



# OIL ANALYSIS REPORT

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

Area

**OKLAHOMA/102/TR/UNKNOWN**

Machine Id

**48.89L [OKLAHOMA^102^TR^UNKNOWN]**

Component

**Diesel Engine**

Fluid

**{not provided} (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample. ( Customer Sample Comment: 4432 hrs )

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0864316</b>	WC0819920	WC0819938
Sample Date		Client Info		<b>05 Feb 2024</b>	20 Oct 2023	29 Jul 2023
Machine Age	hrs	Client Info		<b>4432</b>	3758	3222
Oil Age	hrs	Client Info		<b>1782</b>	1782	1782
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>10</b>	17	14
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m	>20	<b>1</b>	<1	1
Lead	ppm	ASTM D5185m	>40	<b>3</b>	4	3
Copper	ppm	ASTM D5185m	>330	<b>31</b>	35	31
Tin	ppm	ASTM D5185m	>15	<b>3</b>	4	4
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
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.

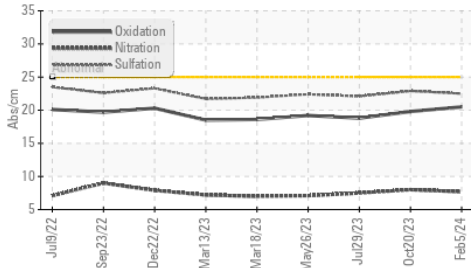
Silicon	ppm	ASTM D5185m	>25	<b>4</b>	5	5
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	0	0
Fuel	%	ASTM D3524	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.3</b>	0.6	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.7</b>	8.0	7.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.5</b>	22.9	22.1
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

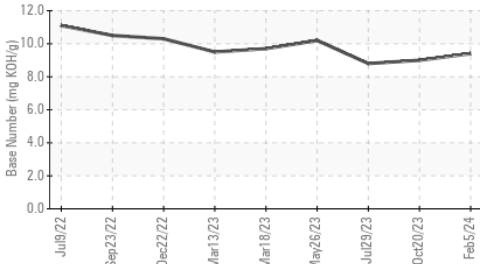
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>0</b>	1	2
Boron	ppm	ASTM D5185m		<b>49</b>	29	32
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>40</b>	35	38
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>463</b>	456	514
Calcium	ppm	ASTM D5185m		<b>1562</b>	1624	1582
Phosphorus	ppm	ASTM D5185m		<b>756</b>	643	730
Zinc	ppm	ASTM D5185m		<b>885</b>	890	879
Sulfur	ppm	ASTM D5185m		<b>2420</b>	2357	2870
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>20.5</b>	19.8	18.8
Base Number (BN)	mg KOH/g	ASTM D2896		<b>9.4</b>	9.0	8.8
Visc @ 100°C	cSt	ASTM D445		<b>12.2</b>	12.4	12.4

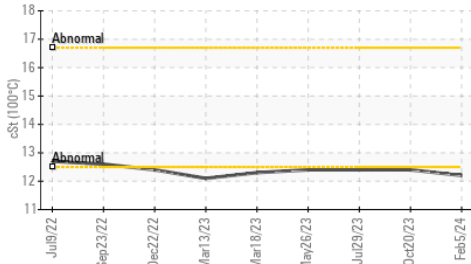
**FT-IR (Direct Trend)**



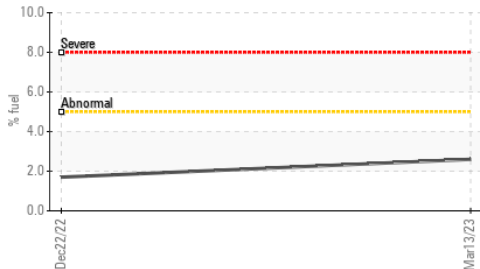
**Base Number**



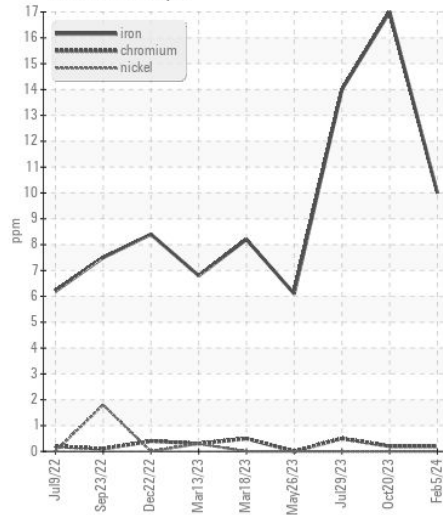
**Viscosity @ 100°C**



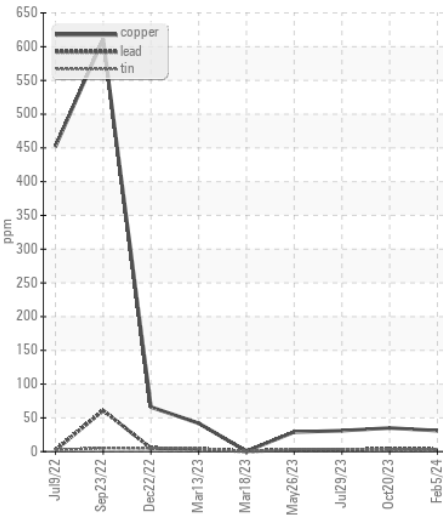
**Fuel Dilution**



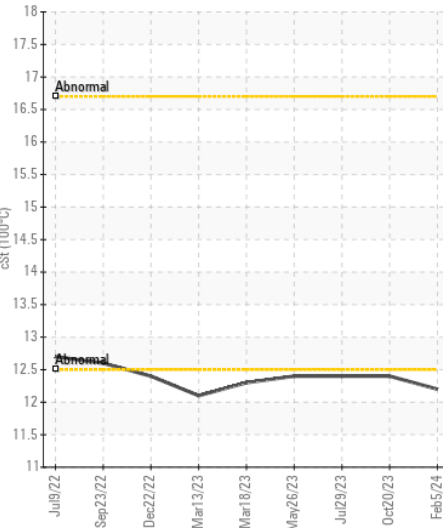
**Ferrous Alloys**



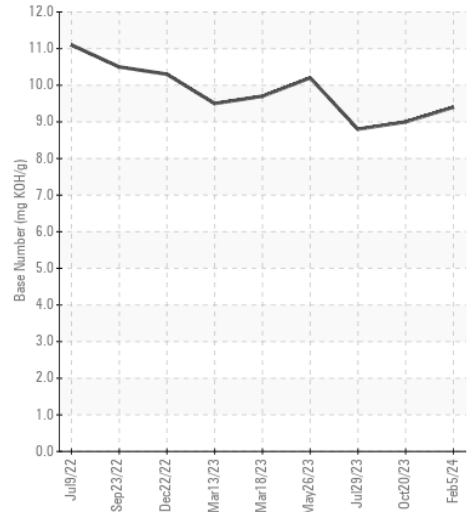
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0864316 **Received** : 13 Feb 2024  
**Lab Number** : 06086867 **Tested** : 13 Feb 2024  
**Unique Number** : 10874312 **Diagnosed** : 14 Feb 2024 - Sean Felton  
**Test Package** : CONST ( Additional Tests: FuelDilution, TBN )

**SHERWOOD CONSTRUCTION CO INC**  
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 WICHITA, KS  
 US 67213  
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 F: x:

To discuss this sample report, contact Customer Service at 1-800-237-1369.

\* - 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)