



# OIL ANALYSIS REPORT

WEAR	<b>SEVERE</b>
CONTAMINATION	<b>ABNORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**T001090 (S/N 11-M-03-1412)**

Component  
**Gearbox**

Fluid  
**GEAR OIL SAE 75W90 (--- GAL)**

## RECOMMENDATION

We advise that you check all areas where dirt can enter the system. We recommend either performing an oil change or oil filtration. We cannot recommend specific action as we have limited information with regards to reservoir capacity and/or lubricant type. 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. We recommend an early resample to monitor this condition.

## WEAR

Iron ppm levels are severe. PQ levels are abnormal. Aluminum ppm levels are noted. Gear wear is indicated. The high ferrous density (PQ) index indicates that abnormal wear is occurring.

## CONTAMINATION

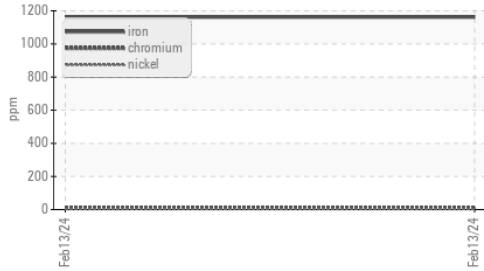
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The water content is negligible. High amount of ingressed dirt has caused abrasive wear to the component.

## FLUID CONDITION

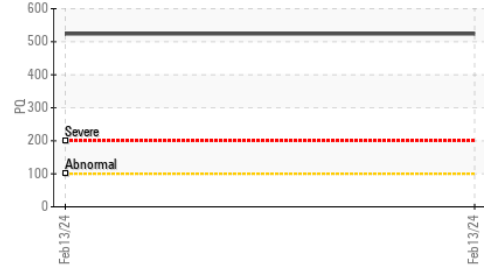
The AN level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0832187</b>	---	---
Sample Date		Client Info		<b>13 Feb 2024</b>	---	---
Machine Age	hrs	Client Info		<b>8124</b>	---	---
Oil Age	hrs	Client Info		<b>0</b>	---	---
Filter Age	hrs	Client Info		<b>0</b>	---	---
Oil Changed		Client Info		<b>N/A</b>	---	---
Filter Changed		Client Info		<b>N/A</b>	---	---
Sample Status				<b>SEVERE</b>	---	---
PQ		ASTM D8184*		<b>▲ 524</b>	---	---
Iron	ppm	ASTM D5185(m)	>200	<b>● 1162</b>	---	---
Chromium	ppm	ASTM D5185(m)	>15	<b>9</b>	---	---
Nickel	ppm	ASTM D5185(m)	>15	<b>3</b>	---	---
Titanium	ppm	ASTM D5185(m)		<b>&lt;1</b>	---	---
Silver	ppm	ASTM D5185(m)		<b>0</b>	---	---
Aluminum	ppm	ASTM D5185(m)	>25	<b>▲ 25</b>	---	---
Lead	ppm	ASTM D5185(m)	>100	<b>&lt;1</b>	---	---
Copper	ppm	ASTM D5185(m)	>200	<b>7</b>	---	---
Tin	ppm	ASTM D5185(m)	>25	<b>0</b>	---	---
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	---	---
White Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---
Silicon	ppm	ASTM D5185(m)	>50	<b>▲ 95</b>	---	---
Potassium	ppm	ASTM D5185(m)	>20	<b>11</b>	---	---
Water	%	ASTM D6304*	>0.2	<b>0.150</b>	---	---
ppm Water	ppm	ASTM D6304*	>2000	<b>1504</b>	---	---
Silt	scalar	Visual*	NONE	<b>NONE</b>	---	---
Debris	scalar	Visual*	NONE	<b>VLITE</b>	---	---
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	---	---
Appearance	scalar	Visual*	NORML	<b>NORML</b>	---	---
Odor	scalar	Visual*	NORML	<b>NORML</b>	---	---
Emulsified Water	scalar	Visual*	>0.2	<b>.5%</b>	---	---
Sodium	ppm	ASTM D5185(m)		<b>8</b>	---	---
Boron	ppm	ASTM D5185(m)	400	<b>57</b>	---	---
Barium	ppm	ASTM D5185(m)	200	<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185(m)	12	<b>1</b>	---	---
Manganese	ppm	ASTM D5185(m)		<b>11</b>	---	---
Magnesium	ppm	ASTM D5185(m)	12	<b>8</b>	---	---
Calcium	ppm	ASTM D5185(m)	150	<b>45</b>	---	---
Phosphorus	ppm	ASTM D5185(m)	1650	<b>1047</b>	---	---
Zinc	ppm	ASTM D5185(m)	125	<b>65</b>	---	---
Sulfur	ppm	ASTM D5185(m)	22500	<b>21073</b>	---	---
Acid Number (AN)	mg KOH/g	ASTM D974*	2.00	<b>2.80</b>	---	---
Visc @ 40°C	cSt	ASTM D7279(m)	109	<b>103</b>	---	---

