



TRAAP

Texas Refinery Advanced Analysis Program

# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**INTERNATIONAL 4048**

Component  
**Diesel Engine**

Fluid  
**TRC MOLY PRO-SPEC IV XP 15W40 (11 GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>TR06075018</b>	TR05886234	---
Sample Date		Client Info		<b>30 Jan 2024</b>	09 May 2023	---
Machine Age	mls	Client Info		<b>171455</b>	108752	---
Oil Age	mls	Client Info		<b>31876</b>	0	---
Filter Age	mls	Client Info		<b>31876</b>	0	---
Oil Changed		Client Info		<b>N/A</b>	N/A	---
Filter Changed		Client Info		<b>N/A</b>	N/A	---
Sample Status				<b>NORMAL</b>	NORMAL	---

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>90	<b>25</b>	34	---
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	2	---
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	2	---
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	<1	---
Silver	ppm	ASTM D5185m	>2	<b>0</b>	<1	---
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	6	---
Lead	ppm	ASTM D5185m	>40	<b>4</b>	4	---
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	3	---
Tin	ppm	ASTM D5185m	>15	<b>0</b>	2	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	---
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---

## CONTAMINATION

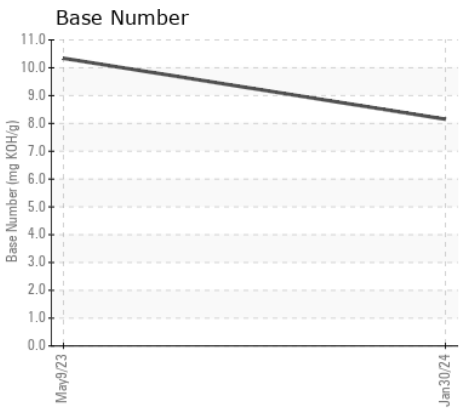
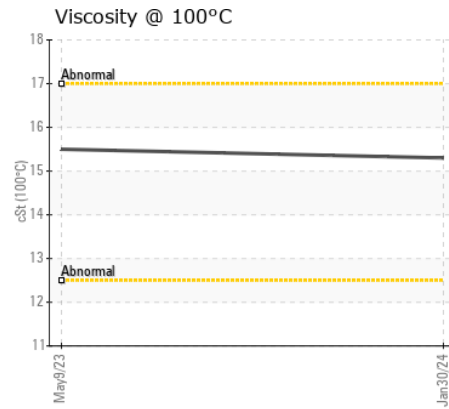
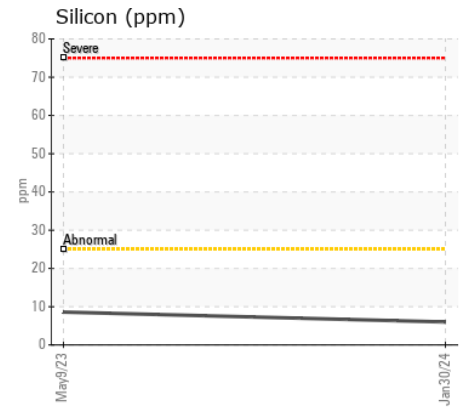
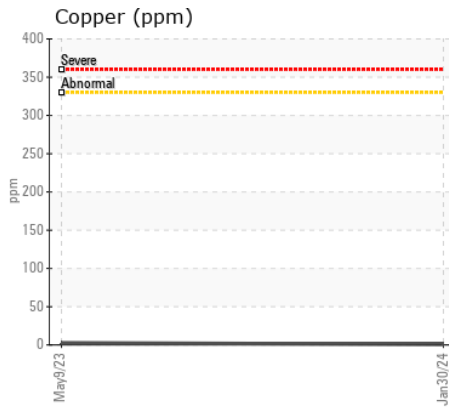
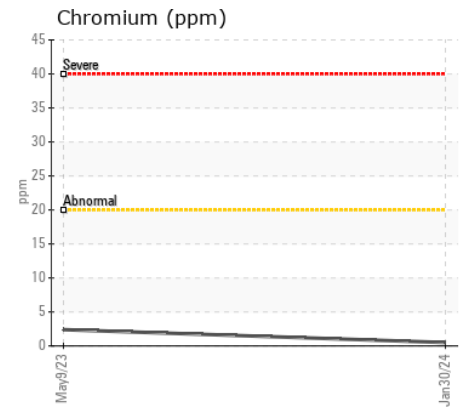
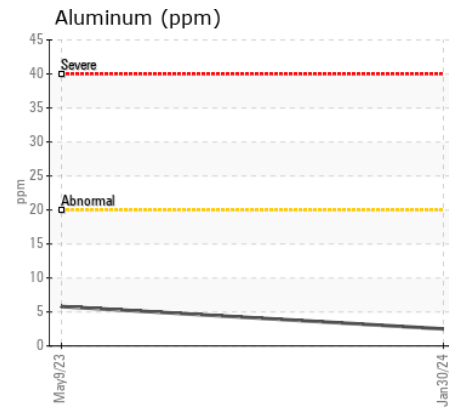
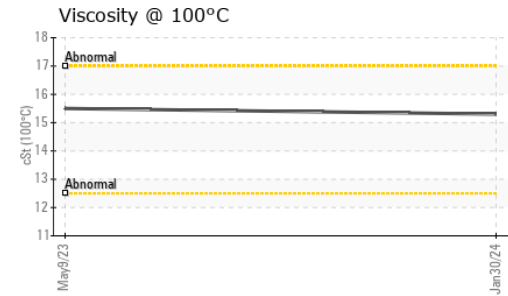
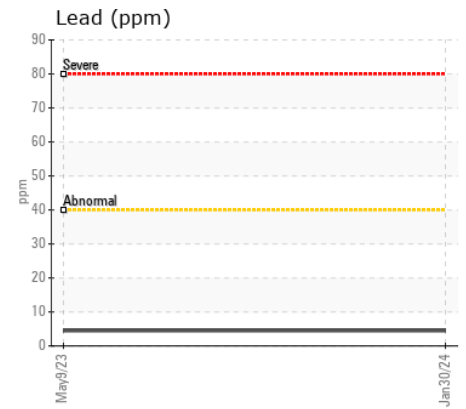
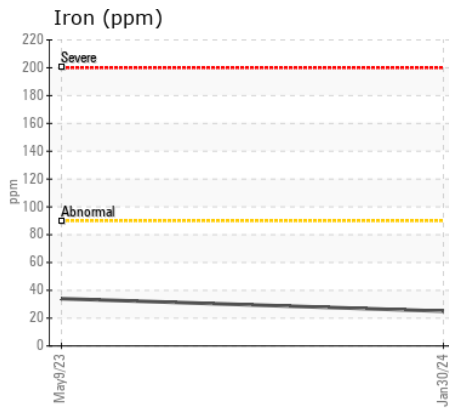
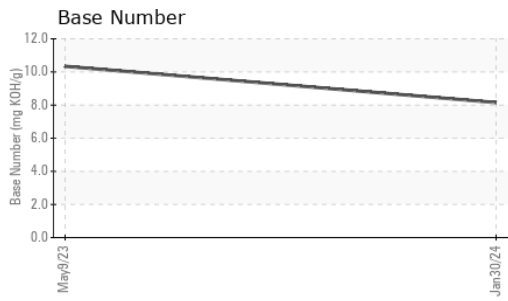
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>6</b>	9	---
Potassium	ppm	ASTM D5185m	>20	<b>10</b>	19	---
Fuel		WC Method	>3.0	<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	>6	<b>0.3</b>	0.4	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>12.9</b>	11.8	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>25.8</b>	26.3	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	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 D5185m		<b>0</b>	10	---
Boron	ppm	ASTM D5185m		<b>0</b>	<1	---
Barium	ppm	ASTM D5185m		<b>&lt;1</b>	0	---
Molybdenum	ppm	ASTM D5185m		<b>2</b>	2	---
Manganese	ppm	ASTM D5185m		<b>0</b>	2	---
Magnesium	ppm	ASTM D5185m		<b>19</b>	24	---
Calcium	ppm	ASTM D5185m		<b>3675</b>	4670	---
Phosphorus	ppm	ASTM D5185m		<b>834</b>	968	---
Zinc	ppm	ASTM D5185m		<b>909</b>	1167	---
Sulfur	ppm	ASTM D5185m		<b>3722</b>	4979	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>19.3</b>	19.2	---
Base Number (BN)	mg KOH/g	ASTM D2896		<b>8.15</b>	10.34	---
Visc @ 100°C	cSt	ASTM D445		<b>15.3</b>	15.5	---



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TR06075018 **Received** : 30 Jan 2024  
**Lab Number** : 06075018 **Diagnosed** : 01 Feb 2024  
**Unique Number** : 10857109 **Diagnostician** : Sean Felton  
**Test Package** : MOB 2

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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