



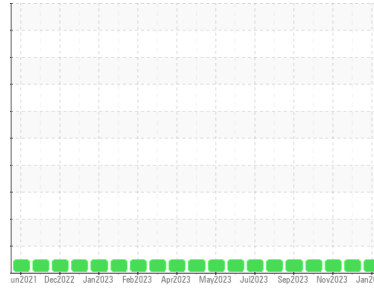
OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
(63A3YA5)
Machine Id
411001-411001
Component
Diesel Engine
Fluid
CHEVRON DELO 400 MULTIGRADE 15W40 (--- LTR)



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	GFL0103442	GFL0098449	GFL0098441
Sample Date	Client Info	25 Jan 2024	26 Dec 2023	29 Nov 2023
Machine Age	hrs	8092	7937	7800
Oil Age	hrs	292	137	6480
Oil Changed	Client Info	N/A	N/A	Changed
Sample Status		NORMAL	NORMAL	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	5	1	6
Chromium	ppm ASTM D5185m >20	<1	0	<1
Nickel	ppm ASTM D5185m >15	<1	<1	0
Titanium	ppm ASTM D5185m >2	0	0	0
Silver	ppm ASTM D5185m >3	0	<1	0
Aluminum	ppm ASTM D5185m >20	3	2	2
Lead	ppm ASTM D5185m >40	<1	<1	0
Copper	ppm ASTM D5185m >330	2	6	1
Tin	ppm ASTM D5185m >15	<1	<1	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 151	28	36	28
Barium	ppm ASTM D5185m 0.4	0	0	2
Molybdenum	ppm ASTM D5185m 250	75	68	77
Manganese	ppm ASTM D5185m	<1	<1	0
Magnesium	ppm ASTM D5185m 0	865	849	821
Calcium	ppm ASTM D5185m 2046	1083	1033	1147
Phosphorus	ppm ASTM D5185m 1043	968	995	862
Zinc	ppm ASTM D5185m 943	1174	1172	1075
Sulfur	ppm ASTM D5185m 5012	2949	2973	2675

CONTAMINANTS

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

INFRA-RED

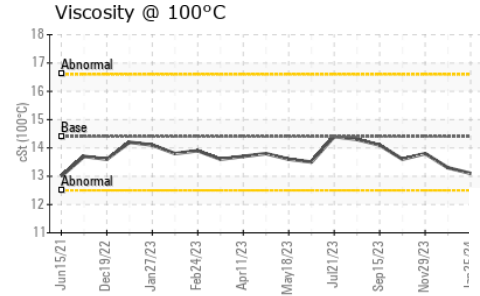
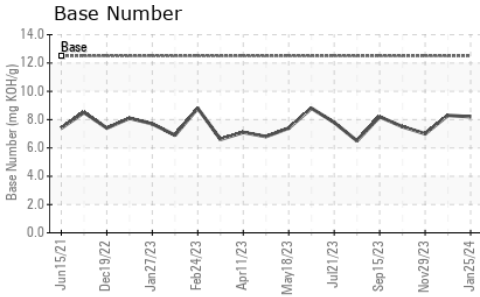
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >4	0.2	0.1	0.3
Nitration	Abs/cm *ASTM D7624 >20	7.0	6.0	9.1
Sulfation	Abs/.1mm *ASTM D7415 >30	18.1	18.3	20.7

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	14.0	13.9	16.4
Base Number (BN)	mg KOH/g ASTM D2896 12.5	8.2	8.3	7.0



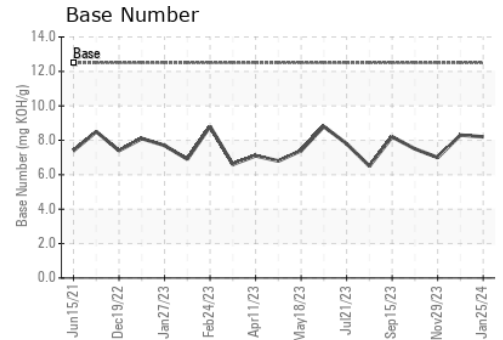
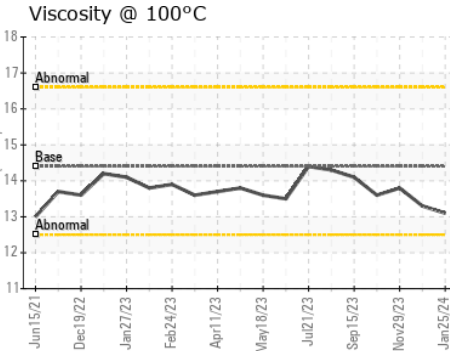
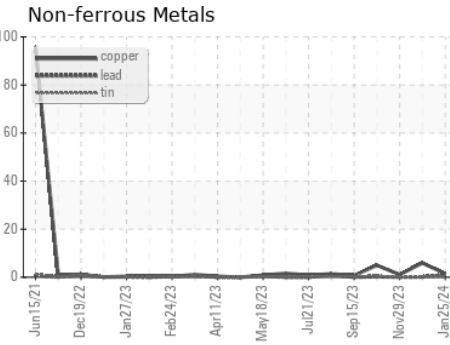
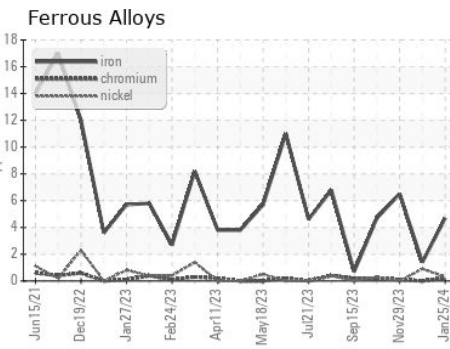
OIL ANALYSIS REPORT



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	14.4	13.1	13.3	13.8

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0103442
 Lab Number : **06081052**
 Unique Number : 10863143
 Test Package : FLEET

Received : 06 Feb 2024
 Tested : 07 Feb 2024
 Diagnosed : 07 Feb 2024 - Don Baldrige

GFL Environmental - 180 - Tuscaloosa Hauling
 4701 12TH ST NE
 Tuscaloosa, AL
 US 35404

Contact: FREDERICK ROGERS
 fred.rogers@gflenv.com

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)

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F: