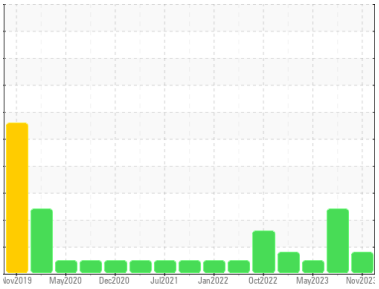
OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Machine Id
9392
Component
Diesel Engine
Fluid
CHEVRON DELO 400 SAE 10W30 (--- GAL)

DIAGNOSIS

Recommendation
We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Wear
Aluminum ppm levels are abnormal. Piston wear is indicated.

Contamination
Test for glycol is negative. There is no indication of any contamination in the oil.

Fluid Condition
The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0853194**	WC0796447	WC0796465
Sample Date		Client Info		**01 Nov 2023**	20 Jul 2023	24 May 2023
Machine Age	kms	Client Info		**145489**	135539	135004
Oil Age	kms	Client Info		**0**	0	5393
Oil Changed		Client Info		**Not Changd**	Changed	Changed
Sample Status				**ABNORMAL**	ABNORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	**<1.0**	<1.0	<1.0
Water		WC Method	>0.2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>130	**27**	61	15
Chromium	ppm	ASTM D5185(m)	>10	**2**	1	1
Nickel	ppm	ASTM D5185(m)	>4	**<1**	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	**0**	<1	<1
Silver	ppm	ASTM D5185(m)	>2	**0**	<1	0
Aluminum	ppm	ASTM D5185(m)	>20	▲ **22**	10	17
Lead	ppm	ASTM D5185(m)	>20	**<1**	4	<1
Copper	ppm	ASTM D5185(m)	>125	**3**	3	1
Tin	ppm	ASTM D5185(m)	>4	**<1**	<1	<1
Antimony	ppm	ASTM D5185(m)		**0**	0	0
Vanadium	ppm	ASTM D5185(m)		**0**	0	0
Beryllium	ppm	ASTM D5185(m)		**0**	0	0
Cadmium	ppm	ASTM D5185(m)		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		**37**	31	54
Barium	ppm	ASTM D5185(m)		**0**	0	0
Molybdenum	ppm	ASTM D5185(m)		**3**	59	7
Manganese	ppm	ASTM D5185(m)		**<1**	<1	<1
Magnesium	ppm	ASTM D5185(m)		**712**	723	732
Calcium	ppm	ASTM D5185(m)		**1348**	1374	1472
Phosphorus	ppm	ASTM D5185(m)	1260	**676**	708	793
Zinc	ppm	ASTM D5185(m)	1400	**754**	777	797
Sulfur	ppm	ASTM D5185(m)		**2666**	2667	2732
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**5**	6	5
Sodium	ppm	ASTM D5185(m)		**10**	▲ 314	6
Potassium	ppm	ASTM D5185(m)	>20	**20**	▲ 221	11
Glycol	%	ASTM D7922*		**0.0**	0.0	0.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>6	**0.5**	0.5	0.1
Nitration	Abs/cm	ASTM D7624*	>20	**11.3**	12.6	9.6
Sulfation	Abs/.1mm	ASTM D7415*	>30	**22.3**	24.9	20.5

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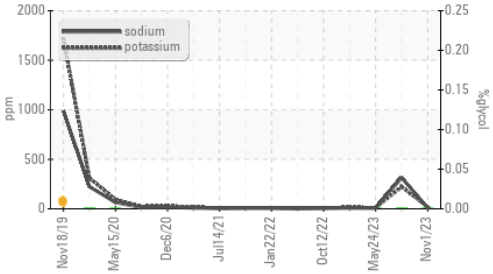
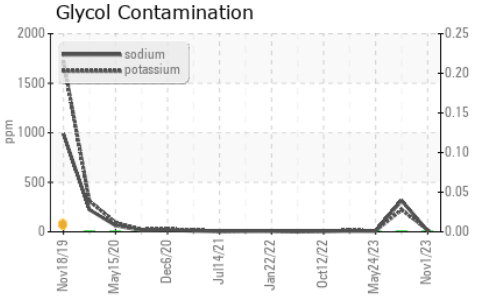
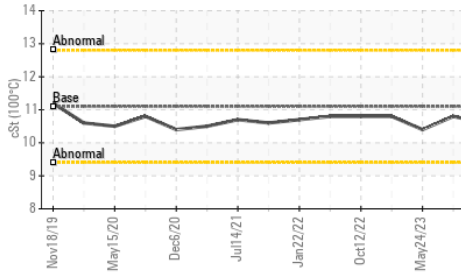
Glycol Contamination



