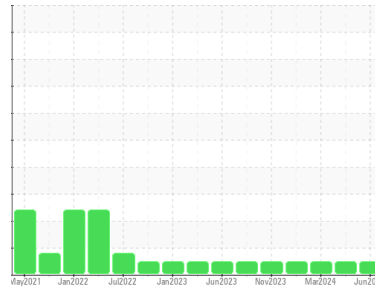




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
427037-587

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		GFL0104684	GFL0104714	GFL0104604
Sample Date	Client Info		14 Jun 2024	30 May 2024	05 Mar 2024
Machine Age	hrs	Client Info	14979	13228	15228
Oil Age	hrs	Client Info	14979	13176	0
Oil Changed	Client Info		Changed	Not Changd	Not Changd
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<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	52	48	15
Chromium	ppm	ASTM D5185m >20	2	2	<1
Nickel	ppm	ASTM D5185m >4	0	0	0
Titanium	ppm	ASTM D5185m	10	11	12
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >20	6	6	5
Lead	ppm	ASTM D5185m >40	0	<1	0
Copper	ppm	ASTM D5185m >330	2	2	<1
Tin	ppm	ASTM D5185m >15	0	0	0
Vanadium	ppm	ASTM D5185m	<1	<1	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	101	106	82
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	62	58	52
Manganese	ppm	ASTM D5185m	<1	<1	<1
Magnesium	ppm	ASTM D5185m	679	678	719
Calcium	ppm	ASTM D5185m	1828	1717	1580
Phosphorus	ppm	ASTM D5185m 760	852	824	731
Zinc	ppm	ASTM D5185m 830	1059	958	847
Sulfur	ppm	ASTM D5185m 2770	3648	3435	3304

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	7	<1	4
Sodium	ppm	ASTM D5185m	11	13	10
Potassium	ppm	ASTM D5185m >20	8	8	7

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.7	0.7	0.4
Nitration	Abs/cm	*ASTM D7624 >20	12.8	13.1	11.0
Sulfation	Abs/.1mm	*ASTM D7415 >30	28.1	28.0	23.1

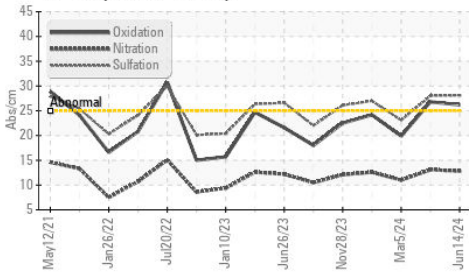
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	26.2	26.8	19.9
Base Number (BN)	mg KOH/g	ASTM D2896 10.7	5.8	5.3	6.0

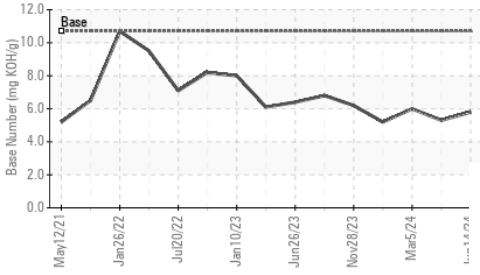


OIL ANALYSIS REPORT

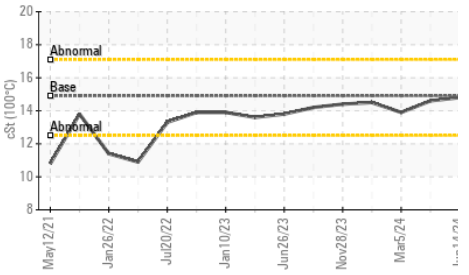
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

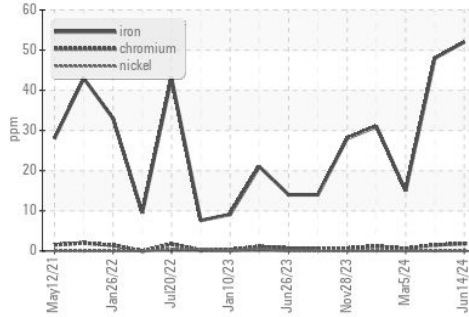


PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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

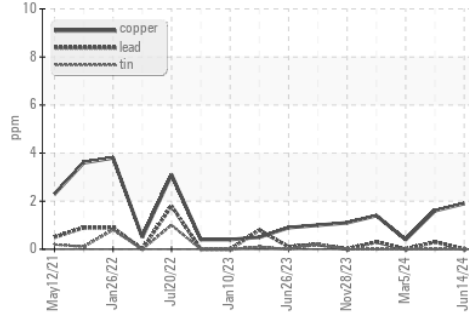
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.9	14.8	14.6

GRAPHS

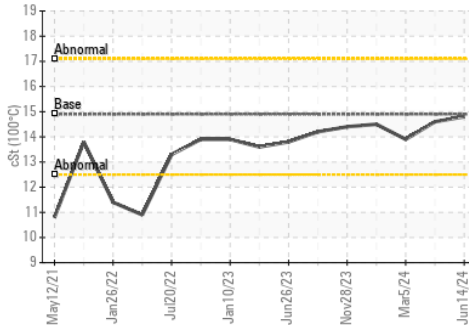
Ferrous Alloys



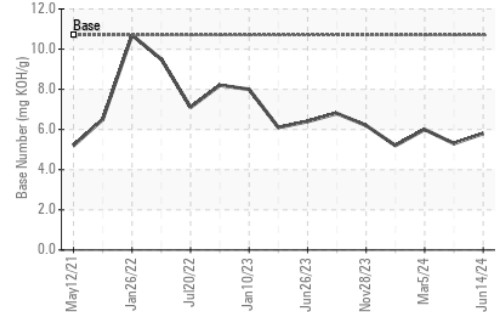
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0104684
 Lab Number : 06219179
 Unique Number : 11097376
 Test Package : FLEET

Received : 24 Jun 2024
 Tested : 25 Jun 2024
 Diagnosed : 26 Jun 2024 - Jonathan Hester

GFL Environmental - 624 - Elmira Hauling
 10164 M-32
 Elmira, MI
 US 49730

Contact: ANDY GROBASKI
 andyg@americanwaste.org
 T: (989)370-2941

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)