



OIL ANALYSIS REPORT

Sample Rating Trend

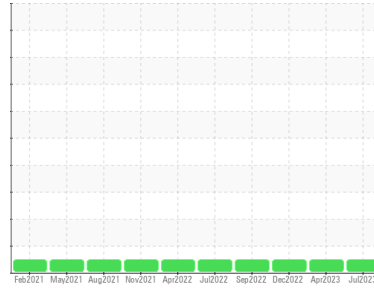
NORMAL



Machine Id
527027-739

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	history1	history2
Sample Number	Client Info		GFL0084527	GFL0073505	GFL0060778
Sample Date	Client Info		10 Jul 2023	21 Apr 2023	13 Dec 2022
Machine Age	hrs	Client Info	18727	18127	17494
Oil Age	hrs	Client Info	600	633	600
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	<1.0
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	20	12	18
Chromium	ppm	ASTM D5185m >20	2	<1	<1
Nickel	ppm	ASTM D5185m >4	0	0	0
Titanium	ppm	ASTM D5185m	14	14	11
Silver	ppm	ASTM D5185m >3	0	0	<1
Aluminum	ppm	ASTM D5185m >20	3	2	3
Lead	ppm	ASTM D5185m >40	1	0	8
Copper	ppm	ASTM D5185m >330	2	2	1
Tin	ppm	ASTM D5185m >15	<1	0	<1
Vanadium	ppm	ASTM D5185m	0	<1	<1
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	67	118	74
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	46	43	76
Manganese	ppm	ASTM D5185m	1	2	<1
Magnesium	ppm	ASTM D5185m	681	747	690
Calcium	ppm	ASTM D5185m	1509	1570	1704
Phosphorus	ppm	ASTM D5185m 760	700	706	756
Zinc	ppm	ASTM D5185m 830	821	830	935
Sulfur	ppm	ASTM D5185m 2770	3233	3727	3673

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	12	12	5
Sodium	ppm	ASTM D5185m	<1	3	2
Potassium	ppm	ASTM D5185m >20	6	4	5

INFRA-RED

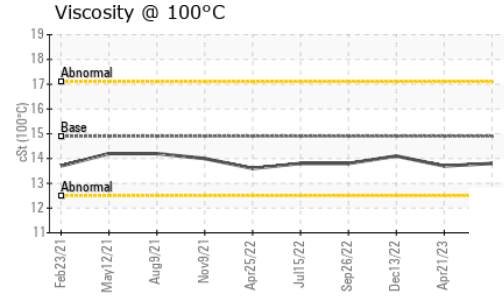
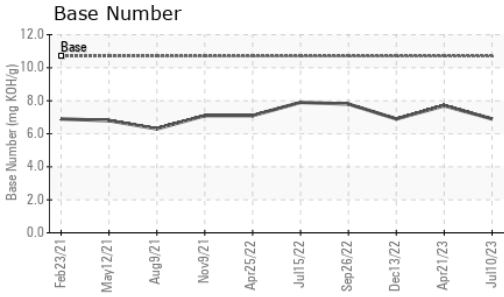
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.5	0.2	0.5
Nitration	Abs/cm	*ASTM D7624 >20	10.7	8.2	12.5
Sulfation	Abs/.1mm	*ASTM D7415 >30	22.5	17.1	26.8

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	17.1	12.9	21.9
Base Number (BN)	mg KOH/g	ASTM D2896 10.7	6.9	7.7	6.9



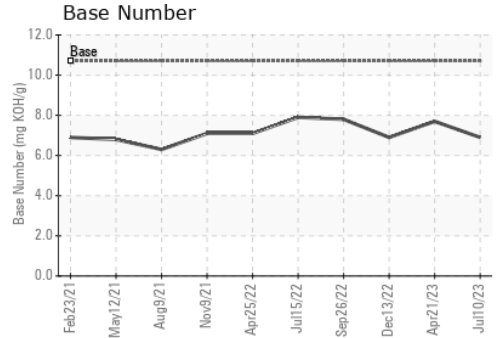
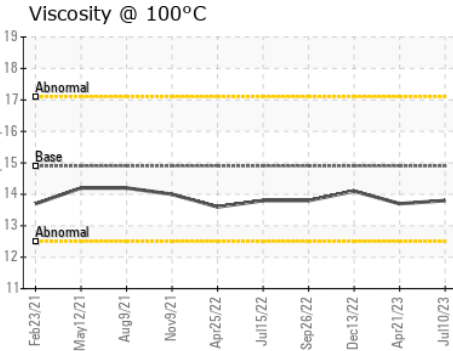
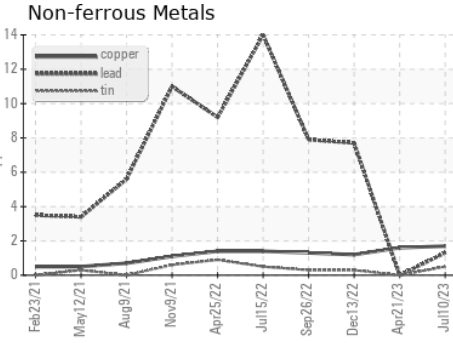
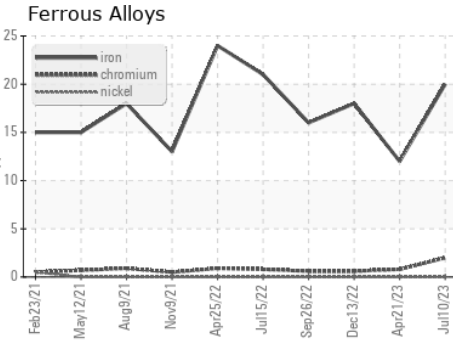
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VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
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	history1	history2	
Visc @ 100°C	cSt	ASTM D445	14.9	13.8	13.7	14.1

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0084527
Lab Number : **05897214**
Unique Number : 10553024
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)

T: (231)624-0848
F: