



TRAAP

Texas Refinery Advanced Analysis Program

# OIL ANALYSIS REPORT

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

Machine Id  
**CATERPILLAR D-8N**

Component  
**Diesel Engine**

Fluid  
**TRC PRO-SPEC III SYNTHETIC BLEND 15W40 (10 GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>TR06176282</b>	TR05616489	---
Sample Date		Client Info		<b>01 May 2024</b>	05 Aug 2022	---
Machine Age	hrs	Client Info		<b>5894</b>	5570	---
Oil Age	hrs	Client Info		<b>312</b>	250	---
Filter Age	hrs	Client Info		<b>312</b>	250	---
Oil Changed		Client Info		<b>Changed</b>	Changed	---
Filter Changed		Client Info		<b>Changed</b>	Changed	---
Sample Status				<b>NORMAL</b>	NORMAL	---

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>23</b>	19	---
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	---
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	<1	---
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	2	---
Silver	ppm	ASTM D5185m	>2	<b>0</b>	<1	---
Aluminum	ppm	ASTM D5185m	>25	<b>2</b>	1	---
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	<1	---
Copper	ppm	ASTM D5185m	>330	<b>5</b>	10	---
Tin	ppm	ASTM D5185m	>15	<b>0</b>	1	---
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

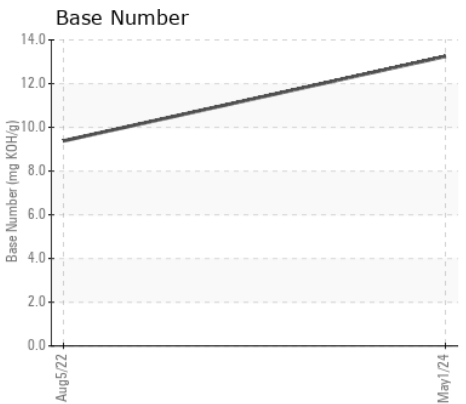
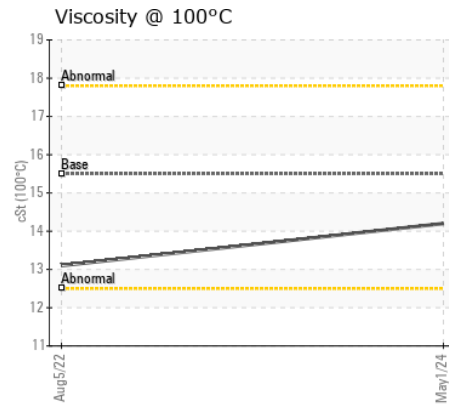
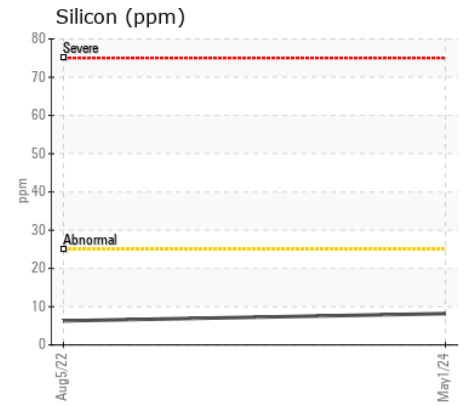
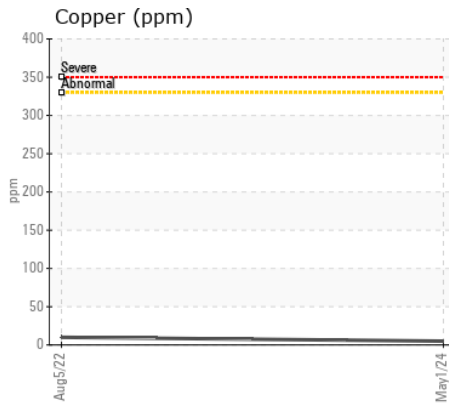
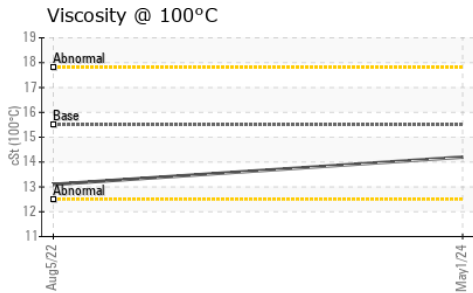
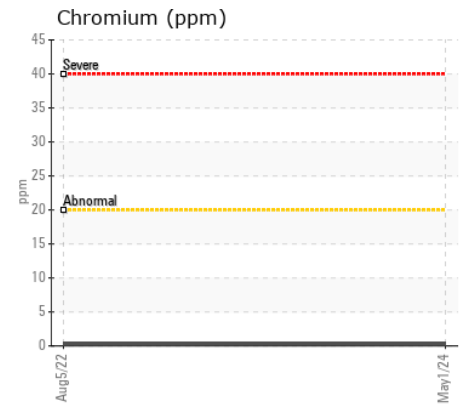
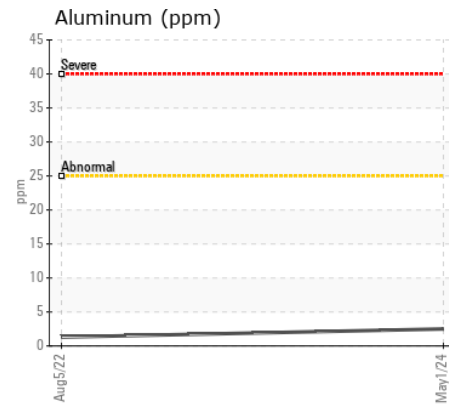
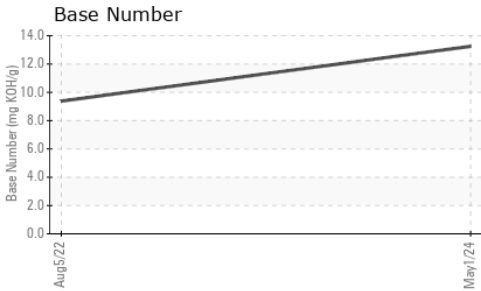
