



# OIL ANALYSIS REPORT

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

Machine Id  
**INTERNATIONAL 13514**  
Component  
**Diesel Engine**  
Fluid  
**CHEVRON DELO 400 MULTIGRADE 15W40 (19 QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0797873</b>	WC0760534	WC0728539
Sample Date		Client Info		<b>08 May 2024</b>	05 Dec 2023	26 Jun 2023
Machine Age	mls	Client Info		<b>188808</b>	0	154722
Oil Age	mls	Client Info		<b>0</b>	13480	0
Filter Age	mls	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	N/A	Changed
Sample Status				<b>NORMAL</b>	NORMAL	ATTENTION

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>130	<b>66</b>	50	78
Chromium	ppm	ASTM D5185m	>10	<b>2</b>	3	15
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>13</b>	11	18
Lead	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	0
Copper	ppm	ASTM D5185m	>125	<b>1</b>	2	3
Tin	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	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.

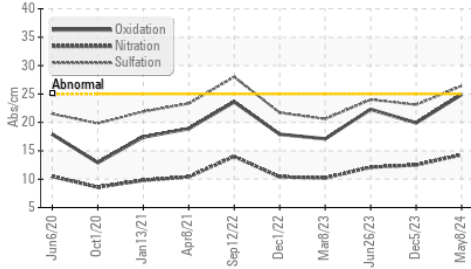
Silicon	ppm	ASTM D5185m	>25	<b>7</b>	8	7
Potassium	ppm	ASTM D5185m	>20	<b>10</b>	10	15
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>6	<b>0.8</b>	0.6	0.8
Nitration	Abs/cm	*ASTM D7624	>20	<b>14.3</b>	12.5	12.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>26.4</b>	23.1	24.0
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

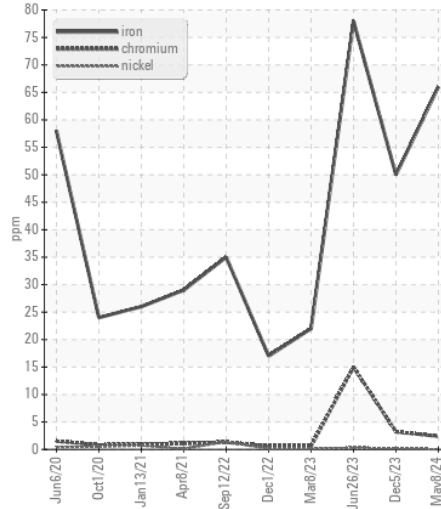
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	1	0
Boron	ppm	ASTM D5185m		<b>9</b>	<1	4
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>80</b>	71	74
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	2
Magnesium	ppm	ASTM D5185m		<b>1183</b>	1045	882
Calcium	ppm	ASTM D5185m		<b>1399</b>	1115	1119
Phosphorus	ppm	ASTM D5185m	1360	<b>1251</b>	1032	985
Zinc	ppm	ASTM D5185m	1480	<b>1606</b>	1371	1204
Sulfur	ppm	ASTM D5185m		<b>4095</b>	3274	3297
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>24.9</b>	19.9	22.3
Base Number (BN)	mg KOH/g	ASTM D2896	12.2	<b>6.3</b>	7.3	7.0
Visc @ 100°C	cSt	ASTM D445	15.1	<b>13.2</b>	13.4	12.1

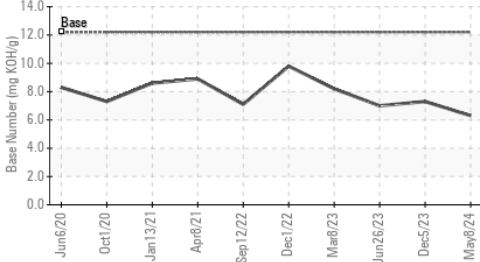
**FT-IR (Direct Trend)**



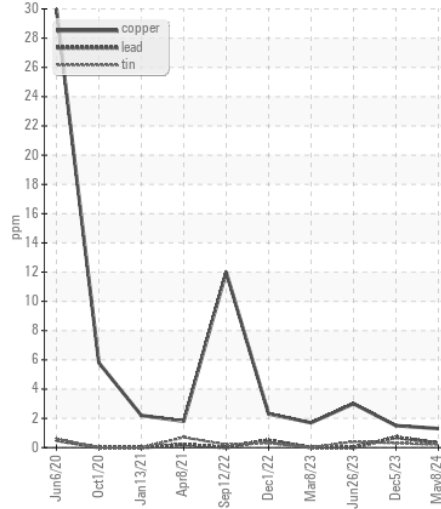
**Ferrous Alloys**



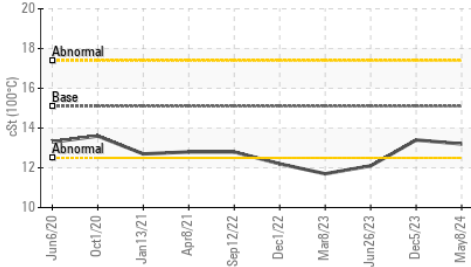
**Base Number**



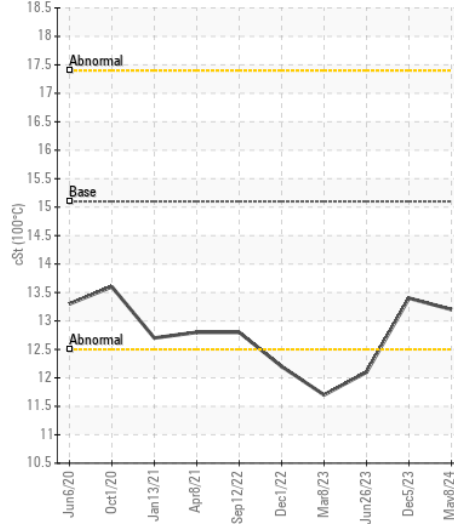
**Non-ferrous Metals**



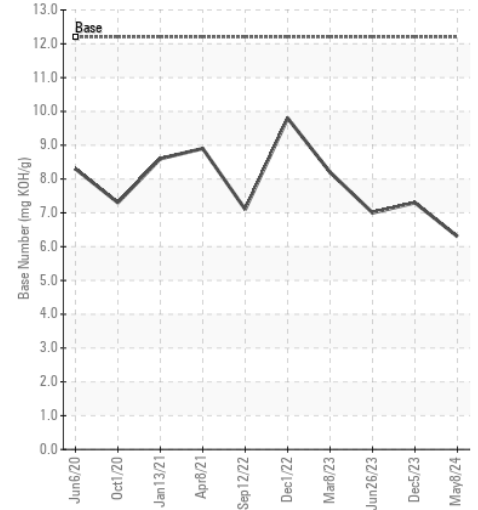
**Viscosity @ 100°C**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513

**Sample No.** : WC0797873

**Lab Number** : 06193326

**Unique Number** : 11050078

**Test Package** : FLEET

**Received** : 28 May 2024

**Tested** : 30 May 2024

**Diagnosed** : 30 May 2024 - Sean Felton

**SALEM NATIONALEASE CORPORATION**

198 PARK PLAZA DRIVE

WINSTON SALEM, NC

US 27105

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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)