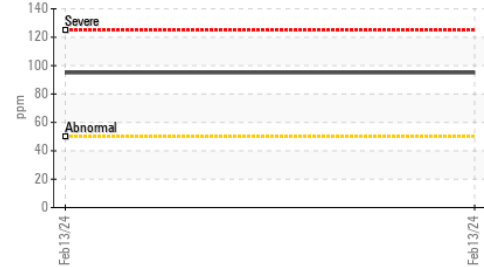
**Ferrous Alloys**



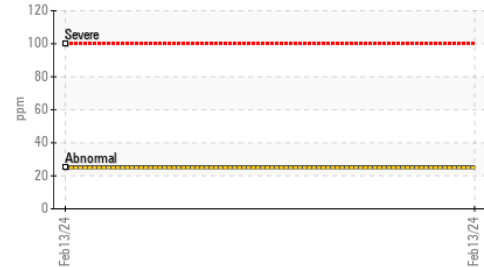
**PQ**



**Silicon (ppm)**



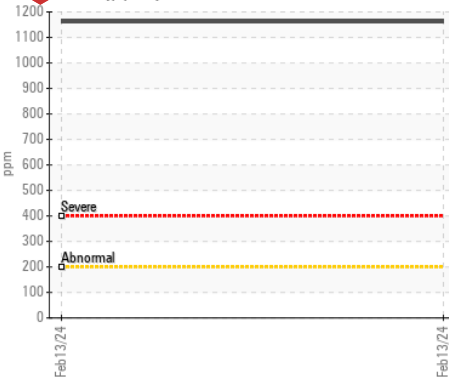
**Aluminum (ppm)**



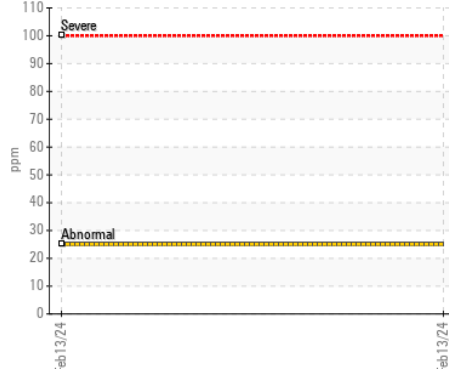
**Acid Number**



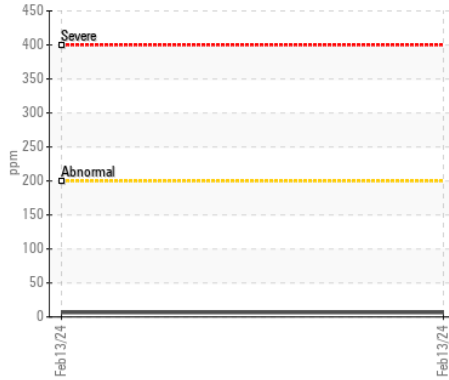
**Iron (ppm)**



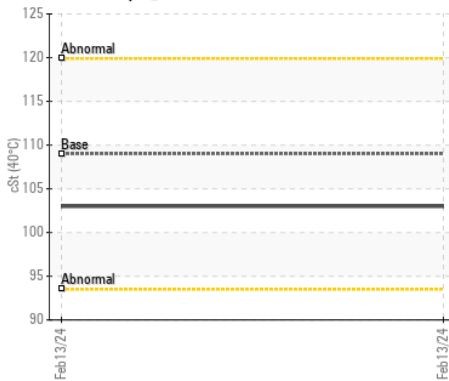
**Aluminum (ppm)**



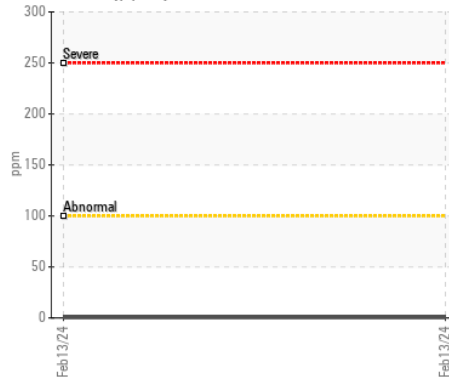
**Copper (ppm)**



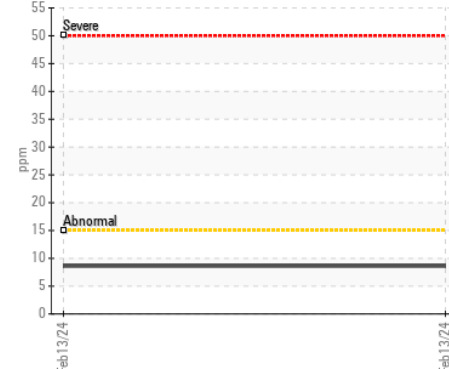
**Viscosity @ 40°C**



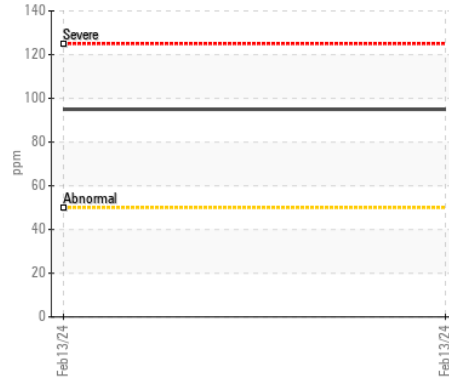
**Lead (ppm)**



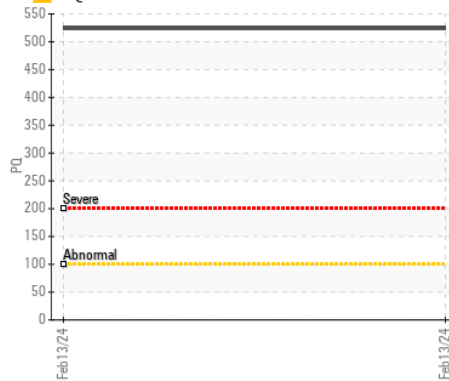
**Chromium (ppm)**



**Silicon (ppm)**



**PQ**



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0832187 **Received** : 15 Feb 2024  
**Lab Number** : 02616073 **Tested** : 20 Feb 2024  
**Unique Number** : 5733183 **Diagnosed** : 20 Feb 2024 - Kevin Marson  
**Test Package** : MOB 2 ( Additional Tests: KF, PQ, TAN Man )

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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.