



WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
WESTERN STAR 72217
Component
Diesel Engine
Fluid
CHEVRON DELO 400 XLE 15W40 (14 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0681104	WC0681115	WC0681098
Sample Date		Client Info		01 Mar 2024	27 Jan 2024	26 Jul 2023
Machine Age	hrs	Client Info		4223	548	5128
Oil Age	hrs	Client Info		498	548	949
Filter Age	hrs	Client Info		498	548	949
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	ABNORMAL	SEVERE

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	32	69	37
Chromium	ppm	ASTM D5185m	>20	1	3	1
Nickel	ppm	ASTM D5185m	>4	0	0	2
Titanium	ppm	ASTM D5185m		16	17	16
Silver	ppm	ASTM D5185m	>3	0	<1	<1
Aluminum	ppm	ASTM D5185m	>20	2	4	8
Lead	ppm	ASTM D5185m	>40	1	3	3
Copper	ppm	ASTM D5185m	>330	<1	3	2
Tin	ppm	ASTM D5185m	>15	0	1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

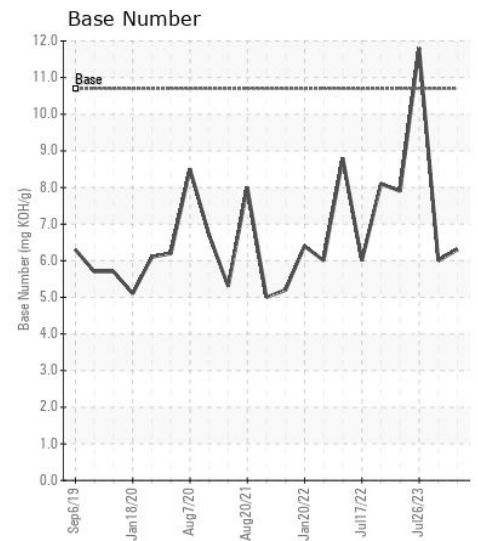
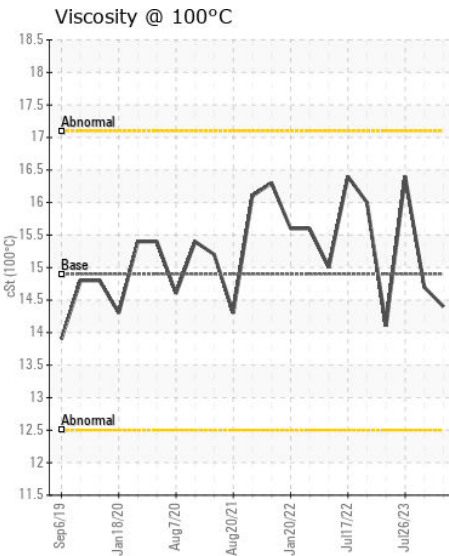
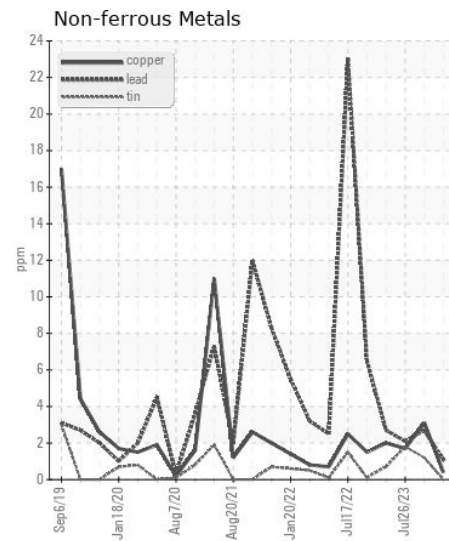
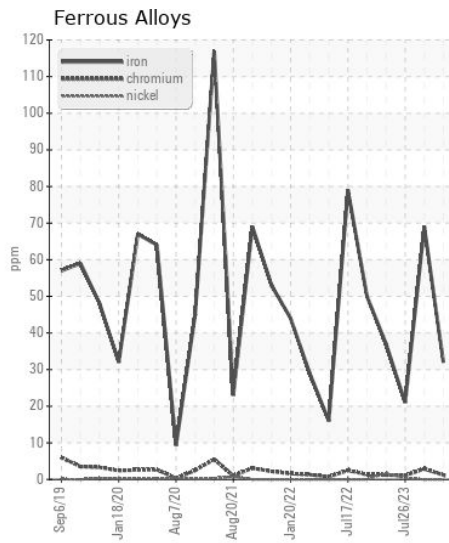
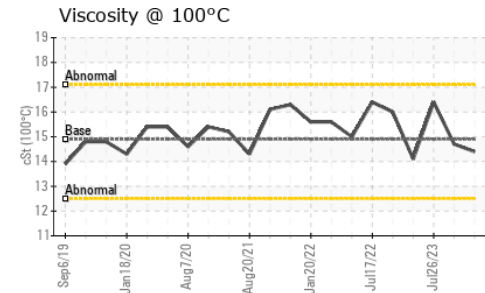
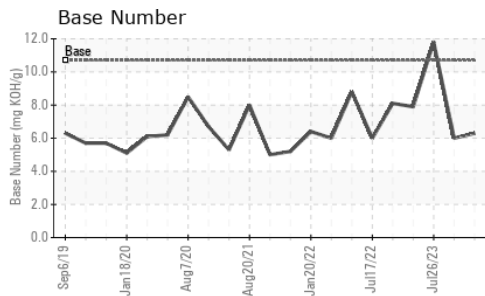
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	7	18	12
Potassium	ppm	ASTM D5185m	>20	3	9	▲ 56
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	▲ 0.10
Soot %	%	*ASTM D7844	>3	1.4	1.9	1.3
Nitration	Abs/cm	*ASTM D7624	>20	11.4	13.3	13.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.6	29.1	22.7
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	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		60	▲ 377	● 1498
Boron	ppm	ASTM D5185m		34	28	● 16
Barium	ppm	ASTM D5185m		0	0	4
Molybdenum	ppm	ASTM D5185m		40	78	● 242
Manganese	ppm	ASTM D5185m		<1	1	<1
Magnesium	ppm	ASTM D5185m		811	786	703
Calcium	ppm	ASTM D5185m		1738	1555	1454
Phosphorus	ppm	ASTM D5185m	760	810	751	694
Zinc	ppm	ASTM D5185m	830	926	855	839
Sulfur	ppm	ASTM D5185m	2770	3747	2946	3133
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.1	22.3	15.2
Base Number (BN)	mg KOH/g	ASTM D2896	10.7	6.3	6.0	11.8
Visc @ 100°C	cSt	ASTM D445	14.9	14.4	14.7	16.4



Certificate L2367

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

Sample No. : WC0681104

Lab Number : 06123032

Unique Number : 10937183

Test Package : FLEET

Received : 19 Mar 2024

Tested : 20 Mar 2024

Diagnosed : 22 Mar 2024 - Sean Felton

NANA LYNDEN LOGISTICS

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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)