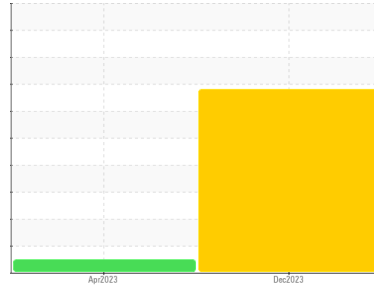




OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Machine Id
1316M

Component
Diesel Engine

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

DIAGNOSIS

Recommendation

The oil change at the time of sampling has been noted. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition.

Wear

Aluminum ppm levels are severe. Iron ppm levels are abnormal. Cylinder, crank, or cam shaft wear is indicated. Piston wear is indicated.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

Additive levels indicate the addition of a different brand, or type of oil. 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		WC0796588	WC0796653	---
Sample Date	Client Info		01 Dec 2023	10 Apr 2023	---
Machine Age	kms	Client Info	297404	22010	---
Oil Age	kms	Client Info	0	0	---
Oil Changed	Client Info		Changed	Changed	---
Sample Status			SEVERE	NORMAL	---

CONTAMINATION

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

WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184*		3	---	---
Iron	ppm	ASTM D5185(m) >90	▲ 124	12	---
Chromium	ppm	ASTM D5185(m) >20	6	0	---
Nickel	ppm	ASTM D5185(m) >2	<1	<1	---
Titanium	ppm	ASTM D5185(m) >2	0	<1	---
Silver	ppm	ASTM D5185(m) >2	<1	0	---
Aluminum	ppm	ASTM D5185(m) >20	◆ 88	1	---
Lead	ppm	ASTM D5185(m) >40	<1	0	---
Copper	ppm	ASTM D5185(m) >330	5	<1	---
Tin	ppm	ASTM D5185(m) >15	0	0	---
Antimony	ppm	ASTM D5185(m)	0	<1	---
Vanadium	ppm	ASTM D5185(m)	0	0	---
Beryllium	ppm	ASTM D5185(m)	0	0	---
Cadmium	ppm	ASTM D5185(m)	0	0	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	37	44	---
Barium	ppm	ASTM D5185(m)	<1	0	---
Molybdenum	ppm	ASTM D5185(m)	3	4	---
Manganese	ppm	ASTM D5185(m)	1	<1	---
Magnesium	ppm	ASTM D5185(m)	687	698	---
Calcium	ppm	ASTM D5185(m)	1245	1364	---
Phosphorus	ppm	ASTM D5185(m) 1260	631	723	---
Zinc	ppm	ASTM D5185(m) 1400	737	754	---
Sulfur	ppm	ASTM D5185(m)	2302	2557	---
Lithium	ppm	ASTM D5185(m)	<1	<1	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >25	10	4	---
Sodium	ppm	ASTM D5185(m)	8	3	---
Potassium	ppm	ASTM D5185(m) >20	8	3	---
Glycol	%	ASTM D7922*	0.0	NEG	---

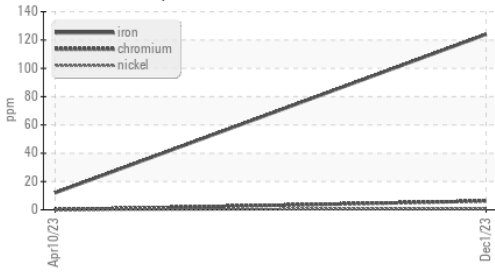
INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844* >6	0.7	0.1	---
Nitration	Abs/cm	ASTM D7624* >20	12.8	11.1	---
Sulfation	Abs./1mm	ASTM D7415* >30	25.4	22.1	---



OIL ANALYSIS REPORT

▲ Ferrous Alloys



FLUID DEGRADATION

method	limit/base	current	history1	history2
Abs/.1mm	ASTM D7414*	>25	22.9	18.9

VISUAL

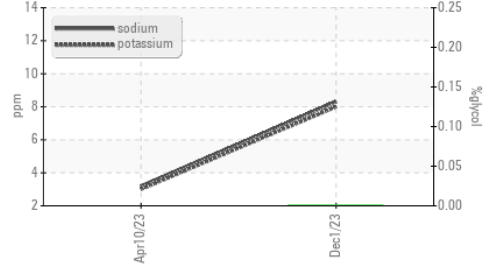
method	limit/base	current	history1	history2
scalar	Visual*	>0.2	NEG	NEG
scalar	Visual*	NEG	NEG	---

FLUID PROPERTIES

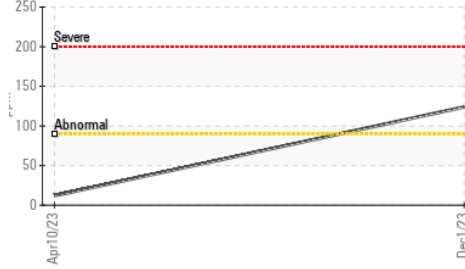
method	limit/base	current	history1	history2
cSt	ASTM D7279(m)	11.1	10.9	10.7

