



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**MAGNUM 98407**  
Component  
**Diesel Engine**  
Fluid  
**CHEVRON 15W40 (4 QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0913632</b>	WC0786212	WC0756512
Sample Date		Client Info		<b>15 Apr 2024</b>	04 Feb 2023	18 Nov 2022
Machine Age	hrs	Client Info		<b>3668</b>	3520	13525
Oil Age	hrs	Client Info		<b>250</b>	200	389
Filter Age	hrs	Client Info		<b>250</b>	200	389
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

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

There is no indication of any contamination in the oil.

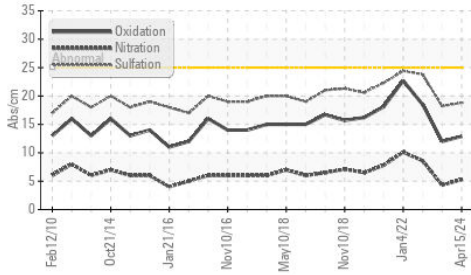
Silicon	ppm	ASTM D5185m	>25	<b>5</b>	5	6
Potassium	ppm	ASTM D5185m	>20	<b>7</b>	0	0
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.2</b>	0.1	0.8
Nitration	Abs/cm	*ASTM D7624	>20	<b>5.3</b>	4.3	8.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.8</b>	18.2	23.8
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

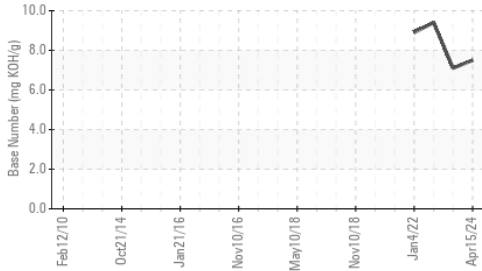
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>50	<b>2</b>	0	2
Boron	ppm	ASTM D5185m		<b>411</b>	409	425
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>77</b>	76	102
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>376</b>	357	443
Calcium	ppm	ASTM D5185m		<b>1338</b>	1265	1630
Phosphorus	ppm	ASTM D5185m		<b>969</b>	929	1006
Zinc	ppm	ASTM D5185m		<b>1175</b>	1163	1217
Sulfur	ppm	ASTM D5185m		<b>3613</b>	3598	3601
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>12.9</b>	12.0	18.5
Base Number (BN)	mg KOH/g	ASTM D2896		<b>7.5</b>	7.1	9.4
Visc @ 100°C	cSt	ASTM D445	14.4	<b>12.9</b>	13.5	13.8

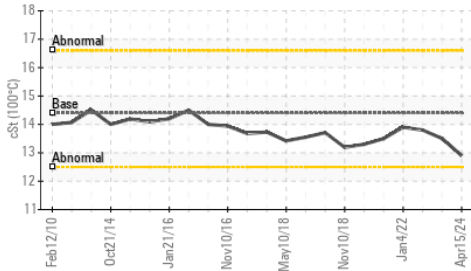
**FT-IR (Direct Trend)**



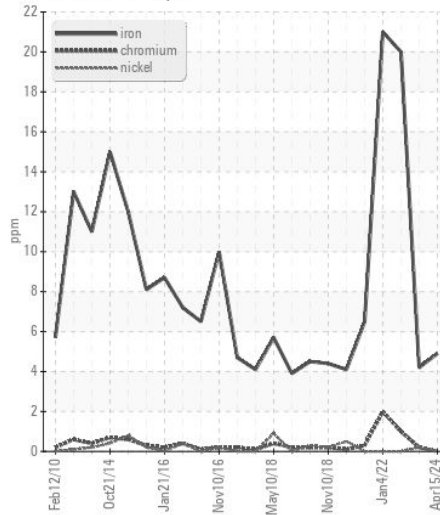
**Base Number**



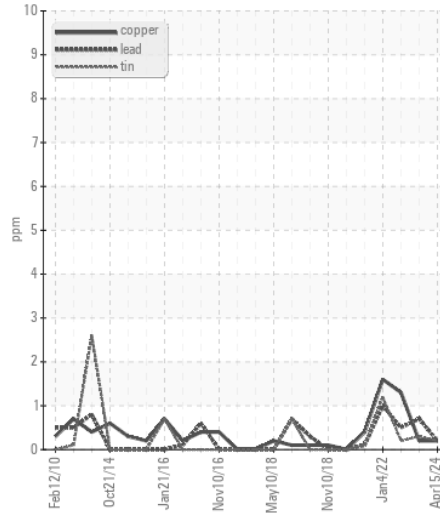
**Viscosity @ 100°C**



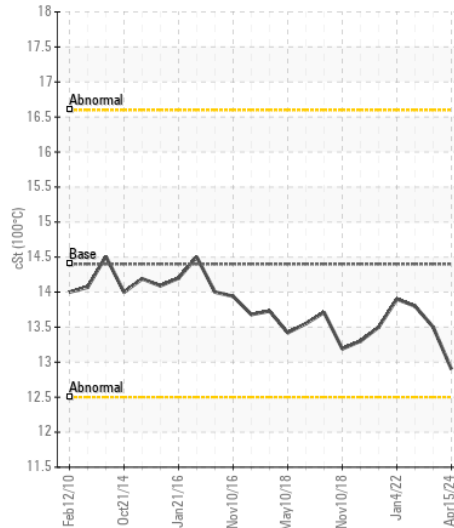
**Ferrous Alloys**



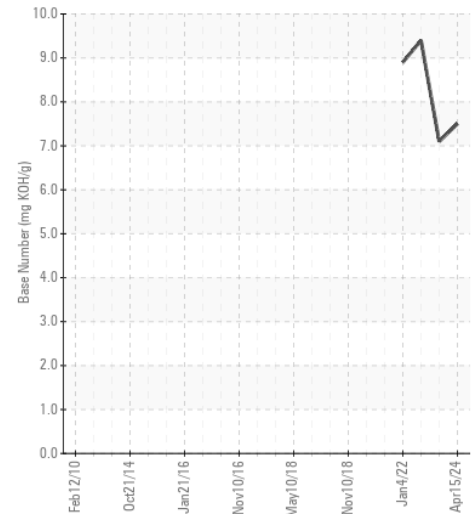
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0913632 **Received** : 16 Apr 2024  
**Lab Number** : 06150970 **Tested** : 17 Apr 2024  
**Unique Number** : 10981048 **Diagnosed** : 17 Apr 2024 - Wes Davis  
**Test Package** : CONST ( Additional Tests: TBN )

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

Contact: SCOTT SULLIVAN  
 ssullivan@sullivaneastern.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)

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