



TRAAP

Texas Refinery Advanced Analysis Program

# OIL ANALYSIS REPORT

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

Machine Id  
**GMC 146118**  
 Component  
**Front Gasoline Engine**  
 Fluid  
**TRC PRO-SPEC SYNTHETIC 0W20 (7 LTR)**

## RECOMMENDATION

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

## WEAR

Iron ppm levels are abnormal. Cylinder, crank, or cam shaft wear is indicated.

## CONTAMINATION

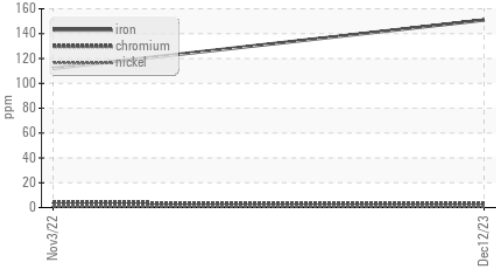
There is no indication of any contamination in the oil.

## FLUID CONDITION

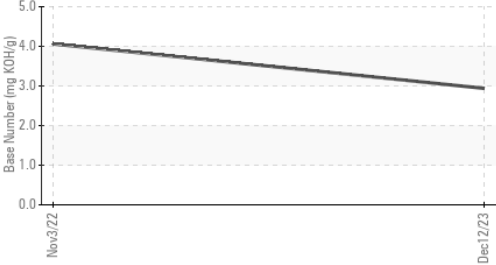
The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>TR02607004</b>	TR02524608	---
Sample Date		Client Info		<b>12 Dec 2023</b>	03 Nov 2022	---
Machine Age	kms	Client Info		<b>77745</b>	51924	---
Oil Age	kms	Client Info		<b>25821</b>	28592	---
Filter Age	kms	Client Info		<b>25821</b>	28592	---
Oil Changed		Client Info		<b>Changed</b>	Changed	---
Filter Changed		Client Info		<b>Changed</b>	Changed	---
Sample Status				<b>ABNORMAL</b>	NORMAL	---
PQ		ASTM D8184*		<b>0</b>	---	---
Iron	ppm	ASTM D5185(m)	>150	<b>▲ 151</b>	112	---
Chromium	ppm	ASTM D5185(m)	>20	<b>3</b>	4	---
Nickel	ppm	ASTM D5185(m)	>5	<b>&lt;1</b>	<1	---
Titanium	ppm	ASTM D5185(m)		<b>0</b>	4	---
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185(m)	>40	<b>9</b>	11	---
Lead	ppm	ASTM D5185(m)	>50	<b>&lt;1</b>	2	---
Copper	ppm	ASTM D5185(m)	>155	<b>34</b>	60	---
Tin	ppm	ASTM D5185(m)	>10	<b>0</b>	<1	---
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	<1	---
Silicon	ppm	ASTM D5185(m)	>30	<b>42</b>	41	---
Potassium	ppm	ASTM D5185(m)	>20	<b>5</b>	4	---
Fuel		WC Method	>4.0	<b>&lt;1.0</b>	<1.0	---
Water		WC Method	>0.2	<b>NEG</b>	NEG	---
Glycol		WC Method		<b>NEG</b>	NEG	---
Soot %	%	ASTM D7844*		<b>0</b>	0	---
Nitration	Abs/cm	ASTM D7624*	>20	<b>15.9</b>	16.4	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>32.2</b>	29.0	---
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	---
Sodium	ppm	ASTM D5185(m)	>400	<b>17</b>	3	---
Boron	ppm	ASTM D5185(m)		<b>31</b>	18	---
Barium	ppm	ASTM D5185(m)		<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185(m)		<b>79</b>	126	---
Manganese	ppm	ASTM D5185(m)		<b>10</b>	18	---
Magnesium	ppm	ASTM D5185(m)		<b>469</b>	498	---
Calcium	ppm	ASTM D5185(m)	2100	<b>1217</b>	1435	---
Phosphorus	ppm	ASTM D5185(m)		<b>634</b>	737	---
Zinc	ppm	ASTM D5185(m)	870	<b>796</b>	847	---
Sulfur	ppm	ASTM D5185(m)		<b>2265</b>	1765	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>32.6</b>	31.7	---
Base Number (BN)	mg KOH/g	ASTM D2896*		<b>2.94</b>	4.06	---
Visc @ 100°C	cSt	ASTM D7279(m)	8.3	<b>8.1</b>	9.1	---

