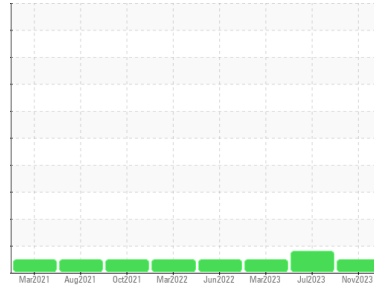




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
427039-751

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	GFL0096269	GFL0064472	GFL0064448	
Sample Date	Client Info	28 Nov 2023	31 Jul 2023	15 Mar 2023	
Machine Age	hrs	Client Info	12400	12003	11287
Oil Age	hrs	Client Info	0	587	0
Oil Changed	Client Info	Not Changed	Changed	Changed	
Sample Status		NORMAL	ABNORMAL	NORMAL	

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >2.0	<1.0	<1.0	<1.0
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 D5185m >100	34	63	45
Chromium	ppm ASTM D5185m >20	<1	1	2
Nickel	ppm ASTM D5185m >4	0	<1	<1
Titanium	ppm ASTM D5185m	10	4	<1
Silver	ppm ASTM D5185m >3	0	0	0
Aluminum	ppm ASTM D5185m >20	14	▲ 20	16
Lead	ppm ASTM D5185m >40	0	0	<1
Copper	ppm ASTM D5185m >330	<1	1	1
Tin	ppm ASTM D5185m >15	0	<1	0
Vanadium	ppm ASTM D5185m	0	<1	0
Cadmium	ppm ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m	90	130	179
Barium	ppm ASTM D5185m	2	0	0
Molybdenum	ppm ASTM D5185m	50	107	117
Manganese	ppm ASTM D5185m	0	<1	<1
Magnesium	ppm ASTM D5185m	630	689	498
Calcium	ppm ASTM D5185m	1385	1718	1658
Phosphorus	ppm ASTM D5185m 760	639	713	755
Zinc	ppm ASTM D5185m 830	759	861	912
Sulfur	ppm ASTM D5185m 2770	3068	3114	2446

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	6	7	7
Sodium	ppm ASTM D5185m	2	6	2
Potassium	ppm ASTM D5185m >20	6	4	4

INFRA-RED

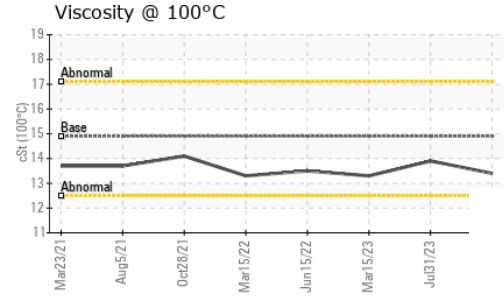
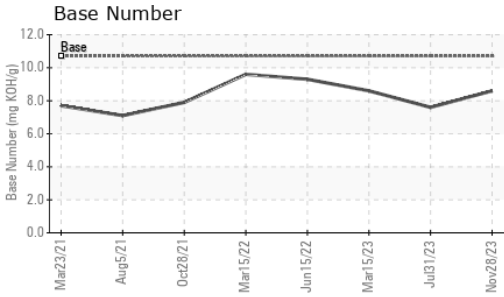
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	1.5	2	1.5
Nitration	Abs/cm *ASTM D7624 >20	10.9	11.5	11.1
Sulfation	Abs/.1mm *ASTM D7415 >30	21.8	24.9	23.9

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	15.6	18.1	17.4
Base Number (BN)	mg KOH/g ASTM D2896 10.7	8.6	7.6	8.6



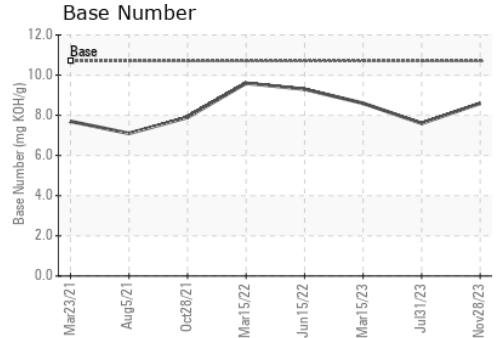
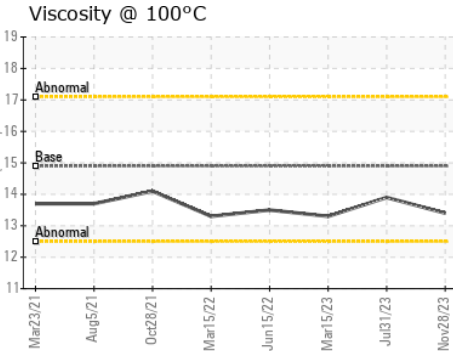
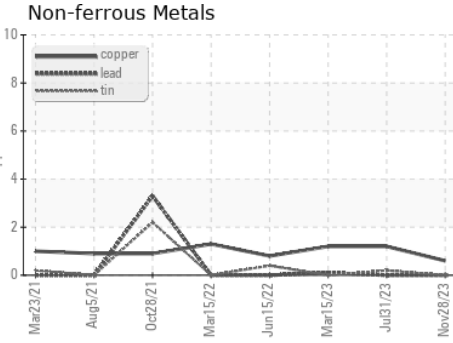
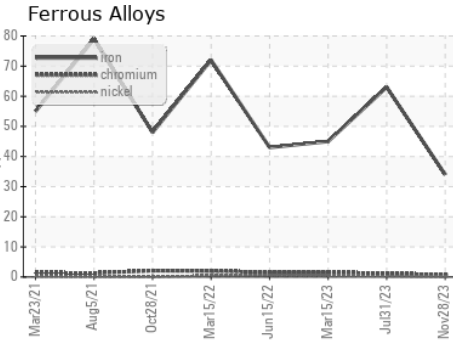
OIL ANALYSIS REPORT



PARAMETER	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	13.4	13.9

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0096269 **Received** : 05 Dec 2023
Lab Number : 06025530 **Diagnosed** : 06 Dec 2023
Unique Number : 10770030 **Diagnostician** : Wes Davis
Test Package : FLEET

GFL Environmental - 624 - Elmira Hauling
 10164 M-32
 Elmira, MI
 US 49730
 Contact: ANDY GROBASKI
 andyg@americanwaste.org
 T: (989)370-2941
 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)