



# WEAR CHECK

## OIL ANALYSIS REPORT

WEAR	<b>SEVERE</b>
CONTAMINATION	<b>SEVERE</b>
FLUID CONDITION	<b>ABNORMAL</b>

Machine Id  
**3189**  
Component  
**Diesel Engine**  
Fluid  
**CHEVRON DELO 400 XLE 10W30 (--- GAL)**

### RECOMMENDATION

We advise that you check for the source of the coolant leak. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Please note that this is a corrected copy.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0833154</b>	WC0833176	WC0702526
Sample Date		Client Info		<b>22 Nov 2023</b>	07 Jul 2023	27 Mar 2023
Machine Age	mls	Client Info		<b>198586</b>	159751	130682
Oil Age	mls	Client Info		<b>38845</b>	42312	13635
Filter Age	mls	Client Info		<b>38845</b>	42312	13635
Oil Changed		Client Info		<b>Changed</b>	Changed	Not Changd
Filter Changed		Client Info		<b>Changed</b>	Changed	Not Changd
Sample Status				<b>SEVERE</b>	NORMAL	NORMAL

### WEAR

Piston wear is indicated.

Iron	ppm	ASTM D5185m	>100	<b>94</b>	36	12
Chromium	ppm	ASTM D5185m	>20	<b>1</b>	1	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m	>20	<b>82</b>	9	6
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m	>330	<b>6</b>	5	2
Tin	ppm	ASTM D5185m	>15	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

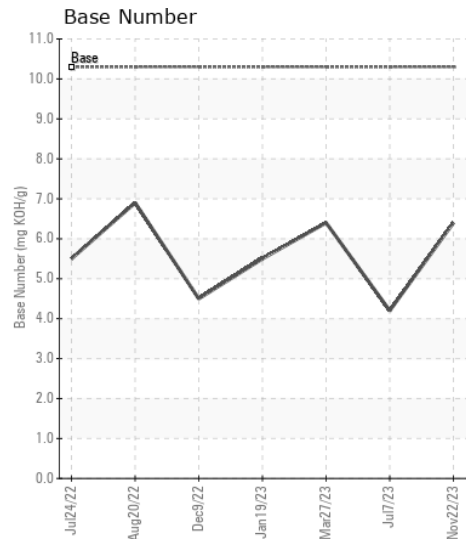
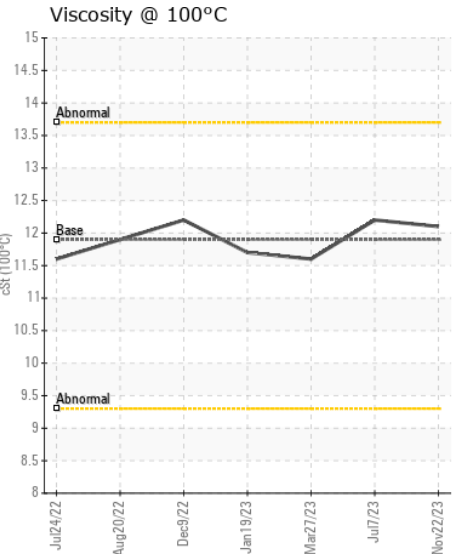
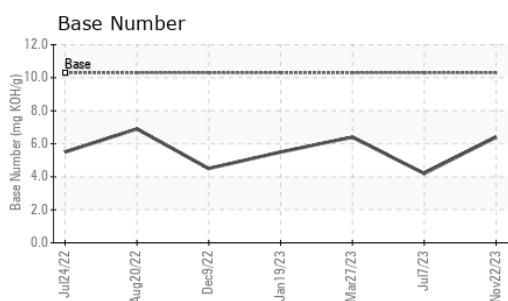
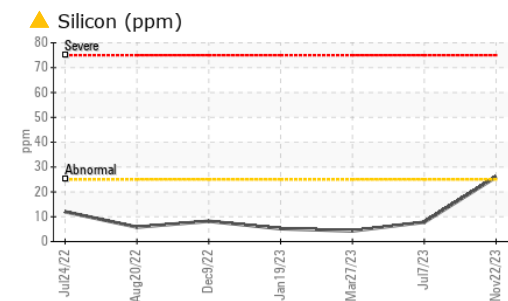
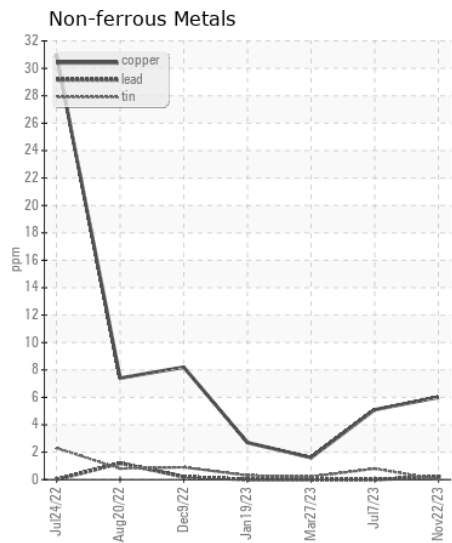
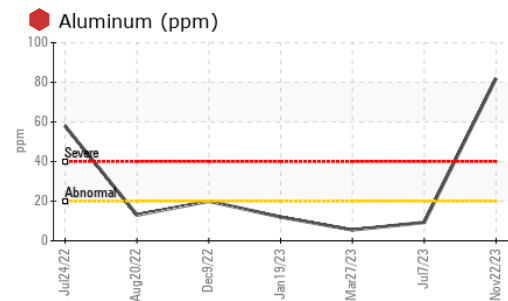
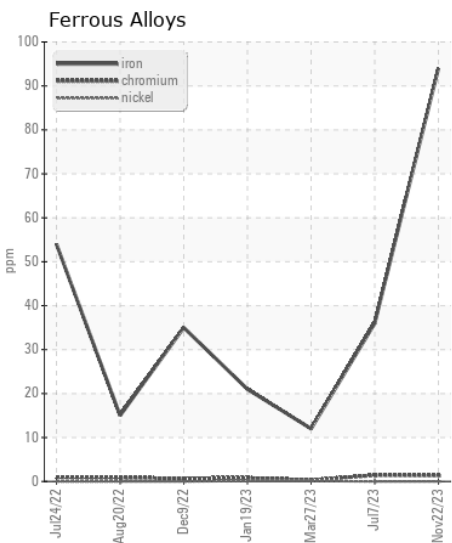
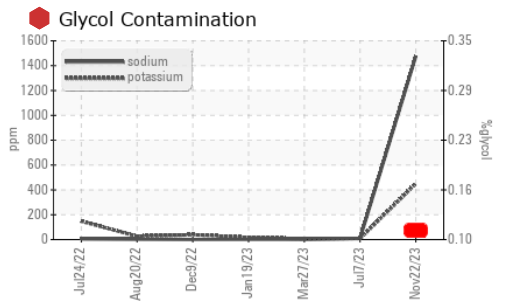
Sodium and/or potassium levels are high. Test for glycol is positive. There is a high concentration of glycol present in the oil. Elemental level of silicon (Si) above normal.

