



# OIL ANALYSIS REPORT

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

Machine Id  
**WESTERN STAR 72215**  
Component  
**Diesel Engine**  
Fluid  
**CHEVRON DELO 400 MULTIGRADE 15W40 (13 GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0680979</b>	WC0681113	WC0680944
Sample Date		Client Info		<b>13 Jan 2024</b>	13 Oct 2023	26 Sep 2023
Machine Age	hrs	Client Info		<b>11856</b>	19828	10311
Oil Age	hrs	Client Info		<b>357</b>	892	1000
Filter Age	hrs	Client Info		<b>35</b>	892	1000
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	ABNORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>17</b>	75	47
Chromium	ppm	ASTM D5185m	>6	<b>&lt;1</b>	3	1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	1	0
Titanium	ppm	ASTM D5185m	>2	<b>16</b>	17	16
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>30	<b>3</b>	▲ 27	6
Lead	ppm	ASTM D5185m	>10	<b>&lt;1</b>	▲ 41	5
Copper	ppm	ASTM D5185m	>150	<b>2</b>	3	36
Tin	ppm	ASTM D5185m	>4	<b>1</b>	4	2
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

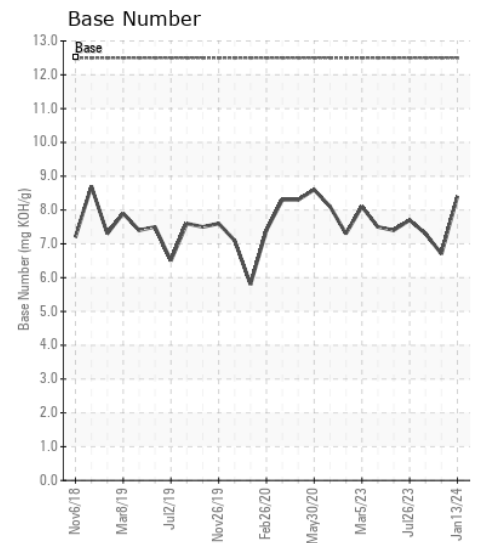
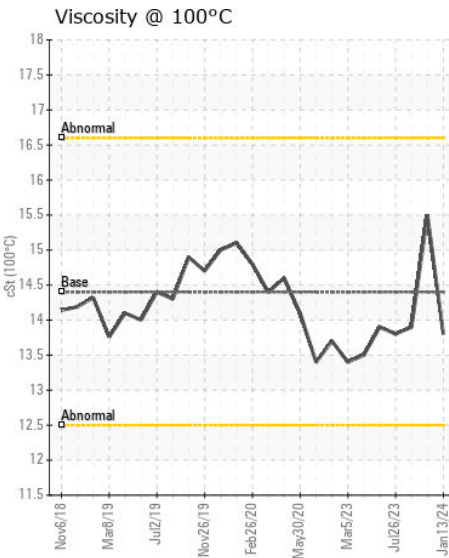
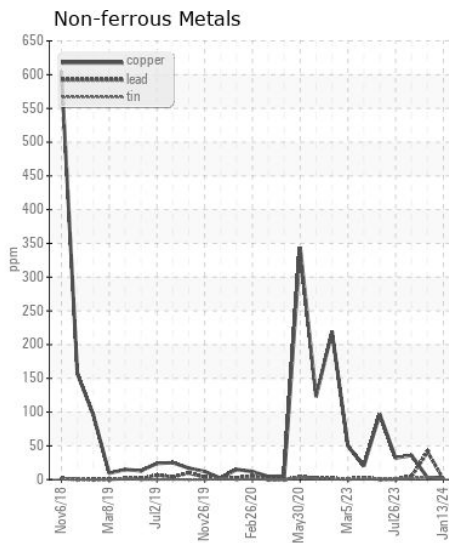
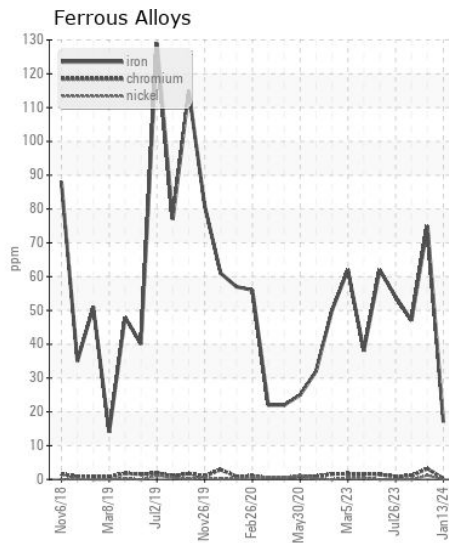
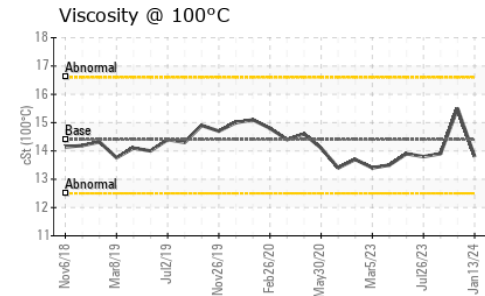
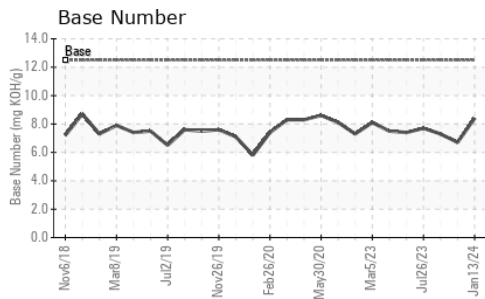
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>9</b>	11	8
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	▲ 111	8
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>0.1</b>	2.2	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.0</b>	17.2	8.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>17.9</b>	31.8	18.8
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		<b>2</b>	▲ 971	2
Boron	ppm	ASTM D5185m	151	<b>99</b>	20	59
Barium	ppm	ASTM D5185m	0.4	<b>0</b>	1	0
Molybdenum	ppm	ASTM D5185m	250	<b>31</b>	206	32
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	2	<1
Magnesium	ppm	ASTM D5185m	0	<b>740</b>	866	786
Calcium	ppm	ASTM D5185m	2046	<b>1494</b>	1812	1665
Phosphorus	ppm	ASTM D5185m	1043	<b>716</b>	854	753
Zinc	ppm	ASTM D5185m	943	<b>825</b>	997	911
Sulfur	ppm	ASTM D5185m	5012	<b>3169</b>	3439	3121
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>12.5</b>	25.9	14.2
Base Number (BN)	mg KOH/g	ASTM D2896	12.5	<b>8.4</b>	6.7	7.3
Visc @ 100°C	cSt	ASTM D445	14.4	<b>13.8</b>	15.5	13.9



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0680979  
**Lab Number** : 06084187  
**Unique Number** : 10871632  
**Test Package** : FLEET  
**Received** : 08 Feb 2024  
**Tested** : 09 Feb 2024  
**Diagnosed** : 09 Feb 2024 - Wes Davis

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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)