

Area

**Turret [167809]**

Machine Id

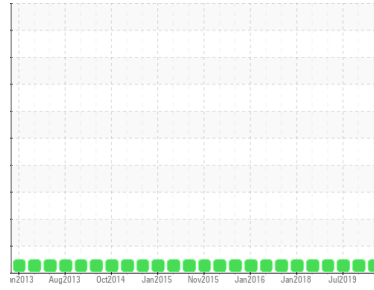
**527-2 Primary System (WH-167809) (S/N Sample Tag NC-23602 WH-167809)**

Component

**Heat Transfer Fluid**

Fluid

**SHELL THERMIA B (--- GAL)**



**DIAGNOSIS**

**Recommendation**

Resample at the next service interval to monitor.  
NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

**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**

The AN level is acceptable for this fluid. The condition of the fluid is suitable for further service.

**SAMPLE INFORMATION** method limit/base current history1 history2

Sample Number	Client Info	<b>PC0080213</b>	PC	PC
Sample Date	Client Info	<b>27 May 2024</b>	18 Dec 2019	05 Jul 2019
Machine Age	hrs	Client Info	<b>0</b>	0
Oil Age	hrs	Client Info	<b>0</b>	0
Oil Changed	Client Info	<b>N/A</b>	N/A	N/A
Sample Status		<b>NORMAL</b>	NORMAL	NORMAL

**CONTAMINATION** method limit/base current history1 history2

Water	WC Method	>0.0601	<b>NEG</b>	NEG	NEG
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**WEAR METALS** method limit/base current history1 history2

Iron	ppm	ASTM D5185(m)	>200	<b>0</b>	0	0
Chromium	ppm	ASTM D5185(m)	>21	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m)	>21	<b>0</b>	0	0
Titanium	ppm	ASTM D5185(m)	>21	<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>21	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>21	<b>0</b>	0	0
Lead	ppm	ASTM D5185(m)	>21	<b>0</b>	0	<1
Copper	ppm	ASTM D5185(m)	>21	<b>0</b>	<1	<1
Tin	ppm	ASTM D5185(m)	>21	<b>0</b>	0	0
Antimony	ppm	ASTM D5185(m)	>21	<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)		<b>0</b>	<1	0
Barium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)		<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1
Calcium	ppm	ASTM D5185(m)		<b>0</b>	<1	<1
Phosphorus	ppm	ASTM D5185(m)		<b>271</b>	247	242
Zinc	ppm	ASTM D5185(m)		<b>1</b>	2	2
Sulfur	ppm	ASTM D5185(m)		<b>689</b>	591	596
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	0

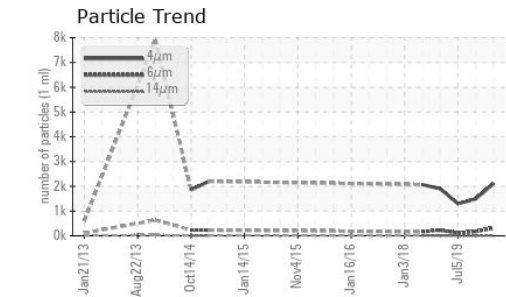
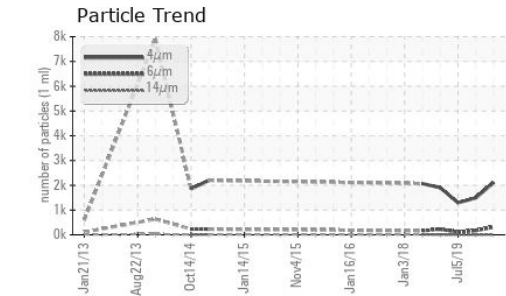
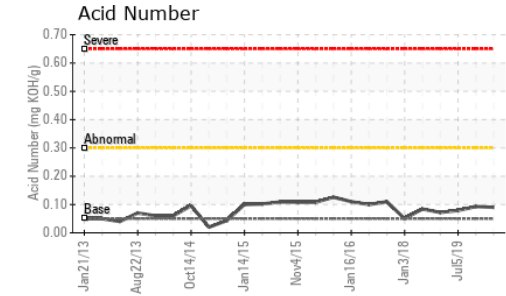
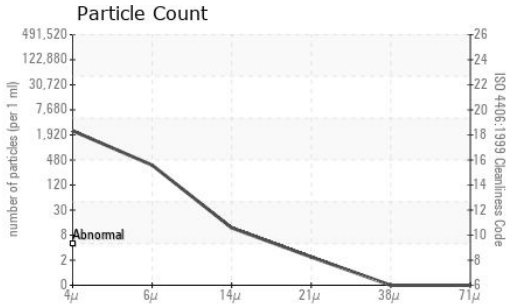
**CONTAMINANTS** method limit/base current history1 history2

Silicon	ppm	ASTM D5185(m)	>25	<b>0</b>	0	<1
Sodium	ppm	ASTM D5185(m)	>21	<b>1</b>	0	0
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1

**FLUID CLEANLINESS** method limit/base current history1 history2

Particles >4µm	ASTM D7647		<b>2110</b>	1493	1294
Particles >6µm	ASTM D7647	>10240000	<b>317</b>	173	119
Particles >14µm	ASTM D7647	>10240000	<b>10</b>	7	7
Particles >21µm	ASTM D7647	>25600000	<b>2</b>	3	2
Particles >38µm	ASTM D7647	>6400000	<b>0</b>	0	0
Particles >71µm	ASTM D7647	>1600000	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>--/30/30	<b>18/15/10</b>	18/15/10	17/14/10

# OIL ANALYSIS REPORT

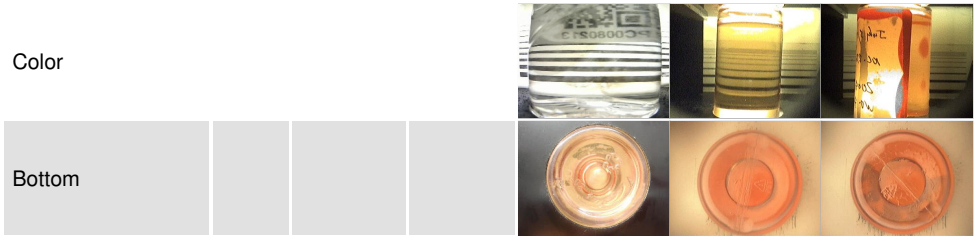


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.05	<b>0.09</b>	0.093	0.079

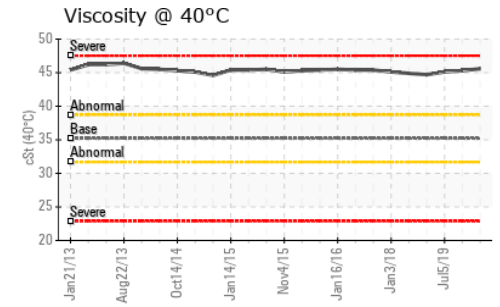
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	Visual*	>0.0601	<b>NEG</b>	NEG	NEG
Free Water	scalar	Visual*		<b>NEG</b>	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	35.2	<b>45.6</b>	45.3	45.1

## SAMPLE IMAGES



## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0080213 **Received** : 28 May 2024  
**Lab Number** : **02638034** **Tested** : 30 May 2024  
**Unique Number** : 5787196 **Diagnosed** : 30 May 2024 - Kevin Marson  
**Test Package** : IND 2 ( Additional Tests: PRTCOUNT, TAN Man )

**Suncor - Terra Nova Projects**  
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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.