Silicon	ppm	ASTM D5185m	>25	<b>26</b>	8	4
Potassium	ppm	ASTM D5185m	>20	<b>450</b>	9	6
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol	%	*ASTM D2982		<b>0.12</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>1.2</b>	0.9	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>15.5</b>	11.3	9.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>29.1</b>	27.1	20.7
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 oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m		<b>1476</b>	10	<1
Boron	ppm	ASTM D5185m		<b>10</b>	12	33
Barium	ppm	ASTM D5185m		<b>0</b>	0	2
Molybdenum	ppm	ASTM D5185m		<b>258</b>	2	2
Manganese	ppm	ASTM D5185m		<b>1</b>	1	<1
Magnesium	ppm	ASTM D5185m		<b>754</b>	810	681
Calcium	ppm	ASTM D5185m	2900	<b>1349</b>	1473	1269
Phosphorus	ppm	ASTM D5185m	1100	<b>694</b>	746	693
Zinc	ppm	ASTM D5185m	1200	<b>879</b>	891	799
Sulfur	ppm	ASTM D5185m	4000	<b>2909</b>	3356	2882
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>23.2</b>	22.9	15.1
Base Number (BN)	mg KOH/g	ASTM D2896	10.3	<b>6.4</b>	4.2	6.4
Visc @ 100°C	cSt	ASTM D445	11.9	<b>12.1</b>	12.2	11.6



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0833154 **Received** : 11 Jan 2024  
**Lab Number** : 06057679 **Diagnosed** : 12 Jan 2024  
**Unique Number** : 10823628 **Diagnostician** : Doug Bogart  
**Test Package** : FLEET ( Additional Tests: Glycol )  
 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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