



# WEAR CHECK

## OIL ANALYSIS REPORT

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

Machine Id  
**24873**  
Component  
**Diesel Engine**  
Fluid  
**CHEVRON 15W40 (--- QTS)**

### RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0948399</b>	WC0855563	WC0839316
Sample Date		Client Info		<b>24 May 2024</b>	01 Nov 2023	25 Jul 2023
Machine Age	mls	Client Info		<b>55571</b>	32548	14453
Oil Age	mls	Client Info		<b>25000</b>	19000	14453
Filter Age	mls	Client Info		<b>25000</b>	19000	14453
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	ATTENTION	ATTENTION

### WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>100	<b>20</b>	20	29
Chromium	ppm	ASTM D5185m	>20	<b>1</b>	2	1
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	1	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>3	<b>&lt;1</b>	<1	1
Aluminum	ppm	ASTM D5185m	>20	<b>9</b>	8	6
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	<1	0
Copper	ppm	ASTM D5185m	>330	<b>100</b>	266	76
Tin	ppm	ASTM D5185m	>15	<b>3</b>	4	5
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

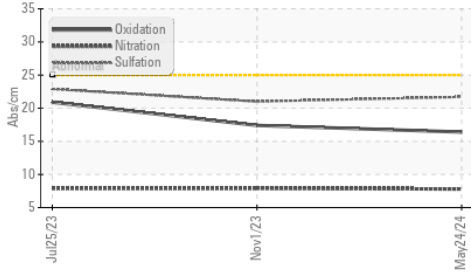
Silicon	ppm	ASTM D5185m	>25	<b>5</b>	4	5
Potassium	ppm	ASTM D5185m	>20	<b>19</b>	23	14
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	0.2
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.4</b>	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.8</b>	7.9	7.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.7</b>	21.0	22.9
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

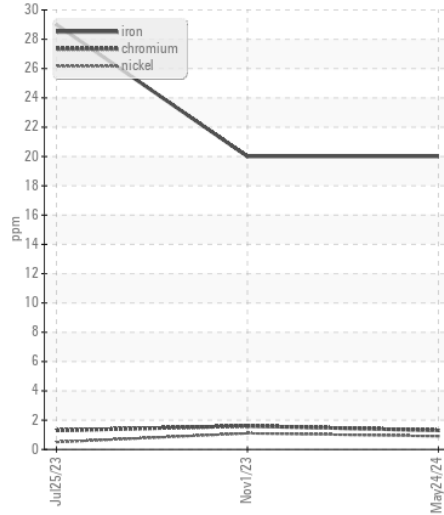
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>50	<b>&lt;1</b>	0	2
Boron	ppm	ASTM D5185m		<b>189</b>	4	36
Barium	ppm	ASTM D5185m		<b>&lt;1</b>	1	0
Molybdenum	ppm	ASTM D5185m		<b>80</b>	60	40
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	1	2
Magnesium	ppm	ASTM D5185m		<b>530</b>	919	558
Calcium	ppm	ASTM D5185m		<b>1265</b>	1164	1638
Phosphorus	ppm	ASTM D5185m		<b>1047</b>	965	768
Zinc	ppm	ASTM D5185m		<b>1181</b>	1173	1006
Sulfur	ppm	ASTM D5185m		<b>2747</b>	3175	2748
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.4</b>	17.4	20.9
Base Number (BN)	mg KOH/g	ASTM D2896		<b>6.7</b>	8.6	8.6
Visc @ 100°C	cSt	ASTM D445	14.4	<b>12.5</b>	12.1	9.7

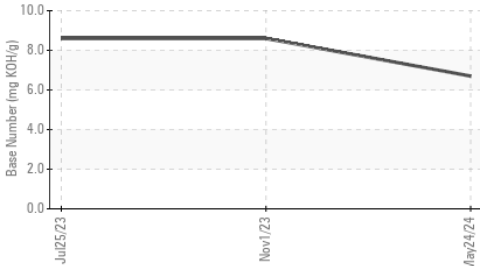
**FT-IR (Direct Trend)**



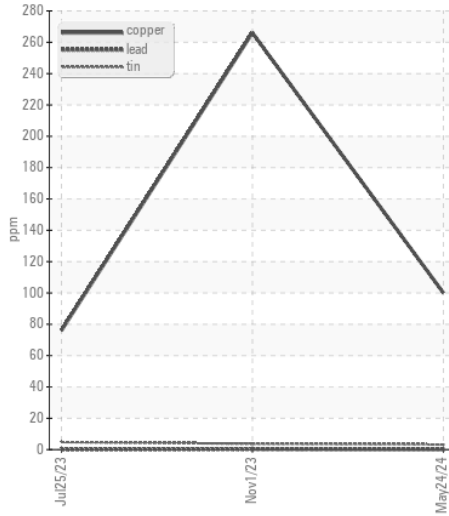
**Ferrous Alloys**



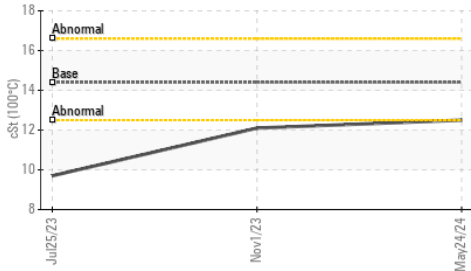
**Base Number**



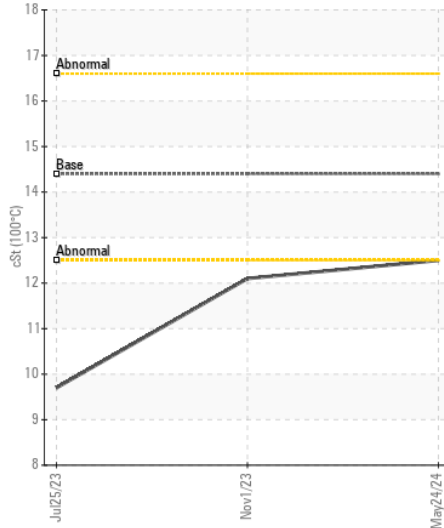
**Non-ferrous Metals**



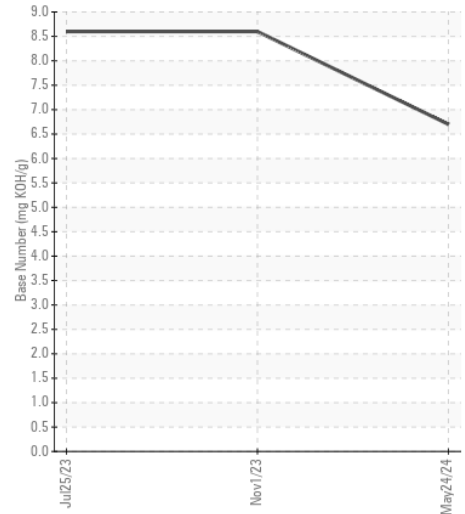
**Viscosity @ 100°C**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0948399  
**Lab Number** : 06213010  
**Unique Number** : 11085874  
**Test Package** : FLEET

**Received** : 17 Jun 2024  
**Tested** : 19 Jun 2024  
**Diagnosed** : 19 Jun 2024 - Wes Davis

**SALEM NATIONALEASE CORPORATION**  
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 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)