GRAPHS

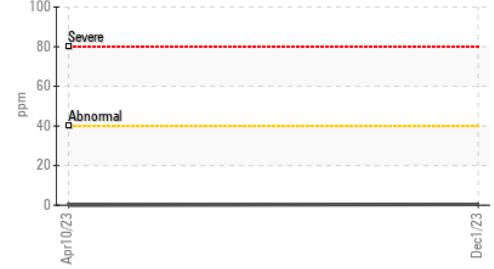
▲ Glycol Contamination



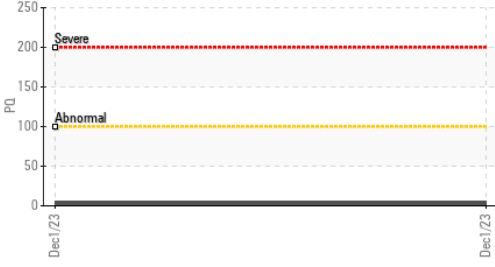
▲ Iron (ppm)



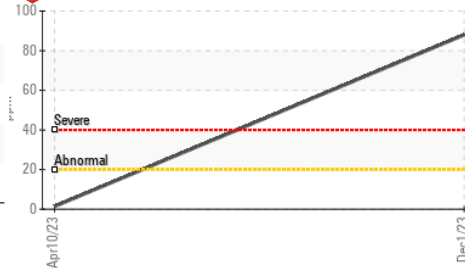
Lead (ppm)



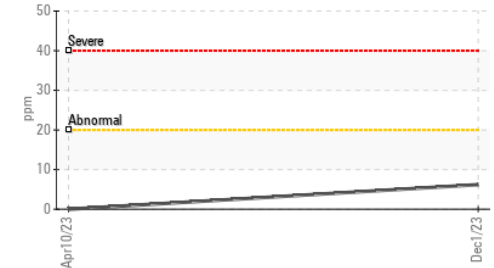
PQ



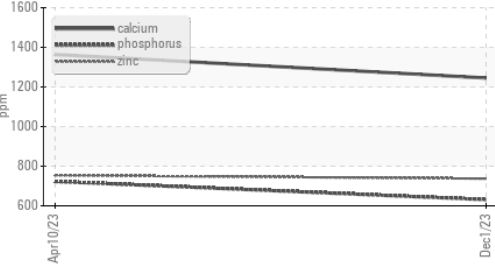
● Aluminum (ppm)



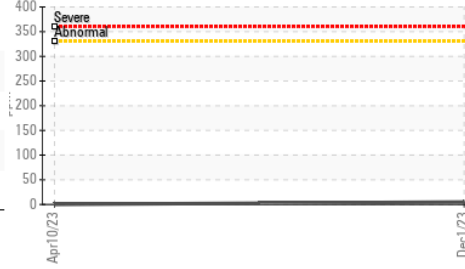
Chromium (ppm)



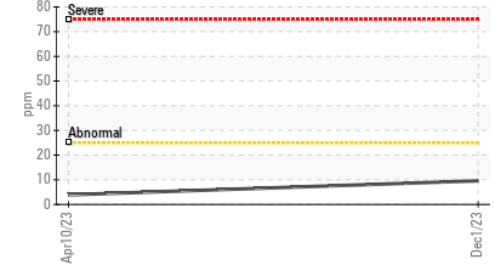
Additives



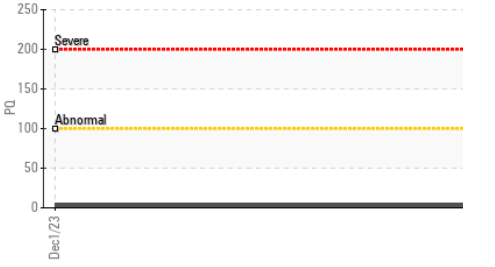
● Copper (ppm)



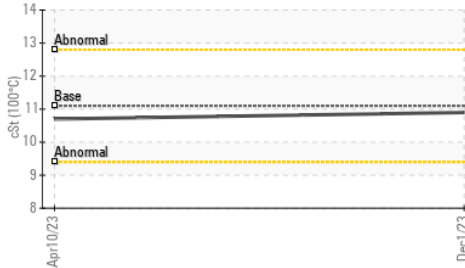
Silicon (ppm)



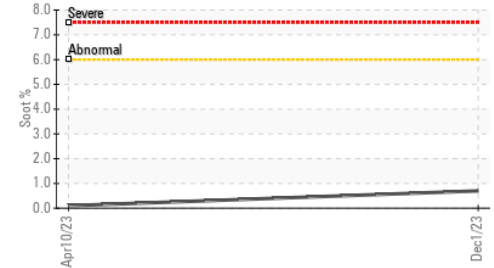
PQ



Viscosity @ 100°C



Soot %



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0796588 **Received** : 05 Dec 2023
Lab Number : 02600864 **Diagnosed** : 06 Dec 2023
Unique Number : 5693949 **Diagnostician** : Kevin Marson
Test Package : MOB 1 (Additional Tests: Glycol, PQ)

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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