



TRAAP

Texas Refinery Advanced Analysis Program

# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**INTERNATIONAL 3437-21**  
 Component  
**Diesel Engine**  
 Fluid  
**TRC PRO-SPEC III SAE 10W30 (40 LTR)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>TR02627282</b>	TR02602225	TR02567947
Sample Date		Client Info		<b>20 Feb 2024</b>	18 Sep 2023	27 Jun 2023
Machine Age	kms	Client Info		<b>103395</b>	78797	55212
Oil Age	kms	Client Info		<b>24598</b>	53280	29695
Filter Age	kms	Client Info		<b>24598</b>	23585	29695
Oil Changed		Client Info		<b>Not Changed</b>	Changed	Not Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185(m)	>100	<b>25</b>	47	26
Chromium	ppm	ASTM D5185(m)	>20	<b>1</b>	2	1
Nickel	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	<1	0
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>7</b>	11	7
Lead	ppm	ASTM D5185(m)	>40	<b>0</b>	4	<1
Copper	ppm	ASTM D5185(m)	>330	<b>19</b>	23	18
Tin	ppm	ASTM D5185(m)	>15	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

## CONTAMINATION

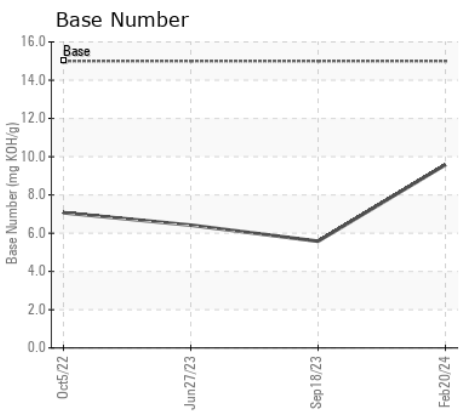
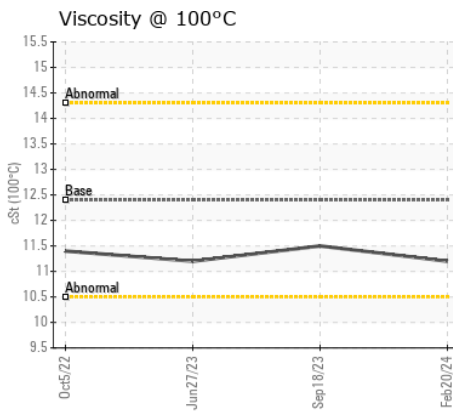
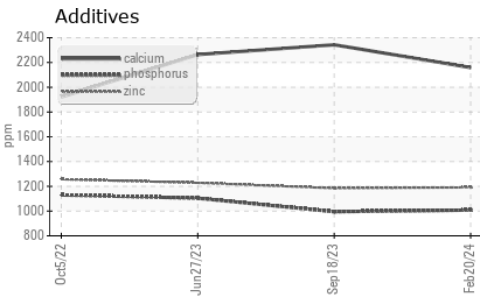
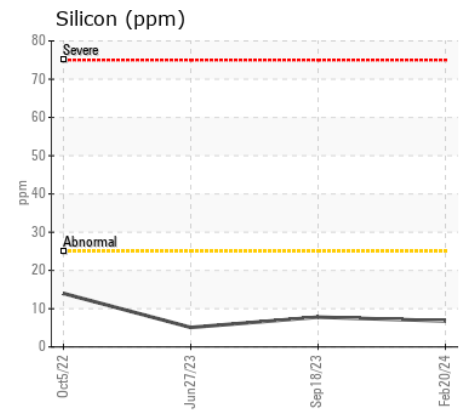
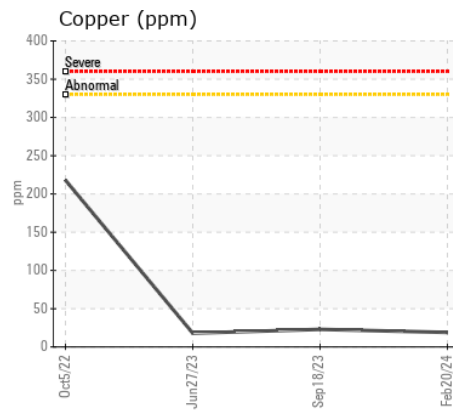
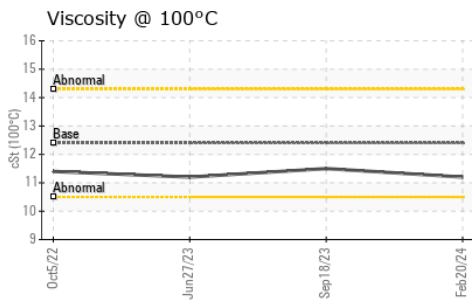
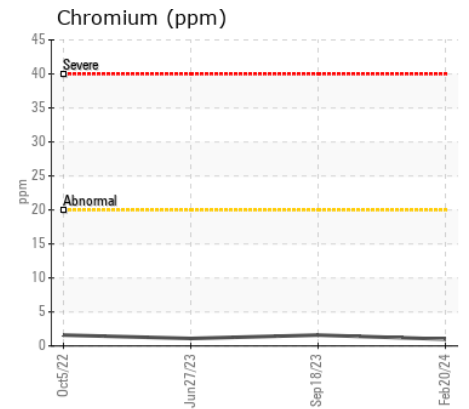
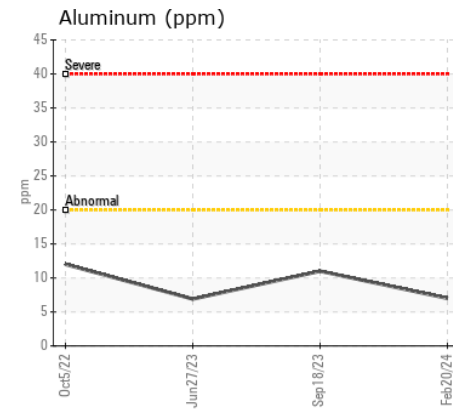
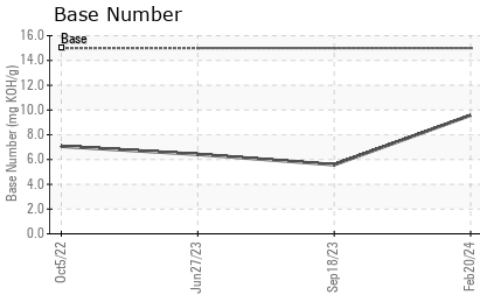
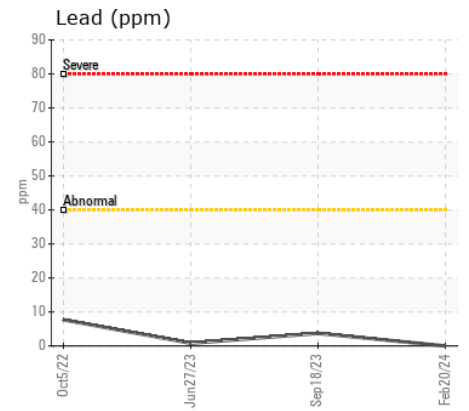
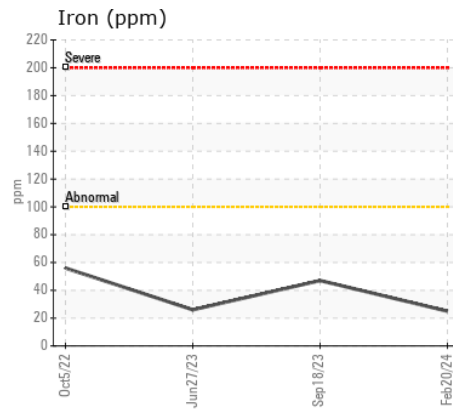
