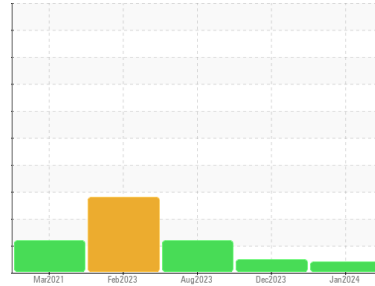




OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Area
[6659]
 Machine Id
T38

Component
Diesel Engine

Fluid
CHEVRON DELO 400 SAE 10W30 (--- GAL)

DIAGNOSIS

▲ Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

▲ Fluid Condition

Viscosity of sample indicates oil is within SAE 40 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

method	limit/base	current	history1	history2	
Sample Number	Client Info	WC0846149	WC0846147	WC0790232	
Sample Date	Client Info	03 Jan 2024	18 Dec 2023	31 Aug 2023	
Machine Age	kms	Client Info	317935	473977	462963
Oil Age	kms	Client Info	0	0	0
Oil Changed	Client Info	Not Chngd	Not Chngd	Not Chngd	
Sample Status		ABNORMAL	NORMAL	ABNORMAL	

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >3.0	<1.0	<1.0	▲ 1.2
Water	WC Method >0.2	NEG	NEG	NEG
Glycol	WC Method	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185(m) >90	29	12	8
Chromium	ppm ASTM D5185(m) >20	1	<1	<1
Nickel	ppm ASTM D5185(m) >2	<1	<1	0
Titanium	ppm ASTM D5185(m) >2	0	0	0
Silver	ppm ASTM D5185(m) >2	<1	0	<1
Aluminum	ppm ASTM D5185(m) >20	6	5	2
Lead	ppm ASTM D5185(m) >40	2	<1	0
Copper	ppm ASTM D5185(m) >330	2	<1	<1
Tin	ppm ASTM D5185(m) >15	0	0	0
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)	174	247	24
Barium	ppm ASTM D5185(m)	0	0	0
Molybdenum	ppm ASTM D5185(m)	121	115	62
Manganese	ppm ASTM D5185(m)	0	0	<1
Magnesium	ppm ASTM D5185(m)	634	656	924
Calcium	ppm ASTM D5185(m)	1622	1505	1043
Phosphorus	ppm ASTM D5185(m) 1260	684	716	995
Zinc	ppm ASTM D5185(m) 1400	807	813	1116
Sulfur	ppm ASTM D5185(m)	2251	2201	2494
Lithium	ppm ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >25	9	5	3
Sodium	ppm ASTM D5185(m)	6	1	1
Potassium	ppm ASTM D5185(m) >20	3	4	1

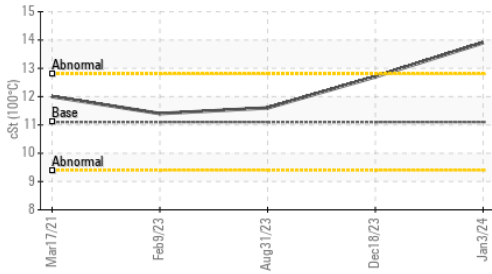
INFRA-RED

method	limit/base	current	history1	history2
Soot %	% ASTM D7844* >6	0.9	0.3	0.1
Nitration	Abs/cm ASTM D7624* >20	12.3	7.5	6.8
Sulfation	Abs/.1mm ASTM D7415* >30	27.5	22.9	20.3



OIL ANALYSIS REPORT

▲ Viscosity @ 100°C



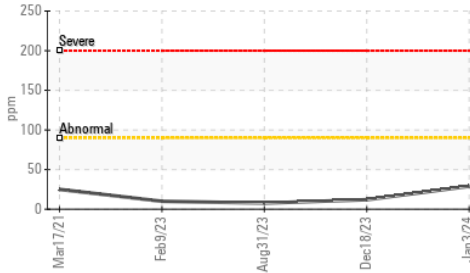
FLUID DEGRADATION	method	limit/base	current	history1	history2
Oxidation	Abs./1mm ASTM D7414*	>25	25.0	16.2	14.5

