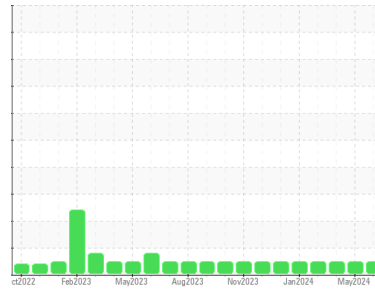




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**ARIZONA**  
Machine Id  
**VOLVO 4886**  
Component  
**Diesel Engine**  
Fluid  
**NAPA Motor Oil 15W40 (--- QTS)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. Please note that this is a corrected copy for data entry updates.

### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil.

### 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.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0935454</b>	WC0935444	WC0899588
Sample Date	Client Info		<b>11 Jun 2024</b>	04 May 2024	10 Apr 2024
Machine Age	hrs	Client Info	<b>3183</b>	2924	2744
Oil Age	hrs	Client Info	<b>2613</b>	2354	2174
Oil Changed	Client Info		<b>Not Chngd</b>	Not Chngd	Not Chngd
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>6.0	<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

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	<b>77</b>	83	73
Chromium	ppm	ASTM D5185m >20	<b>1</b>	2	<1
Nickel	ppm	ASTM D5185m >2	<b>7</b>	8	8
Titanium	ppm	ASTM D5185m	<b>0</b>	<1	0
Silver	ppm	ASTM D5185m >2	<b>&lt;1</b>	<1	<1
Aluminum	ppm	ASTM D5185m >25	<b>4</b>	5	5
Lead	ppm	ASTM D5185m >40	<b>4</b>	5	5
Copper	ppm	ASTM D5185m >330	<b>81</b>	100	97
Tin	ppm	ASTM D5185m >15	<b>4</b>	4	4
Vanadium	ppm	ASTM D5185m	<b>0</b>	<1	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>21</b>	22	18
Barium	ppm	ASTM D5185m	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>18</b>	22	22
Manganese	ppm	ASTM D5185m	<b>2</b>	2	2
Magnesium	ppm	ASTM D5185m	<b>514</b>	438	438
Calcium	ppm	ASTM D5185m	<b>1750</b>	1786	1811
Phosphorus	ppm	ASTM D5185m	<b>906</b>	936	919
Zinc	ppm	ASTM D5185m	<b>1089</b>	1104	1144
Sulfur	ppm	ASTM D5185m	<b>3169</b>	2907	3238

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>8</b>	10	8
Sodium	ppm	ASTM D5185m	<b>5</b>	4	4
Potassium	ppm	ASTM D5185m >20	<b>13</b>	15	13

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.7</b>	0.7	0.7
Nitration	Abs/cm	*ASTM D7624 >20	<b>10.8</b>	11.0	11.1
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>23.9</b>	24.4	24.7

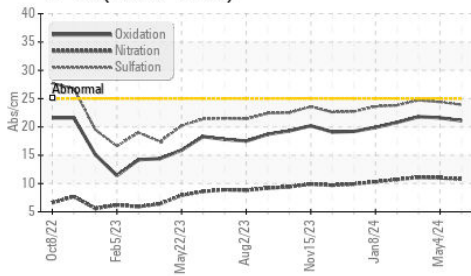
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>21.1</b>	21.6	21.8
Base Number (BN)	mg KOH/g	ASTM D2896	<b>5.1</b>	5.0	4.7

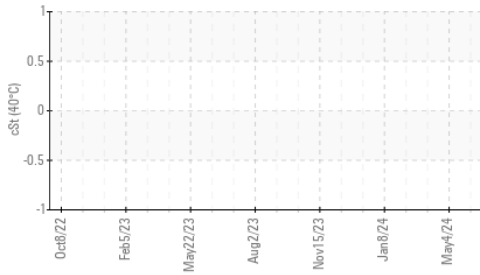


# OIL ANALYSIS REPORT

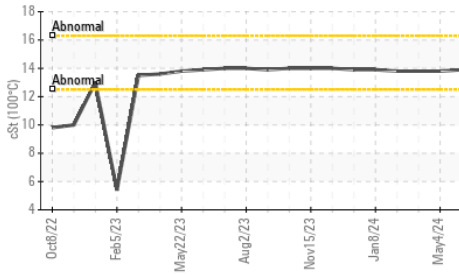
FT-IR (Direct Trend)



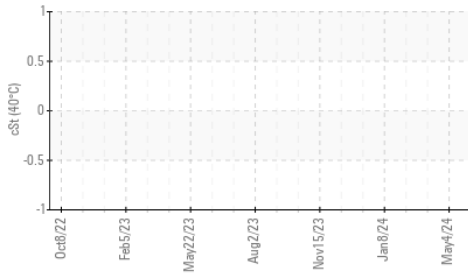
Viscosity @ 40°C



Viscosity @ 100°C



Viscosity @ 40°C

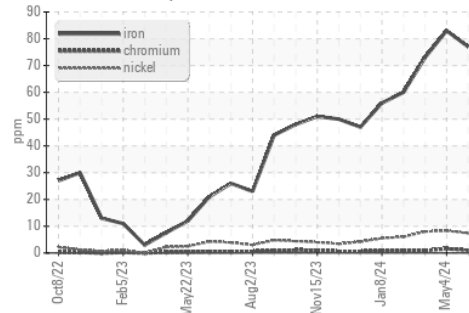


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

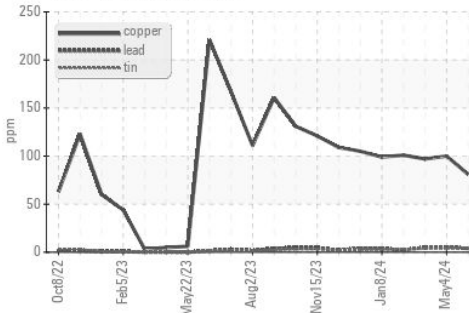
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	13.9	13.8	13.8

## GRAPHS

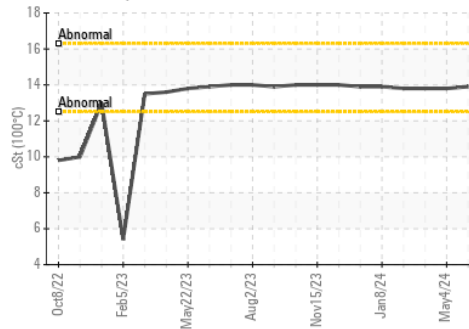
Ferrous Alloys



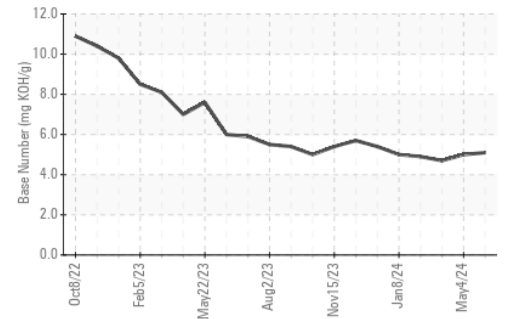
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : WC0935454 Received : 21 Jun 2024  
 Lab Number : 06217550 Tested : 25 Jun 2024  
 Unique Number : 11090414 Diagnosed : 25 Jun 2024 - Sean Felton  
 Test Package : FLEET ( Additional Tests: KV40 )

LIBERTY DISPOSAL  
 6401 S EASTERN AVE  
 OKLAHOMA CITY, OK  
 US 73149  
 Contact: CATHY ROSA  
 c.rosa@ldi89.com

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)

T:  
F: