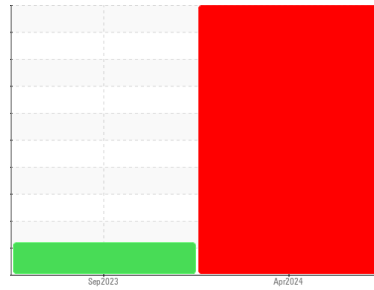


PROBLEM SUMMARY

Sample Rating Trend



GLYCOL

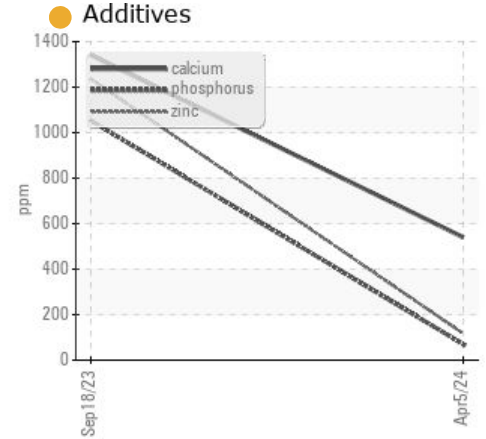
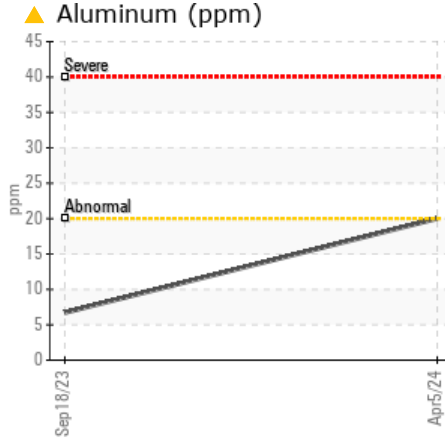
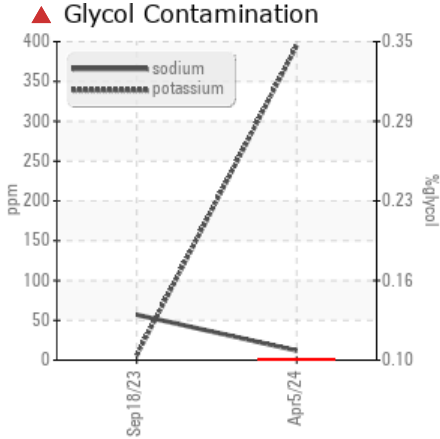


Machine Id
1019 BF 229

Component
Diesel Engine

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

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We advise that you check for the source of the coolant leak. We recommend that you drain the oil from the component if this has not already been done. We advise that you flush the component thoroughly before re-filling with oil. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	ABNORMAL	---
Aluminum	ppm	ASTM D5185m	>20	▲ 20	7	---
Potassium	ppm	ASTM D5185m	>20	▲ 395	6	---
Glycol	%	*ASTM D2982		▲ 0.10	NEG	---

Customer Id: DELSHR
Sample No.: PCA0101411
Lab Number: 06189475
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
Wes Davis +1 905-569-8600 x223
wesd@wearcheck.ca

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Fluid	---	---	?	We recommend that you drain the oil from the component if this has not already been done.
Flush System	---	---	?	We advise that you flush the component thoroughly before re-filling with oil.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Fluid Source	---	---	?	Confirm the source of the lubricant being utilized for top-up/fill.
Check Glycol Access	---	---	?	We advise that you check for the source of the coolant leak.

HISTORICAL DIAGNOSIS

WEAR



18 Sep 2023 Diag: Doug Bogart

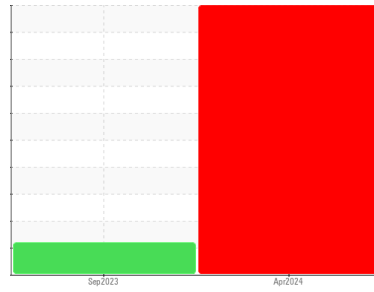
Resample at the next service interval to monitor. Please note that this is a corrected copy for laboratory data and diagnostic comment updates for BN.Cylinder, crank, or cam shaft wear is indicated. There is no indication of any contamination in the oil. The oil viscosity is higher than normal. Confirm oil type. The BN result indicates that there is suitable alkalinity remaining in the oil.

view report



OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id
1019 BF 229

Component
Diesel Engine

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

DIAGNOSIS

▲ Recommendation

We advise that you check for the source of the coolant leak. We recommend that you drain the oil from the component if this has not already been done. We advise that you flush the component thoroughly before re-filling with oil. 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 abnormal. Piston wear is indicated.

▲ Contamination

Test for glycol is positive. There is a high concentration of glycol present in the oil.

● Fluid Condition

Additive levels indicate the addition of a different brand, or type of oil. The BN result indicates that there is suitable alkalinity remaining in the 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	PCA0101411	PCA0101392	---
Sample Date	Client Info	05 Apr 2024	18 Sep 2023	---
Machine Age	mls	297345	281651	---
Oil Age	mls	0	0	---
Oil Changed	Client Info	N/A	N/A	---
Sample Status		SEVERE	ABNORMAL	---

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
Iron	ppm ASTM D5185m >90	47	▲ 100	---
Chromium	ppm ASTM D5185m >20	2	4	---
Nickel	ppm ASTM D5185m >2	1	2	---
Titanium	ppm ASTM D5185m >2	<1	<1	---
Silver	ppm ASTM D5185m >2	<1	0	---
Aluminum	ppm ASTM D5185m >20	▲ 20	7	---
Lead	ppm ASTM D5185m >40	<1	0	---
Copper	ppm ASTM D5185m >330	2	4	---
Tin	ppm ASTM D5185m >15	<1	0	---
Vanadium	ppm ASTM D5185m	<1	0	---
Cadmium	ppm ASTM D5185m	0	0	---

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m	● 572	89	---
Barium	ppm ASTM D5185m	1	0	---
Molybdenum	ppm ASTM D5185m	● 1100	91	---
Manganese	ppm ASTM D5185m	2	2	---
Magnesium	ppm ASTM D5185m	● 128	523	---
Calcium	ppm ASTM D5185m	● 540	1341	---
Phosphorus	ppm ASTM D5185m 1260	● 70	1053	---
Zinc	ppm ASTM D5185m 1400	● 117	1236	---
Sulfur	ppm ASTM D5185m	2396	3054	---

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	20	18	---
Sodium	ppm ASTM D5185m	12	57	---
Potassium	ppm ASTM D5185m >20	▲ 395	6	---
Glycol	% *ASTM D2982	▲ 0.10	NEG	---

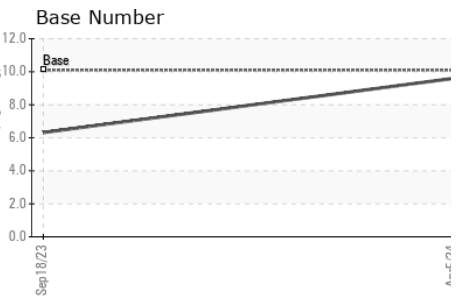
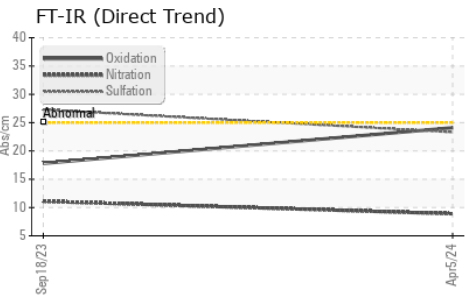
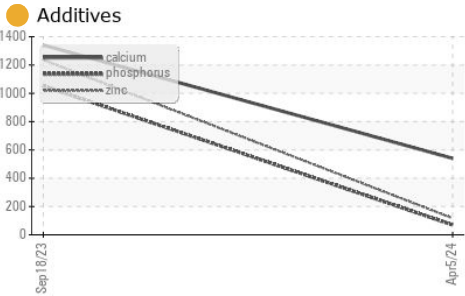
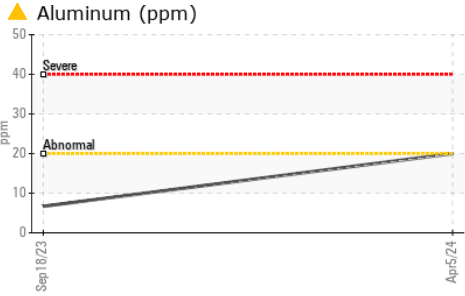
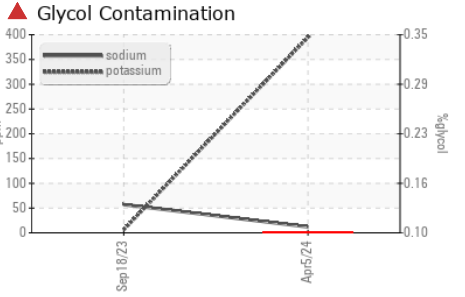
INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >6	1.1	2.3	---
Nitration	Abs/cm *ASTM D7624 >20	8.9	11.1	---
Sulfation	Abs/.1mm *ASTM D7415 >30	23.3	27.3	---

