



OIL ANALYSIS REPORT

Sample Rating Trend

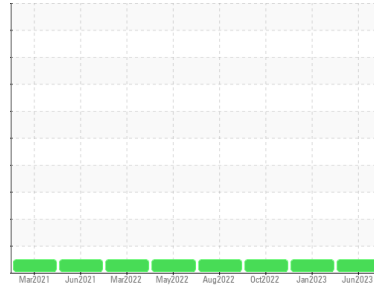
NORMAL



Machine Id
527023-735

Component
Diesel Engine

Fluid
CHEVRON DELO 400 XLE 15W40 (--- GAL)



DIAGNOSIS

Recommendation

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

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

method	limit/base	current	history 1	history 2
Sample Number	Client Info	GFL0073478	GFL0064736	GFL0060797
Sample Date	Client Info	26 Jun 2023	13 Jan 2023	31 Oct 2022
Machine Age	hrs	16246	15001	14415
Oil Age	hrs	1245	587	699
Oil Changed	Client Info	Changed	Changed	Changed
Sample Status		NORMAL	NORMAL	NORMAL

CONTAMINATION

method	limit/base	current	history 1	history 2
Fuel	WC Method >5	<1.0	<1.0	<1.0
Glycol	WC Method	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history 1	history 2
Iron	ppm ASTM D5185m >100	29	26	31
Chromium	ppm ASTM D5185m >20	1	<1	<1
Nickel	ppm ASTM D5185m >4	<1	<1	0
Titanium	ppm ASTM D5185m	16	12	5
Silver	ppm ASTM D5185m >3	<1	0	<1
Aluminum	ppm ASTM D5185m >20	4	2	8
Lead	ppm ASTM D5185m >40	12	11	17
Copper	ppm ASTM D5185m >330	1	<1	2
Tin	ppm ASTM D5185m >15	<1	0	<1
Vanadium	ppm ASTM D5185m	<1	<1	0
Cadmium	ppm ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history 1	history 2
Boron	ppm ASTM D5185m	41	52	63
Barium	ppm ASTM D5185m	0	0	0
Molybdenum	ppm ASTM D5185m	37	60	102
Manganese	ppm ASTM D5185m	<1	<1	<1
Magnesium	ppm ASTM D5185m	892	678	527
Calcium	ppm ASTM D5185m	1825	1698	1768
Phosphorus	ppm ASTM D5185m 760	812	745	743
Zinc	ppm ASTM D5185m 830	988	924	935
Sulfur	ppm ASTM D5185m 2770	4071	3141	3205

CONTAMINANTS

method	limit/base	current	history 1	history 2
Silicon	ppm ASTM D5185m >25	20	6	6
Sodium	ppm ASTM D5185m	3	5	3
Potassium	ppm ASTM D5185m >20	5	4	4

INFRA-RED

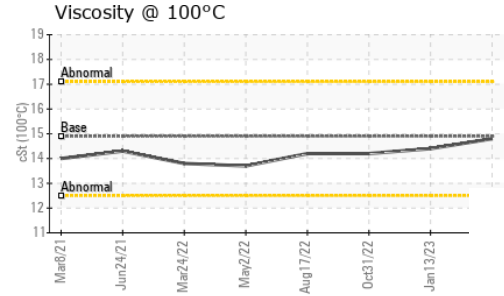
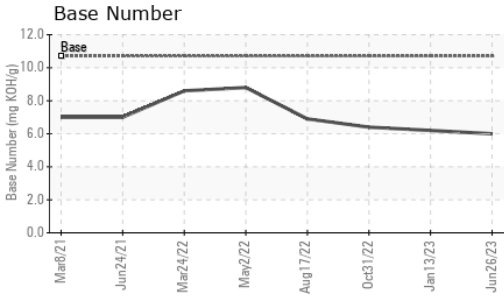
method	limit/base	current	history 1	history 2
Soot %	% *ASTM D7844 >3	0.4	0.4	0.4
Nitration	Abs/cm *ASTM D7624 >20	12.4	11.9	13.0
Sulfation	Abs/.1mm *ASTM D7415 >30	26.8	25.2	28.0

FLUID DEGRADATION

method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm *ASTM D7414 >25	23.0	20.5	22.8
Base Number (BN)	mg KOH/g ASTM D2896 10.7	6.0	6.2	6.4



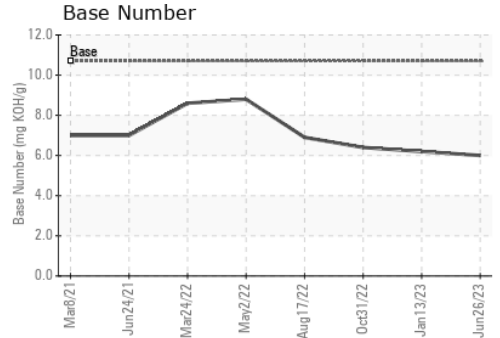
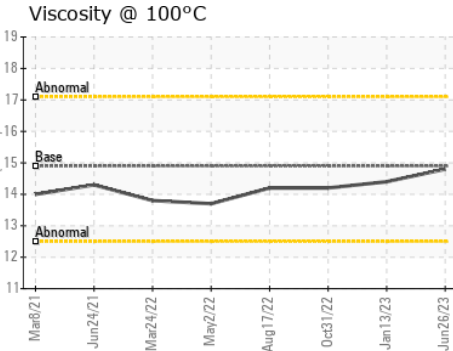
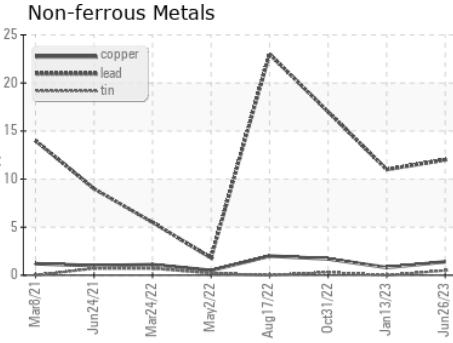
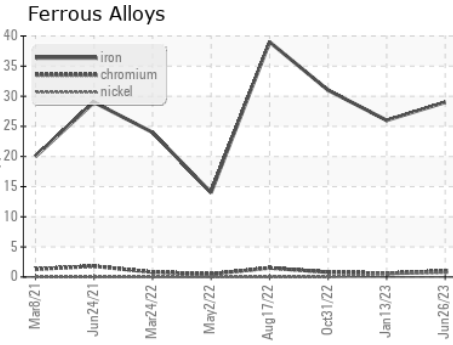
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	NONE	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	history 1	history 2	
Visc @ 100°C	cSt	ASTM D445	14.9	14.8	14.4	14.2

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0073478
Lab Number : **05886451**
Unique Number : 10536934
Test Package : FLEET

GFL Environmental - 629 - Northern A1
 3947 US 131 N
 Kalkaska, MI
 US 49646-8428
Contact: MITCH HERSHBERGER

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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F: