



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**CATERPILLAR 972H L10 A7D01072**

Component  
**Diesel Engine**

Fluid  
**TRC MOLY XL PRO-SPEC IV XP 15W40 (9 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>TR06189783</b>	TR06170205	TR06101166
Sample Date		Client Info		<b>17 May 2024</b>	23 Apr 2024	21 Feb 2024
Machine Age	hrs	Client Info		<b>12036</b>	11874	11532
Oil Age	hrs	Client Info		<b>2575</b>	2413	2071
Filter Age	hrs	Client Info		<b>2575</b>	2413	2071
Oil Changed		Client Info		<b>Not Changd</b>	Not Changd	N/A
Filter Changed		Client Info		<b>Not Changd</b>	Not Changd	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>81</b>	94	91
Chromium	ppm	ASTM D5185m	>20	<b>2</b>	2	2
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>4</b>	3	4
Lead	ppm	ASTM D5185m	>40	<b>6</b>	8	8
Copper	ppm	ASTM D5185m	>330	<b>10</b>	12	11
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

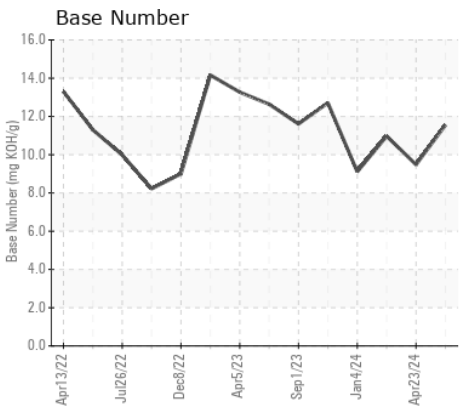
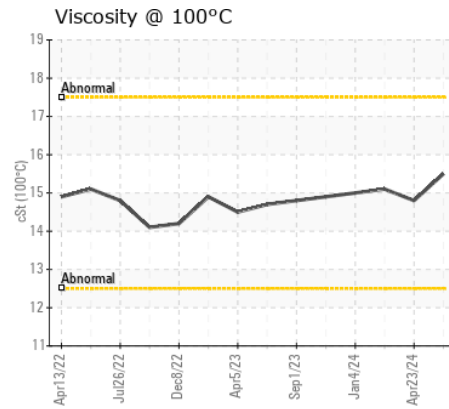
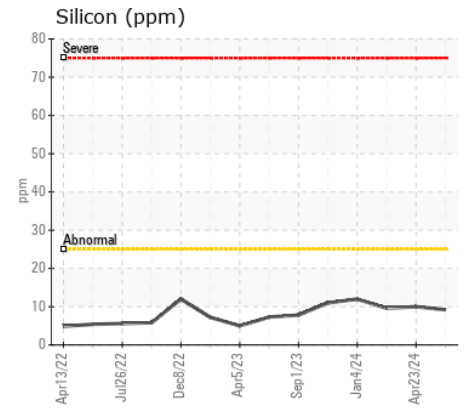
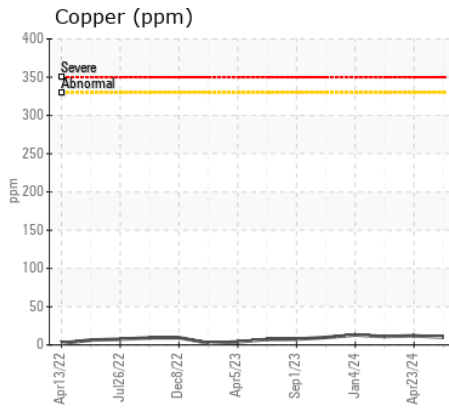
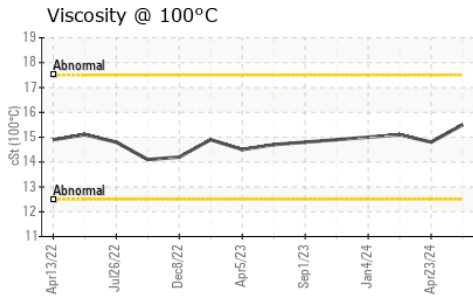
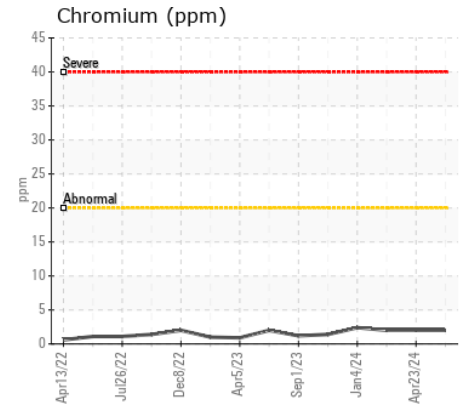
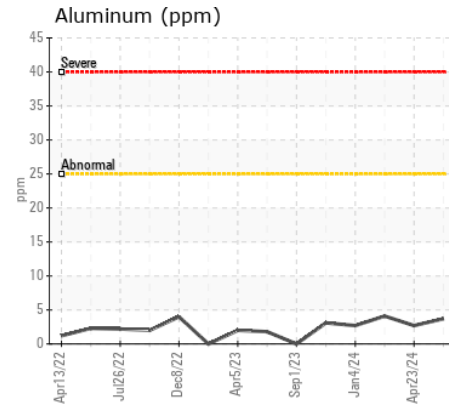
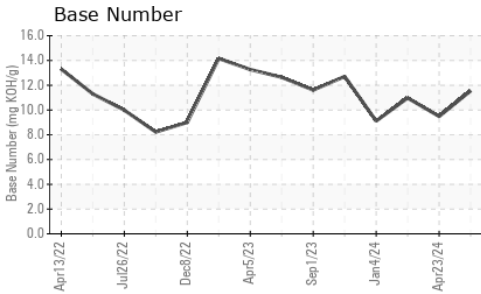
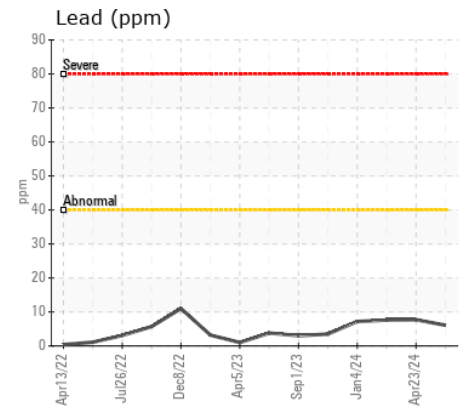
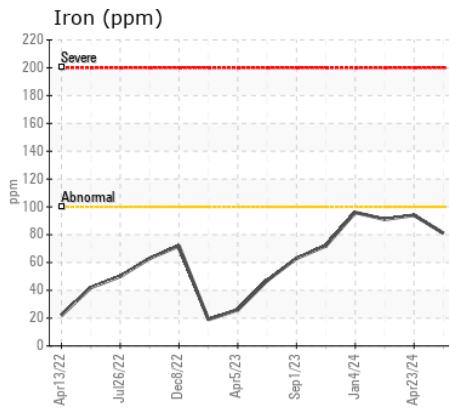
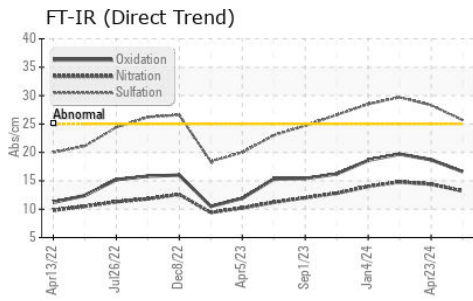
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>9</b>	10	10
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	4	0
Fuel	%	ASTM D3524	>5	<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>1.7</b>	2.1	2.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>13.2</b>	14.4	14.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>25.7</b>	28.3	29.7
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
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 D5185m		<b>28</b>	36	0
Boron	ppm	ASTM D5185m		<b>15</b>	19	2
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>118</b>	110	128
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	1	<1
Magnesium	ppm	ASTM D5185m		<b>162</b>	201	67
Calcium	ppm	ASTM D5185m		<b>3587</b>	3383	3920
Phosphorus	ppm	ASTM D5185m		<b>834</b>	949	844
Zinc	ppm	ASTM D5185m		<b>1016</b>	1027	1090
Sulfur	ppm	ASTM D5185m		<b>4011</b>	4520	4006
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.6</b>	18.7	19.7
Base Number (BN)	mg KOH/g	ASTM D2896		<b>11.55</b>	9.48	10.97
Visc @ 100°C	cSt	ASTM D445		<b>15.5</b>	14.8	15.1



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TR06189783 **Received** : 23 May 2024  
**Lab Number** : 06189783 **Tested** : 29 May 2024  
**Unique Number** : 11046535 **Diagnosed** : 29 May 2024 - Wes Davis  
**Test Package** : MOB 2 ( Additional Tests: FuelDilution )

**BARR-TECH COMPOSTING**  
 9117 KALLENBERGER RD N  
 SPRAGUE, WA  
 US 99032  
 Contact: RON GROGAN

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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 F: