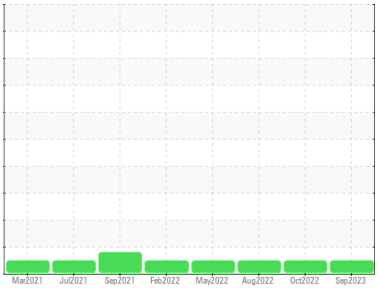
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
527026-738
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		**GFL0084502**	GFL0060789	GFL0037088
Sample Date		Client Info		**11 Sep 2023**	06 Oct 2022	05 Aug 2022
Machine Age	hrs	Client Info		**19474**	15153	14466
Oil Age	hrs	Client Info		**4320**	687	591
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	**38**	27	14
Chromium	ppm	ASTM D5185m	>20	**<1**	2	1
Nickel	ppm	ASTM D5185m	>4	**0**	1	0
Titanium	ppm	ASTM D5185m		**11**	4	<1
Silver	ppm	ASTM D5185m	>3	**0**	1	<1
Aluminum	ppm	ASTM D5185m	>20	**6**	4	5
Lead	ppm	ASTM D5185m	>40	**18**	12	8
Copper	ppm	ASTM D5185m	>330	**1**	2	4
Tin	ppm	ASTM D5185m	>15	**<1**	1	<1
Vanadium	ppm	ASTM D5185m		**<1**	2	0
Cadmium	ppm	ASTM D5185m		**0**	<1	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**66**	104	208
Barium	ppm	ASTM D5185m		**0**	<1	2
Molybdenum	ppm	ASTM D5185m		**72**	95	133
Manganese	ppm	ASTM D5185m		**<1**	2	<1
Magnesium	ppm	ASTM D5185m		**802**	527	603
Calcium	ppm	ASTM D5185m		**1879**	1696	1547
Phosphorus	ppm	ASTM D5185m	760	**898**	773	728
Zinc	ppm	ASTM D5185m	830	**1107**	918	906
Sulfur	ppm	ASTM D5185m	2770	**4009**	3129	2585

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**8**	9	8
Sodium	ppm	ASTM D5185m		**6**	6	3
Potassium	ppm	ASTM D5185m	>20	**9**	4	2

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.4**	0.4	0.3
Nitration	Abs/cm	*ASTM D7624	>20	**11.8**	12.5	10.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	**25.8**	25.0	25.4

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**22.7**	20.1	21.0
Base Number (BN)	mg KOH/g	ASTM D2896	10.7	**5.9**	7.4	7.8

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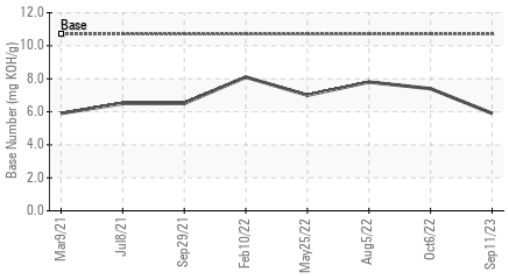
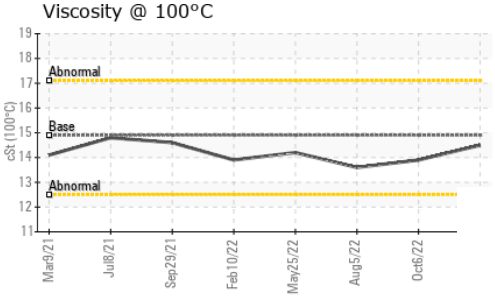
Base Number



Viscosity @ 100°C

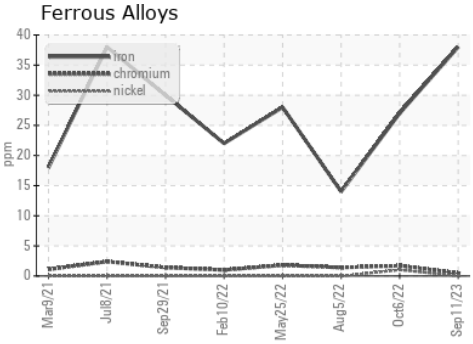


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

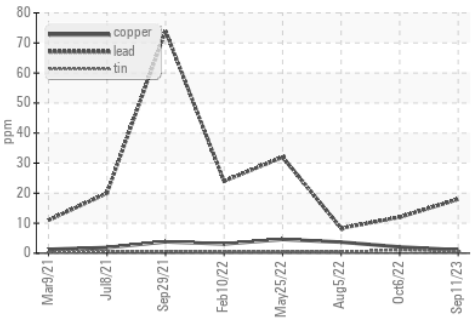
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.9	**14.5**	13.9	13.6

GRAPHS

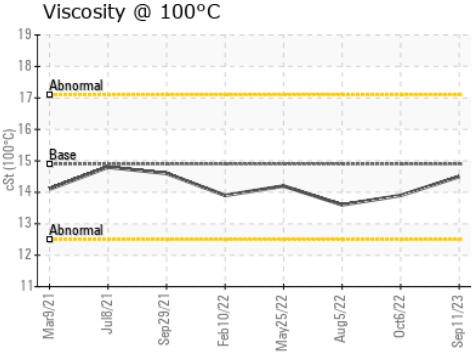
Ferrous Alloys



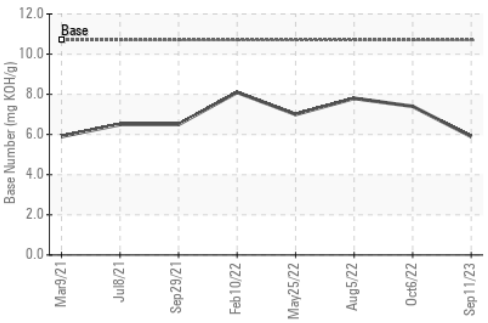
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0084502
Lab Number : 05951034
Unique Number : 10646993
Test Package : FLEET

Received : 14 Sep 2023
Diagnosed : 19 Sep 2023
Diagnostician : Jonathan Hester

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

T: (231)624-0848
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)