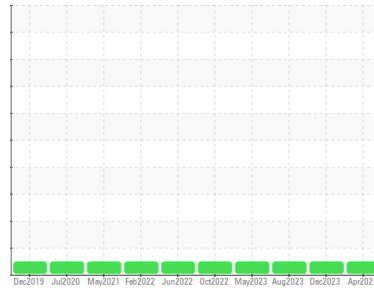




# OIL ANALYSIS REPORT

## Sample Rating Trend



**NORMAL**



Area

**Bob**  
Machine Id  
**BOB'S RAM**

Component  
**Gasoline Engine**

Fluid  
**CASTROL GTX 5W20 (--- GAL)**

### DIAGNOSIS

#### Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

#### Fluid Condition

Additive levels indicate the addition of a different brand, or type of oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>WC0935561</b>	WC0888641	WC0851678
Sample Date	Client Info			<b>19 Apr 2024</b>	10 Dec 2023	22 Aug 2023
Machine Age	kms	Client Info		<b>153968</b>	0	128074
Oil Age	kms	Client Info		<b>0</b>	0	89161
Oil Changed	Client Info			<b>Changed</b>	N/A	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>4.0		<b>&lt;1.0</b>	<1.0	<1.0
Water	WC Method	>0.2		<b>NEG</b>	NEG	NEG
Glycol	WC Method			<b>NEG</b>	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>150	<b>15</b>	19	12
Chromium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	<b>&lt;1</b>	<1	0
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>40	<b>2</b>	2	2
Lead	ppm	ASTM D5185(m)	>50	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185(m)	>155	<b>10</b>	13	15
Tin	ppm	ASTM D5185(m)	>10	<b>0</b>	0	0
Antimony	ppm	ASTM D5185(m)		<b>0</b>	0	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>22</b>	18	21
Barium	ppm	ASTM D5185(m)		<b>0</b>	<1	0
Molybdenum	ppm	ASTM D5185(m)		<b>140</b>	135	129
Manganese	ppm	ASTM D5185(m)		<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185(m)		<b>409</b>	433	462
Calcium	ppm	ASTM D5185(m)	2500	<b>1144</b>	1186	1129
Phosphorus	ppm	ASTM D5185(m)	1000	<b>559</b>	593	616
Zinc	ppm	ASTM D5185(m)	1100	<b>679</b>	713	689
Sulfur	ppm	ASTM D5185(m)		<b>1426</b>	1526	1475
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

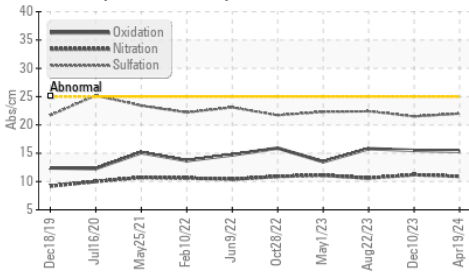
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>30	<b>8</b>	11	11
Sodium	ppm	ASTM D5185(m)	>400	<b>3</b>	4	3
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	7	<1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*		<b>0</b>	0	0
Nitration	Abs/cm	ASTM D7624*	>20	<b>10.9</b>	11.2	10.6
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>22.0</b>	21.5	22.4

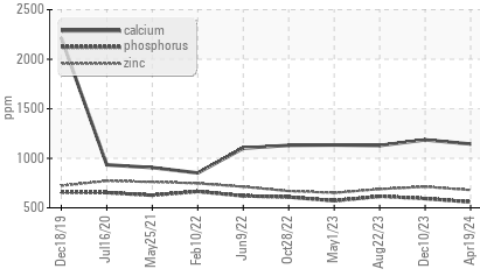


# OIL ANALYSIS REPORT

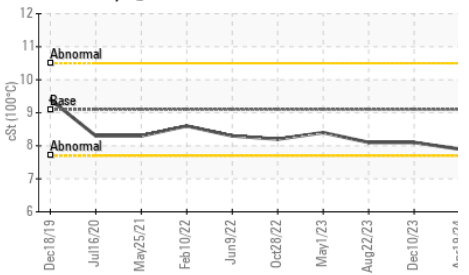
FT-IR (Direct Trend)



