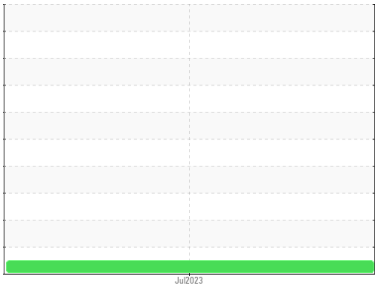
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
S4
Component
Hydraulic System
Fluid
NOT GIVEN (--- GAL)

DIAGNOSIS

Recommendation
Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your 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 oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history 1	history 2
Sample Number		Client Info		**PC0052117**	---	---
Sample Date		Client Info		**05 Jul 2023**	---	---
Machine Age	hrs	Client Info		**0**	---	---
Oil Age	hrs	Client Info		**0**	---	---
Oil Changed		Client Info		**N/A**	---	---
Sample Status				**NORMAL**	---	---

WEAR METALS		method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185(m)	>20	**2**	---	---
Chromium	ppm	ASTM D5185(m)	>10	**0**	---	---
Nickel	ppm	ASTM D5185(m)	>10	**<1**	---	---
Titanium	ppm	ASTM D5185(m)		**0**	---	---
Silver	ppm	ASTM D5185(m)		**0**	---	---
Aluminum	ppm	ASTM D5185(m)	>10	**1**	---	---
Lead	ppm	ASTM D5185(m)	>20	**4**	---	---
Copper	ppm	ASTM D5185(m)	>20	**5**	---	---
Tin	ppm	ASTM D5185(m)	>10	**<1**	---	---
Antimony	ppm	ASTM D5185(m)		**0**	---	---
Vanadium	ppm	ASTM D5185(m)		**0**	---	---
Beryllium	ppm	ASTM D5185(m)		**0**	---	---
Cadmium	ppm	ASTM D5185(m)		**0**	---	---

ADDITIVES		method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185(m)		**75**	---	---
Barium	ppm	ASTM D5185(m)		**<1**	---	---
Molybdenum	ppm	ASTM D5185(m)		**<1**	---	---
Manganese	ppm	ASTM D5185(m)		**0**	---	---
Magnesium	ppm	ASTM D5185(m)		**1**	---	---
Calcium	ppm	ASTM D5185(m)		**58**	---	---
Phosphorus	ppm	ASTM D5185(m)		**269**	---	---
Zinc	ppm	ASTM D5185(m)		**98**	---	---
Sulfur	ppm	ASTM D5185(m)		**790**	---	---
Lithium	ppm	ASTM D5185(m)		**<1**	---	---

CONTAMINANTS		method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185(m)	>15	**4**	---	---
Sodium	ppm	ASTM D5185(m)		**2**	---	---
Potassium	ppm	ASTM D5185(m)	>20	**1**	---	---

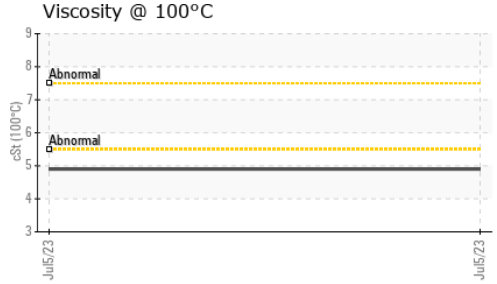
FLUID CLEANLINESS		method	limit/base	current	history 1	history 2
Particles >4µm		ASTM D7647	>5000	**2279**	---	---
Particles >6µm		ASTM D7647	>1300	**366**	---	---
Particles >14µm		ASTM D7647	>160	**19**	---	---
Particles >21µm		ASTM D7647	>40	**6**	---	---
Particles >38µm		ASTM D7647	>10	**1**	---	---
Particles >71µm		ASTM D7647	>3	**0**	---	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	**18/16/11**	---	---

FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Acid Number (AN)	mg KOH/g	ASTM D974*		**0.99**	---	---