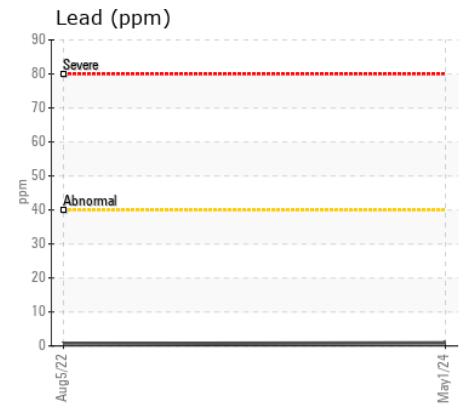
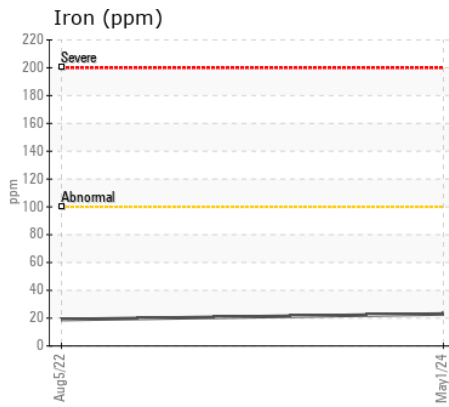
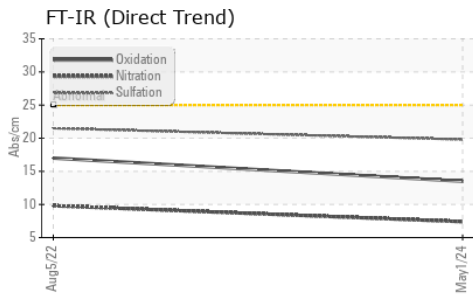
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>8</b>	6	---
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	---
Fuel		WC Method	>5	<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	>3	<b>0.4</b>	0.3	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.4</b>	9.8	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.8</b>	21.5	---
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>4</b>	4	---
Boron	ppm	ASTM D5185m		<b>228</b>	129	---
Barium	ppm	ASTM D5185m		<b>&lt;1</b>	0	---
Molybdenum	ppm	ASTM D5185m		<b>186</b>	76	---
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	---
Magnesium	ppm	ASTM D5185m		<b>464</b>	460	---
Calcium	ppm	ASTM D5185m		<b>3707</b>	2092	---
Phosphorus	ppm	ASTM D5185m		<b>921</b>	865	---
Zinc	ppm	ASTM D5185m		<b>1077</b>	1054	---
Sulfur	ppm	ASTM D5185m		<b>4293</b>	2955	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.5</b>	17.0	---
Base Number (BN)	mg KOH/g	ASTM D2896		<b>13.25</b>	9.38	---
Visc @ 100°C	cSt	ASTM D445	15.5	<b>14.2</b>	13.1	---



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TR06176282  
**Lab Number** : 06176282  
**Unique Number** : 11022335  
**Test Package** : MOB 2  
**Received** : 10 May 2024  
**Tested** : 13 May 2024  
**Diagnosed** : 14 May 2024 - Sean Felton

**NOLL CONSTRUCTION**  
 BOX 152  
 GOLVA, ND  
 US 58632  
 Contact: KELLY ZIETLOW

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)