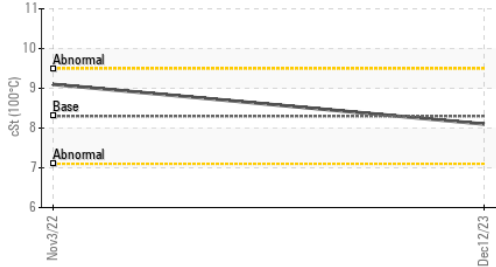
▲ Ferrous Alloys



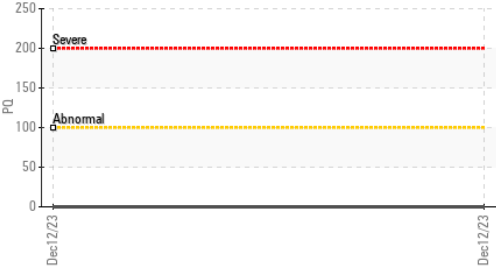
Base Number



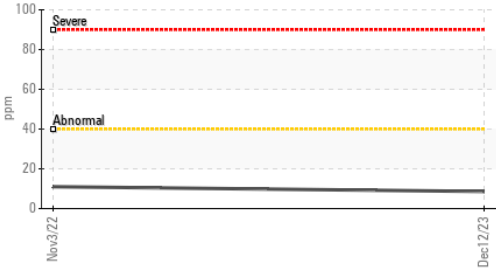
Viscosity @ 100°C



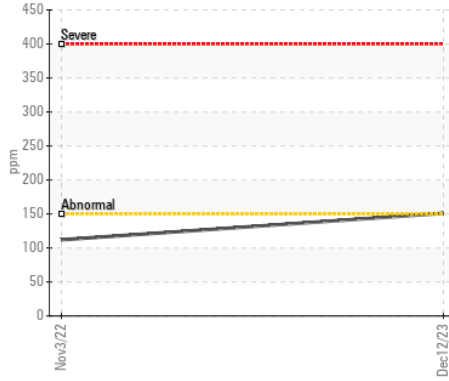
PQ



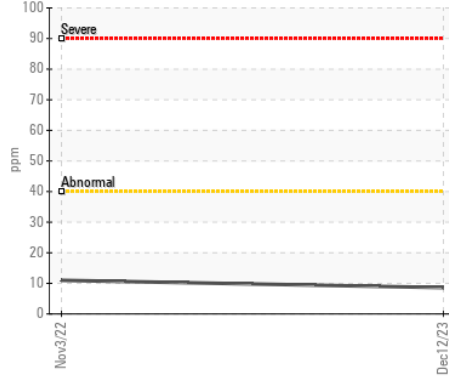
Aluminum (ppm)



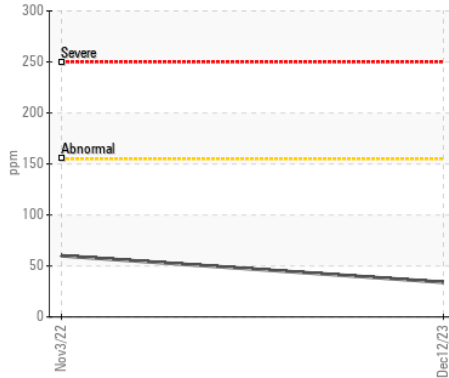
▲ Iron (ppm)



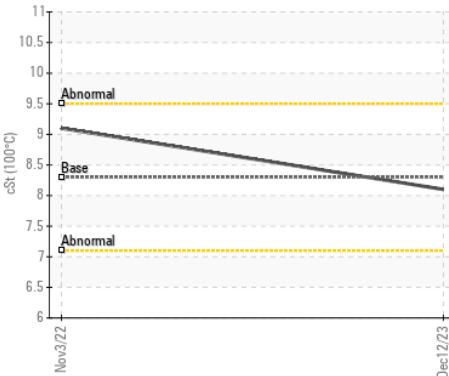
Aluminum (ppm)



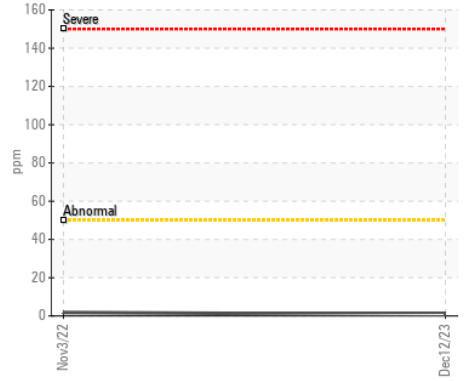
Copper (ppm)



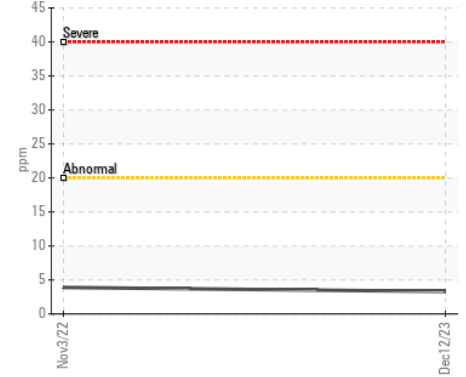
Viscosity @ 100°C



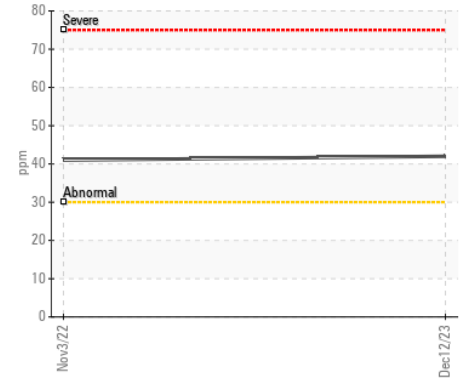
Lead (ppm)



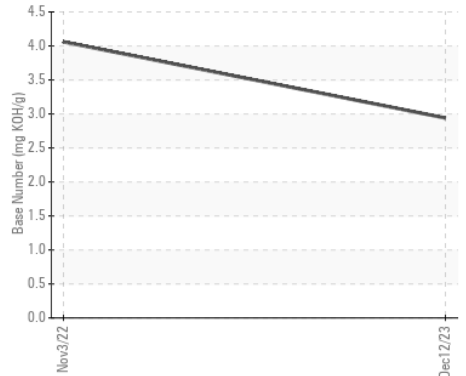
Chromium (ppm)



Silicon (ppm)



Base Number



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : TR02607004 **Received** : 08 Jan 2024  
**Lab Number** : 02607004 **Diagnosed** : 09 Jan 2024  
**Unique Number** : 5708090 **Diagnostician** : Kevin Marson  
**Test Package** : MOB 2 ( Additional Tests: PQ )

**WILCO CONTRACTORS**  
 3031 ARTHUR ST  
 ROSSLYN, ON  
 CA P7K 0P2  
 Contact: David Cramer

To discuss this sample report, contact Customer Service at 1-800-827-0711.

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

T: (807)475-5951  
 F: (807)475-8619