Glycol Contamination



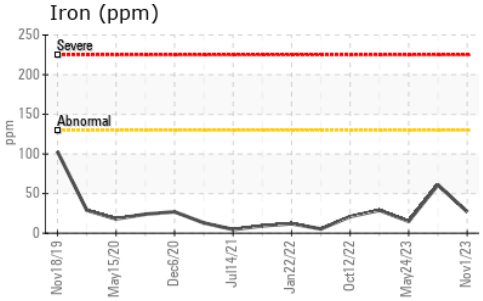
Viscosity @ 100°C



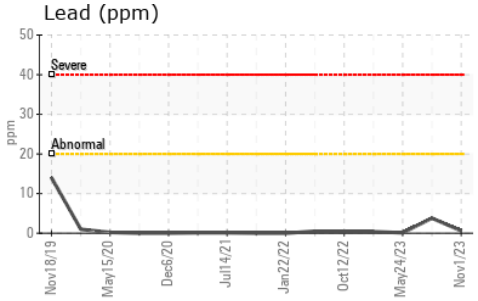
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**17.2**	20.0	15.4
VISUAL		**method**	**limit/base**	**current**	**history1**	**history2**
Emulsified Water	scalar	Visual*	>0.2	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG
FLUID PROPERTIES		**method**	**limit/base**	**current**	**history1**	**history2**
Visc @ 100°C	cSt	ASTM D7279(m)	11.1	**10.6**	10.8	10.4

GRAPHS

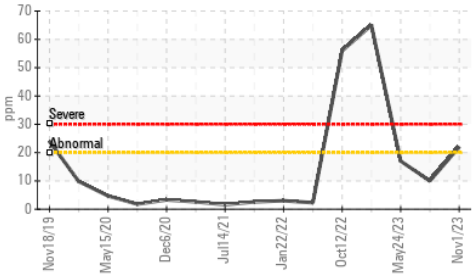
Iron (ppm)



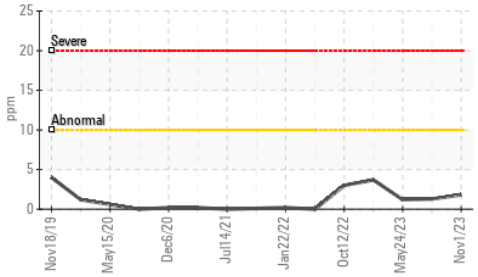
Lead (ppm)



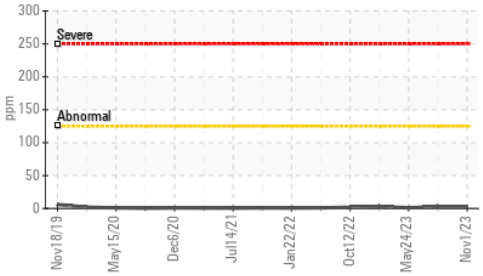
Aluminum (ppm)



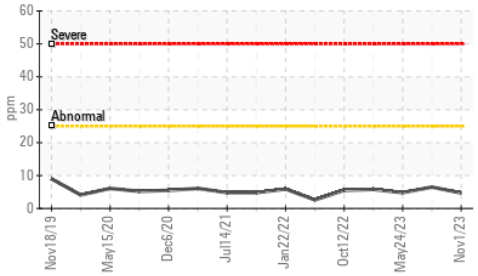
Chromium (ppm)



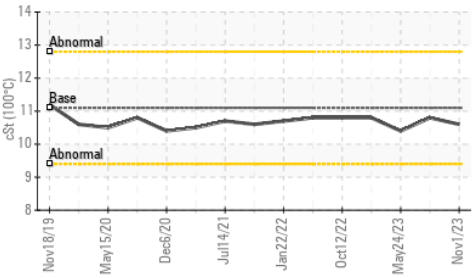
Copper (ppm)



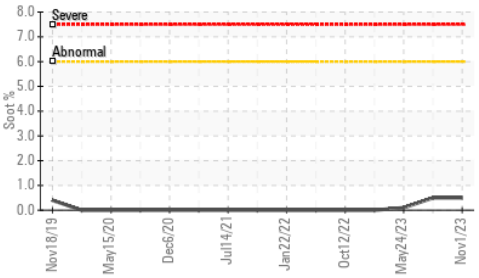
Silicon (ppm)



Viscosity @ 100°C



Soot %



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0853194 **Recieved** : 19 Jan 2024
Lab Number : 02609890 **Diagnosed** : 19 Jan 2024
Unique Number : 5710976 **Diagnostician** : Kevin Marson
Test Package : MOB 1 (Additional Tests: Glycol)

To discuss this sample report, contact Customer Service at 1-800-268-2131.
Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
Validity of results and interpretation are based on the sample and information as supplied.

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