OIL ANALYSIS REPORT

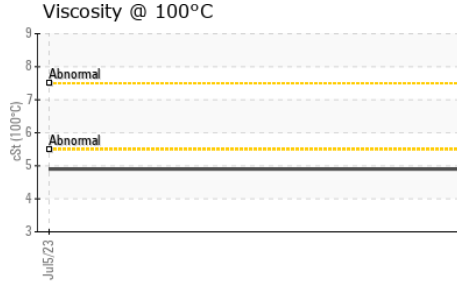
Particle Trend

Viscosity @ 100°C

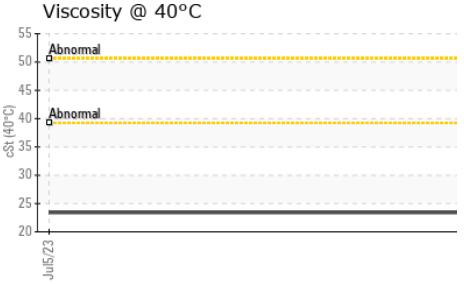


Particle Trend

Viscosity @ 100°C

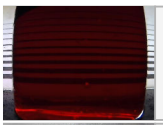
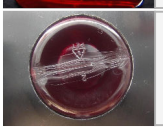


Viscosity @ 40°C



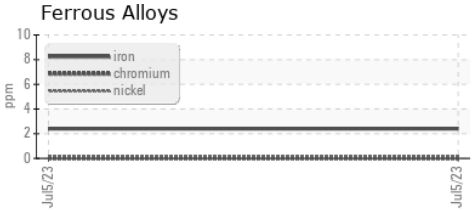
VISUAL		method	limit/base	current	history 1	history 2
White Metal	scalar	Visual*	NONE	**NONE**	---	---
Yellow Metal	scalar	Visual*	NONE	**NONE**	---	---
Precipitate	scalar	Visual*	NONE	**NONE**	---	---
Silt	scalar	Visual*	NONE	**NONE**	---	---
Debris	scalar	Visual*	NONE	**NONE**	---	---
Sand/Dirt	scalar	Visual*	NONE	**NONE**	---	---
Appearance	scalar	Visual*	NORML	**NORML**	---	---
Odor	scalar	Visual*	NORML	**NORML**	---	---
Emulsified Water	scalar	Visual*	>0.05	**NEG**	---	---
Free Water	scalar	Visual*		**NEG**	---	---

FLUID PROPERTIES		method	limit/base	current	history 1	history 2
Visc @ 40°C	cSt	ASTM D7279(m)		**23.4**	---	---
Visc @ 100°C	cSt	ASTM D7279(m)		**4.9**	---	---
Viscosity Index (VI)	Scale	ASTM D2270*		**137**	---	---

SAMPLE IMAGES	method	limit/base	current	history 1	history 2
Color				*no image*	*no image*
Bottom				*no image*	*no image*

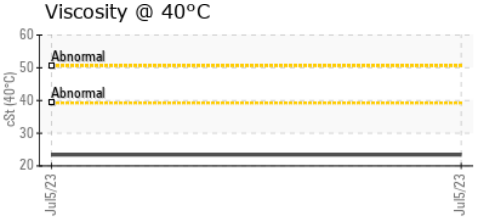
GRAPHS

Ferrous Alloys

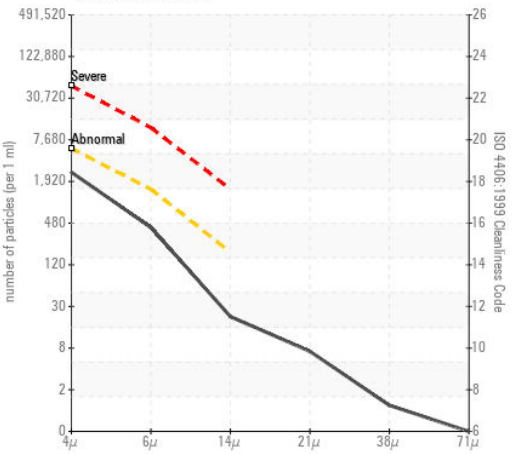


Non-ferrous Metals

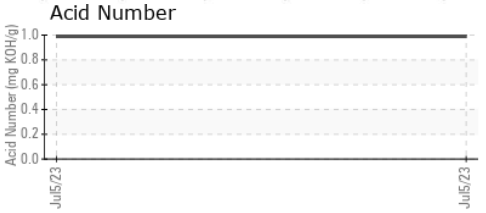
Viscosity @ 40°C



Particle Count



Acid Number



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0052117 **Received** : 06 Jul 2023
Lab Number : 02568255 **Diagnosed** : 07 Jul 2023
Unique Number : 5605301 **Diagnostician** : Kevin Marson
Test Package : MAR 2 (Additional Tests: KV100, TAN Man, VI)

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.

Suncor - Terra Nova Projects
Scotia Centre, 235 Water Strret
St. John`s, NL
CA A1C 1B6
Contact: Deanne Badcock
dbadcock@suncor.com
T: (709)778-3843
F: (709)724-2784