



# OIL ANALYSIS REPORT

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

Machine Id  
**54148**  
Component  
**Diesel Engine**  
Fluid  
**CHEVRON 15W40 (--- QTS)**

## RECOMMENDATION

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0809949</b>	WC0671666	WC0551220
Sample Date		Client Info		<b>03 Jan 2024</b>	19 Aug 2022	16 Jun 2021
Machine Age	hrs	Client Info		<b>870</b>	592	374
Oil Age	hrs	Client Info		<b>200</b>	218	200
Filter Age	hrs	Client Info		<b>200</b>	218	200
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	ABNORMAL	ATTENTION

## WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>100	<b>4</b>	18	10
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	2	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	<1	2
Aluminum	ppm	ASTM D5185m	>20	<b>3</b>	5	<1
Lead	ppm	ASTM D5185m	>40	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	2	4
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	3	2
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

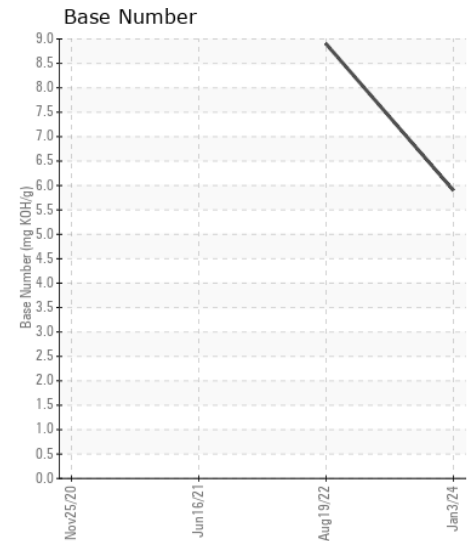
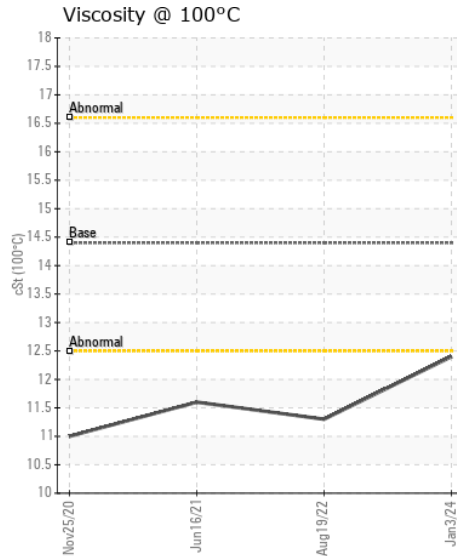
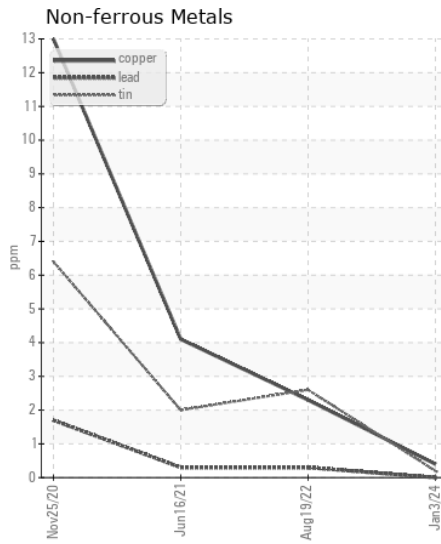
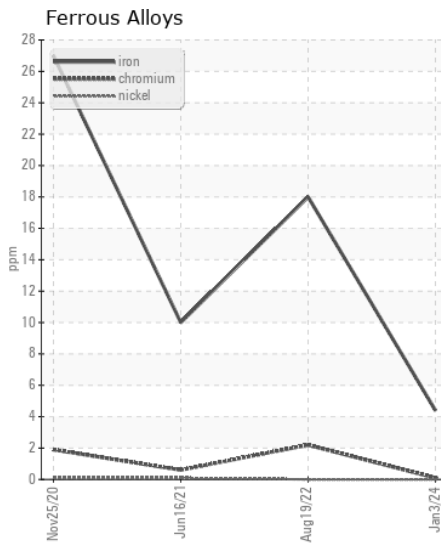
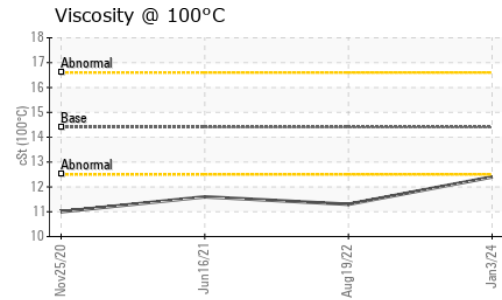
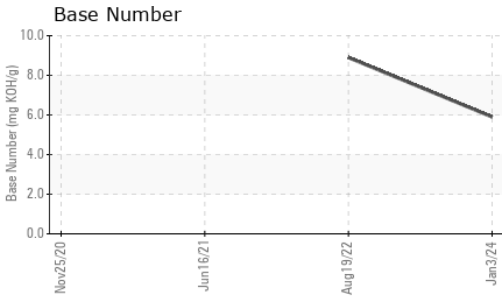
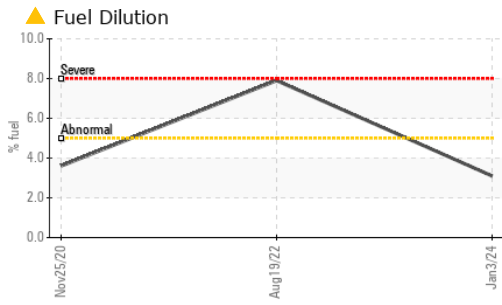
Light fuel dilution occurring. No other contaminants were detected in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>8</b>	10	10
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	<1	<1
Fuel	%	ASTM D3524	>5	<b>▲ 3.1</b>	▲ 7.9	<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>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>5.9</b>	6.6	5.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>16.7</b>	20.4	21.2
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

Magnesium ppm levels are abnormally low. The BN result indicates that there is suitable alkalinity remaining in the oil.

Sodium	ppm	ASTM D5185m	>50	<b>&lt;1</b>	<1	3
Boron	ppm	ASTM D5185m		<b>156</b>	95	490
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>71</b>	58	93
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>▲ 170</b>	712	463
Calcium	ppm	ASTM D5185m		<b>1672</b>	1106	1445
Phosphorus	ppm	ASTM D5185m		<b>916</b>	868	762
Zinc	ppm	ASTM D5185m		<b>1084</b>	1022	874
Sulfur	ppm	ASTM D5185m		<b>3223</b>	2804	2212
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>12.3</b>	16.1	16.4
Base Number (BN)	mg KOH/g	ASTM D2896		<b>5.9</b>	8.9	---
Visc @ 100°C	cSt	ASTM D445	14.4	<b>12.4</b>	▲ 11.3	▲ 11.6



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0809949 **Received** : 16 Jan 2024  
**Lab Number** : 06060624 **Diagnosed** : 18 Jan 2024  
**Unique Number** : 10832006 **Diagnostician** : Wes Davis  
**Test Package** : CONST ( Additional Tests: PercentFuel, TBN )

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)

**SULLIVAN EASTERN INC**  
 2860 C SLATER RD  
 MORRISVILLE, NC  
 US 27560

Contact: SCOTT SULLIVAN  
 ssullivan@sullivaneastern.com

T: (919)484-8993

F: (919)484-2136