



Machine Id  
**S-11**  
Component  
**Gearbox**  
Fluid  
**GEAR OIL SAE 80W90 (--- 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. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) GEAR OIL SAE 80W90. Please confirm. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

**Wear**

All component wear rates are normal.

**Contamination**

There is no indication of any contamination in the oil.

**Fluid Condition**

The oil viscosity is lower than typical, possibly indicating the addition of lighter grade oil. 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	<b>PC0040628</b>	---	---
Sample Date	Client Info	<b>05 Jul 2023</b>	---	---
Machine Age	hrs	Client Info	<b>0</b>	---
Oil Age	hrs	Client Info	<b>0</b>	---
Oil Changed	Client Info	<b>N/A</b>	---	---
Sample Status		<b>NORMAL</b>	---	---

**WEAR METALS** method limit/base current history 1 history 2

PQ	ASTM D8184*		<b>0</b>	---	---
Iron	ppm	ASTM D5185(m) >150	<b>22</b>	---	---
Chromium	ppm	ASTM D5185(m) >10	<b>&lt;1</b>	---	---
Nickel	ppm	ASTM D5185(m) >10	<b>0</b>	---	---
Titanium	ppm	ASTM D5185(m)	<b>0</b>	---	---
Silver	ppm	ASTM D5185(m)	<b>0</b>	---	---
Aluminum	ppm	ASTM D5185(m) >5	<b>&lt;1</b>	---	---
Lead	ppm	ASTM D5185(m) >65	<b>&lt;1</b>	---	---
Copper	ppm	ASTM D5185(m) >80	<b>1</b>	---	---
Tin	ppm	ASTM D5185(m) >8	<b>0</b>	---	---
Antimony	ppm	ASTM D5185(m) >5	<b>0</b>	---	---
Vanadium	ppm	ASTM D5185(m)	<b>0</b>	---	---
Beryllium	ppm	ASTM D5185(m)	<b>0</b>	---	---
Cadmium	ppm	ASTM D5185(m)	<b>0</b>	---	---

**ADDITIVES** method limit/base current history 1 history 2

Boron	ppm	ASTM D5185(m) 400	<b>197</b>	---	---
Barium	ppm	ASTM D5185(m) 200	<b>&lt;1</b>	---	---
Molybdenum	ppm	ASTM D5185(m) 12	<b>0</b>	---	---
Manganese	ppm	ASTM D5185(m)	<b>1</b>	---	---
Magnesium	ppm	ASTM D5185(m) 12	<b>2</b>	---	---
Calcium	ppm	ASTM D5185(m) 150	<b>15</b>	---	---
Phosphorus	ppm	ASTM D5185(m) 1650	<b>881</b>	---	---
Zinc	ppm	ASTM D5185(m) 125	<b>52</b>	---	---
Sulfur	ppm	ASTM D5185(m) 22500	<b>14419</b>	---	---
Lithium	ppm	ASTM D5185(m)	<b>6</b>	---	---

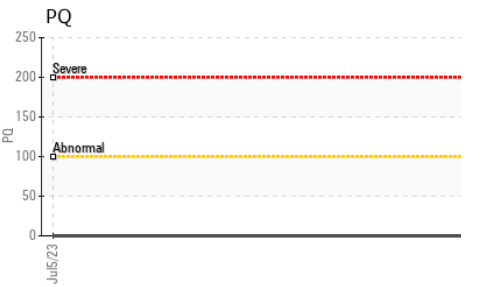
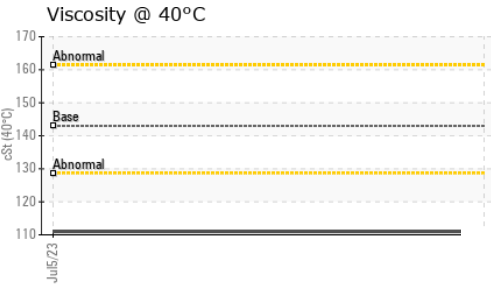
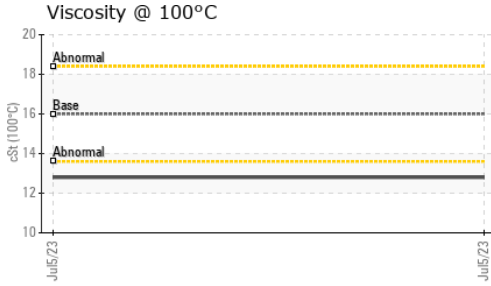
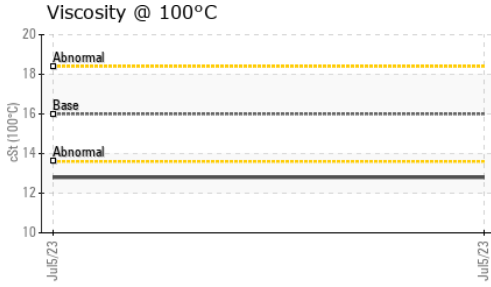
**CONTAMINANTS** method limit/base current history 1 history 2

Silicon	ppm	ASTM D5185(m) >20	<b>4</b>	---	---
Sodium	ppm	ASTM D5185(m) >170	<b>2</b>	---	---
Potassium	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	---	---

**FLUID DEGRADATION** method limit/base current history 1 history 2

Acid Number (AN)	mg KOH/g	ASTM D974*	2.00	<b>1.33</b>	---	---
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# OIL ANALYSIS REPORT

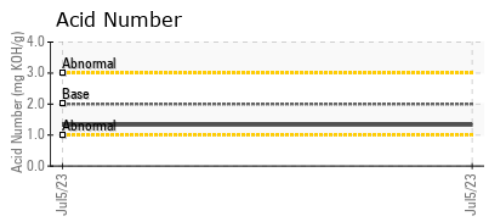
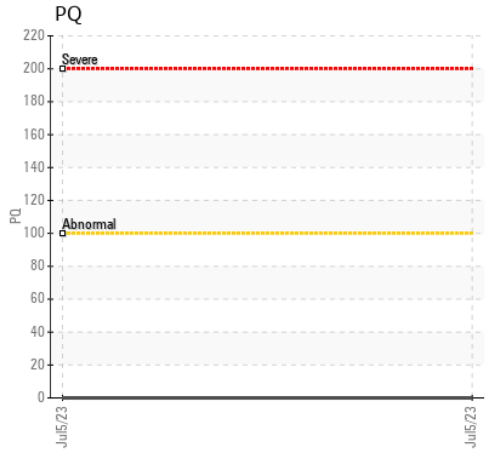
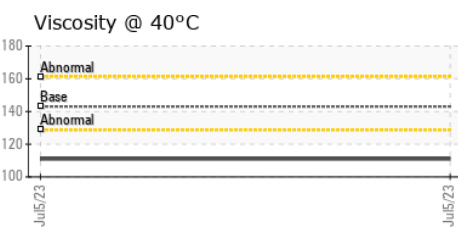
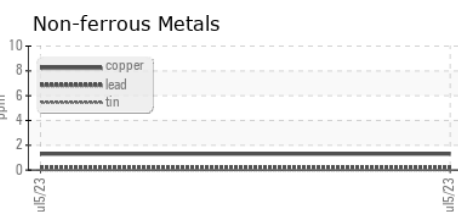
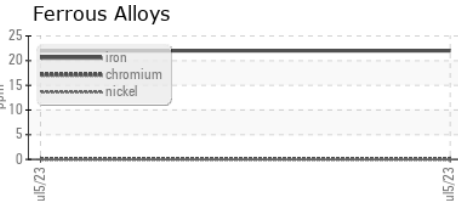


VISUAL	method	limit/base	current	history 1	history 2
White Metal	scalar	Visual*	NONE	NONE	---
Yellow Metal	scalar	Visual*	NONE	NONE	---
Precipitate	scalar	Visual*	NONE	NONE	---
Silt	scalar	Visual*	NONE	NONE	---
Debris	scalar	Visual*	NONE	NONE	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---
Appearance	scalar	Visual*	NORML	NORML	---
Odor	scalar	Visual*	NORML	NORML	---
Emulsified Water	scalar	Visual*	>0.2	NEG	---
Free Water	scalar	Visual*		NEG	---

FLUID PROPERTIES	method	limit/base	current	history 1	history 2
Visc @ 40°C	cSt	ASTM D7279(m)	143	111	---
Visc @ 100°C	cSt	ASTM D7279(m)	16.0	12.8	---
Viscosity Index (VI)	Scale	ASTM D2270*	117	108	---

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

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0040628 **Received** : 06 Jul 2023  
**Lab Number** : 02568331 **Diagnosed** : 07 Jul 2023  
**Unique Number** : 5605377 **Diagnostician** : Kevin Marson  
**Test Package** : MAR 2 ( Additional Tests: KV100, TAN Man, VI )

**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.