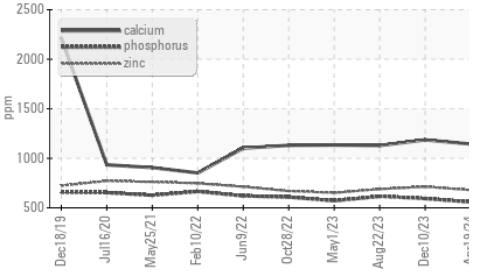
Additives



Viscosity @ 100°C



Additives

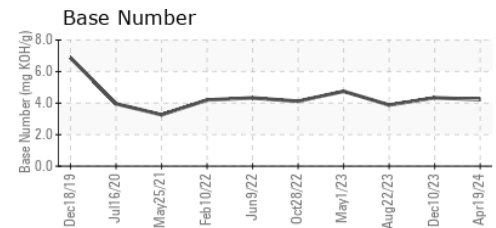
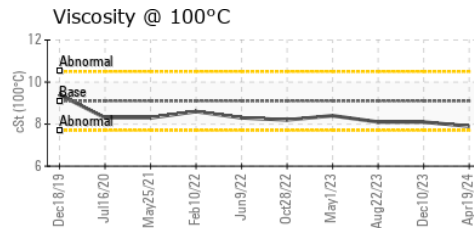
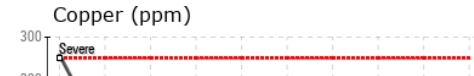
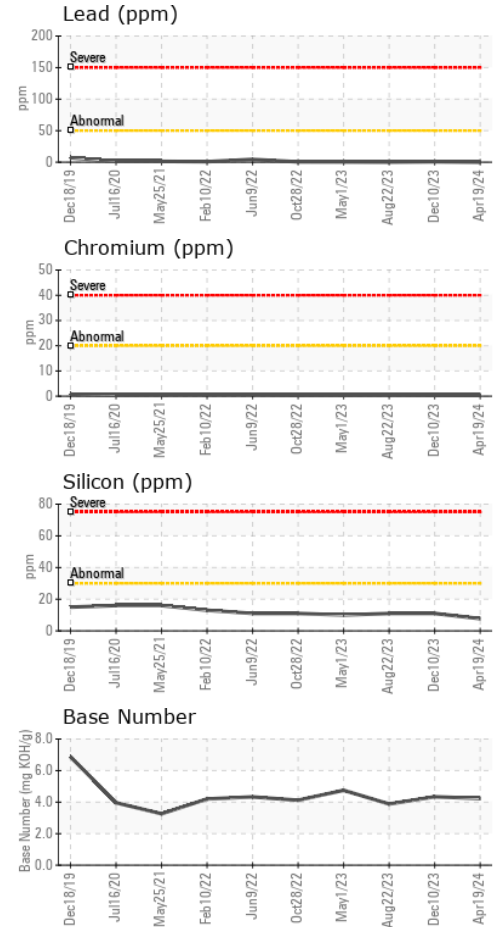
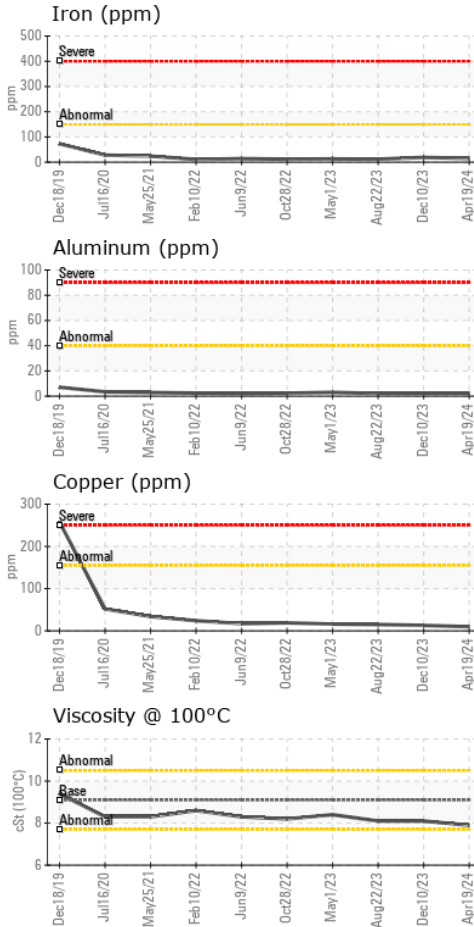


FLUID DEGRADATION	method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	15.3	15.8
Base Number (BN)	mg KOH/g	ASTM D2896*	4.23	4.34	3.88

VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	VLITE
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*	>0.2	NEG	NEG
Free Water	scalar	Visual*	NEG	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	9.1	7.9	8.1

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0935561 **Received** : 19 Apr 2024  
**Lab Number** : 02630153 **Tested** : 22 Apr 2024  
**Unique Number** : 5763285 **Diagnosed** : 22 Apr 2024 - Kevin Marson  
**Test Package** : MOB 2

**WEARCHECK CANADA INC.**  
 C8-1175 Appleby Line  
 BURLINGTON, ON  
 CA L7L 5H9  
 Contact: Dorian Anderson  
 dorian.anderson@wearcheck.com  
 T:  
 F: (905)569-8605

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.