VISUAL	method	limit/base	current	history1	history2
Emulsified Water	scalar Visual*	>0.2	NEG	NEG	NEG
Free Water	scalar Visual*		NEG	NEG	NEG

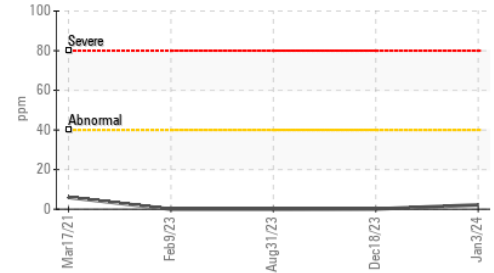
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt ASTM D7279(m)	11.1	▲ 13.9	12.7	▲ 11.6

GRAPHS

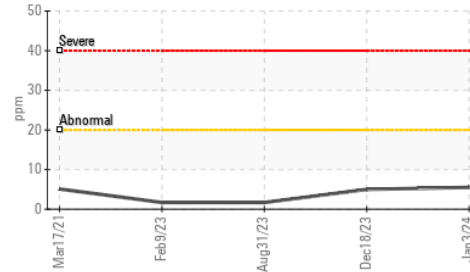
Iron (ppm)



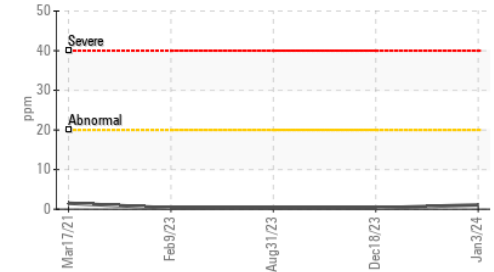
Lead (ppm)



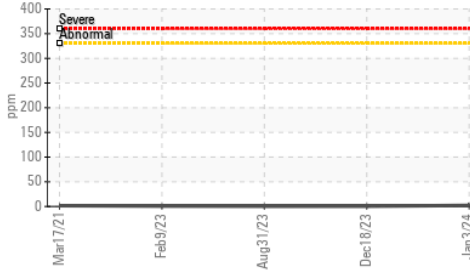
Aluminum (ppm)



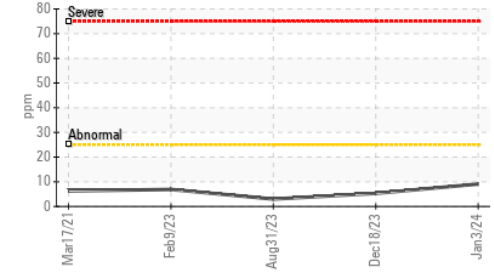
Chromium (ppm)



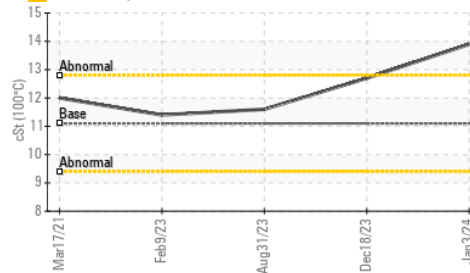
Copper (ppm)



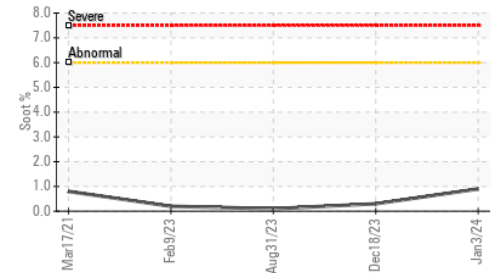
Silicon (ppm)



▲ Viscosity @ 100°C



Soot %



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0846149 **Received** : 05 Jan 2024
Lab Number : **02606734** **Diagnosed** : 08 Jan 2024
Unique Number : 5707820 **Diagnostician** : Kevin Marson
Test Package : MOB 1

CANADA CLEAN FUELS

4425 CHESSWOOD DR
TORONTO, ON
CA M3J 2C2
Contact: Aldo Bellisario
aldo@canadacleanfuels.com
T: (416)521-9533
F: (416)521-9368

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.