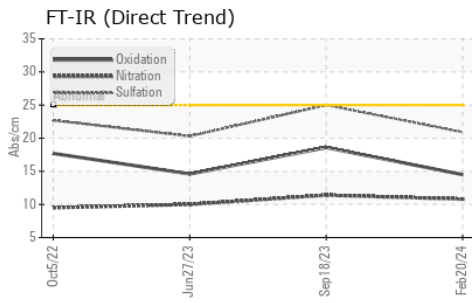
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<b>7</b>	8	5
Potassium	ppm	ASTM D5185(m)	>20	<b>16</b>	30	17
Fuel		WC Method	>2.0	<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
Soot %	%	ASTM D7844*	>3	<b>0.8</b>	1.1	0.5
Nitration	Abs/cm	ASTM D7624*	>20	<b>10.8</b>	11.4	10.0
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>20.9</b>	25.0	20.3
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185(m)		<b>4</b>	5	4
Boron	ppm	ASTM D5185(m)		<b>29</b>	10	25
Barium	ppm	ASTM D5185(m)		<b>0</b>	<1	0
Molybdenum	ppm	ASTM D5185(m)		<b>92</b>	96	91
Manganese	ppm	ASTM D5185(m)		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)		<b>35</b>	28	27
Calcium	ppm	ASTM D5185(m)	4500	<b>2159</b>	2343	2264
Phosphorus	ppm	ASTM D5185(m)		<b>1008</b>	995	1104
Zinc	ppm	ASTM D5185(m)	1400	<b>1191</b>	1184	1228
Sulfur	ppm	ASTM D5185(m)		<b>3092</b>	2985	3227
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>14.5</b>	18.6	14.6
Base Number (BN)	mg KOH/g	ASTM D2896*	15	<b>9.58</b>	5.58	6.42
Visc @ 100°C	cSt	ASTM D7279(m)	12.4	<b>11.2</b>	11.5	11.2



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : TR02627282  
**Lab Number** : 02627282  
**Unique Number** : 5760414  
**Test Package** : MOB 2  
**Received** : 08 Apr 2024  
**Tested** : 09 Apr 2024  
**Diagnosed** : 09 Apr 2024 - Wes Davis

**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)

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