

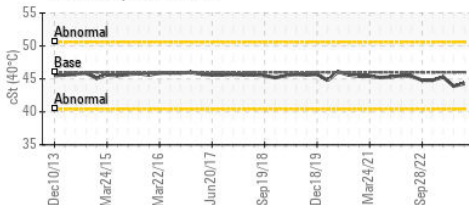
### Ferrous Alloys



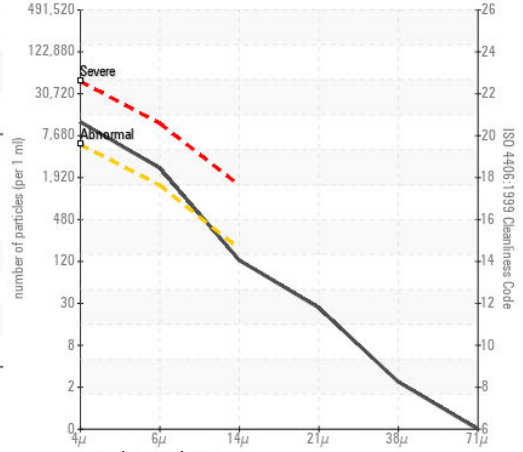
### Non-ferrous Metals



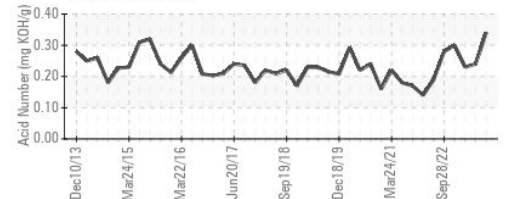
### Viscosity @ 40°C



### ▲ Particle Count



### Acid Number



ISO 17025:2017  
Accredited  
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **CANADIAN GENERAL TOWER LTD.**  
 Sample No. : WC0837270 **Received** : 06 Oct 2023 52 MIDDLETON STREET, P.O. BOX 160  
 Lab Number : 02587598 **Diagnosed** : 10 Oct 2023 CAMBRIDGE, ON  
 Unique Number : 5656664 **Diagnostician** : Wes Davis CA N1S 2R4  
 Test Package : IND 2

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.

Contact: Bob Abell  
 bob.abell@cgtower.com  
 T: (519)623-1630  
 F: (519)623-7018