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	24.1	17.8	---
Base Number (BN)	mg KOH/g ASTM D2896 10.1	9.59	6.32	---

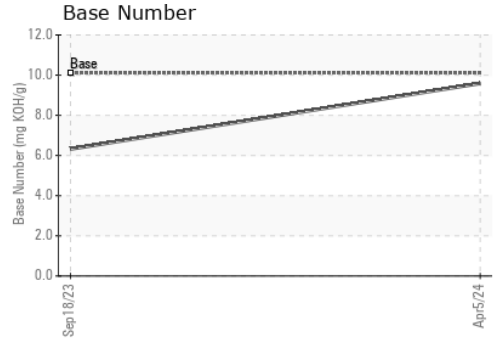
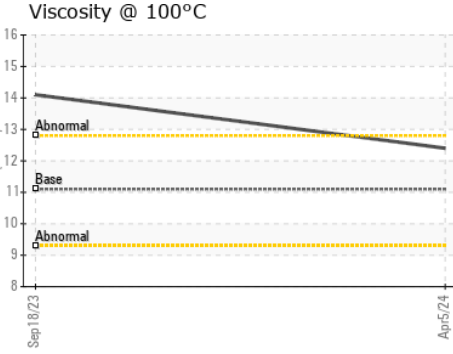
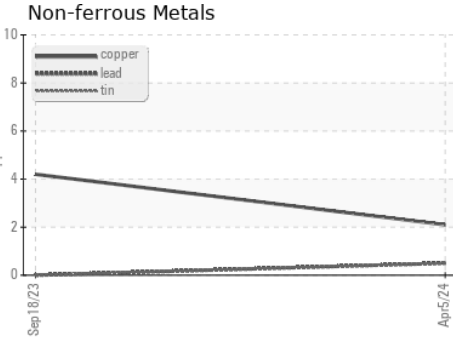
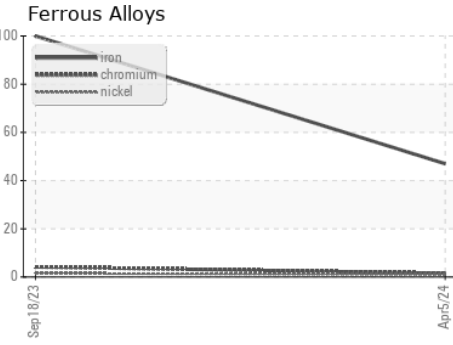
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	LIGHT	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	---
Free Water	scalar	*Visual		NEG	NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	11.1	12.4	14.1	---

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0101411 **Received** : 23 May 2024
Lab Number : **06189475** **Tested** : 29 May 2024
Unique Number : 11046227 **Diagnosed** : 29 May 2024 - Wes Davis
Test Package : IND 2 (Additional Tests: Glycol)

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 1000 WELLS ISLAND RD
 SHREVEPORT, LA
 US 71107
 Contact: BRAD GORDON
 bgordon@deltafuel.com
 T: (318)780-3921
 F:

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)