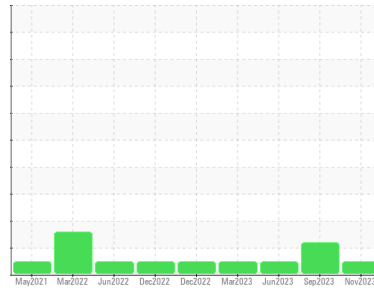




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
727027-598
 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 acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0096309	GFL0055610	GFL0064485
Sample Date	Client Info		28 Nov 2023	11 Sep 2023	26 Jun 2023
Machine Age	hrs	Client Info	0	15448	14937
Oil Age	hrs	Client Info	0	572	543
Oil Changed	Client Info		Not Changed	Not Changd	Not Changed
Sample Status			NORMAL	ABNORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<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 >120	76	96	65
Chromium	ppm	ASTM D5185m >20	4	4	3
Nickel	ppm	ASTM D5185m >5	<1	1	<1
Titanium	ppm	ASTM D5185m >2	7	7	3
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >20	10	9	4
Lead	ppm	ASTM D5185m >40	2	5	5
Copper	ppm	ASTM D5185m >330	2	4	2
Tin	ppm	ASTM D5185m >15	0	<1	<1
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	107	79	83
Barium	ppm	ASTM D5185m	2	0	0
Molybdenum	ppm	ASTM D5185m	115	78	87
Manganese	ppm	ASTM D5185m	0	1	<1
Magnesium	ppm	ASTM D5185m	833	815	644
Calcium	ppm	ASTM D5185m	1838	1743	1323
Phosphorus	ppm	ASTM D5185m 760	872	794	675
Zinc	ppm	ASTM D5185m 830	1032	975	853
Sulfur	ppm	ASTM D5185m 2770	3475	3487	2587

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	16	15	11
Sodium	ppm	ASTM D5185m	13	16	8
Potassium	ppm	ASTM D5185m >20	11	9	5

INFRA-RED

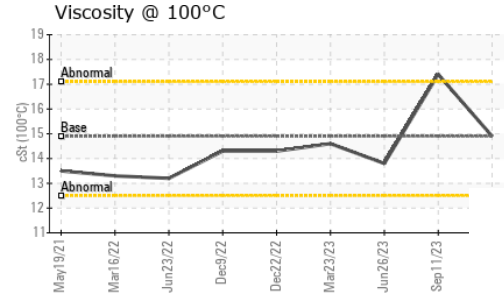
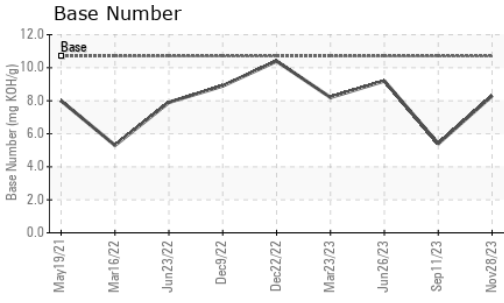
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	3.4	▲ 4.4	0.5
Nitration	Abs/cm	*ASTM D7624 >20	18.5	22.5	7.9
Sulfation	Abs/.1mm	*ASTM D7415 >30	33.1	38.4	20.0

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	29.1	37.7	15.2
Base Number (BN)	mg KOH/g	ASTM D2896 10.7	8.3	5.4	9.2



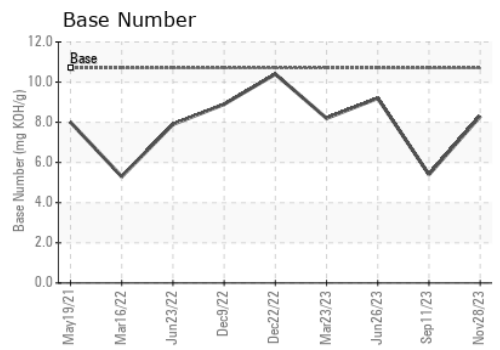
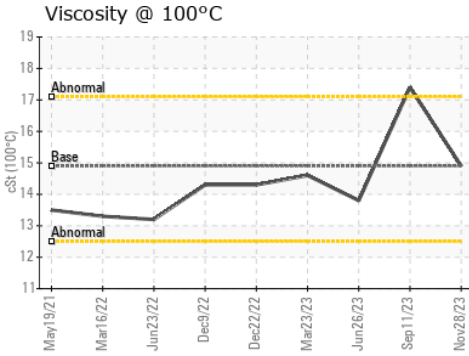
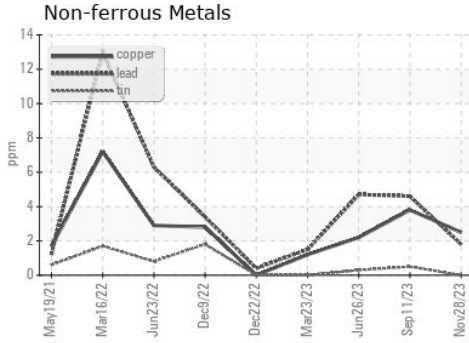
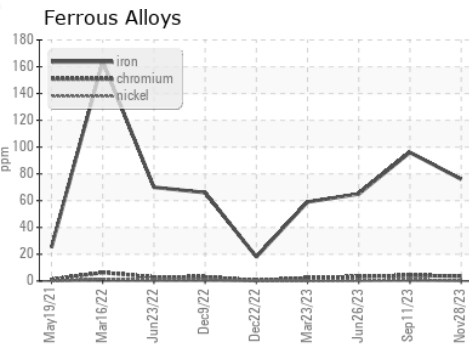
OIL ANALYSIS REPORT



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	▲ 17.4	13.8

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0096309 **Received** : 05 Dec 2023
Lab Number : 06025513 **Diagnosed** : 07 Dec 2023
Unique Number : 10770013 **Diagnostician** : Sean Felton
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:

Certificate L2367
 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)