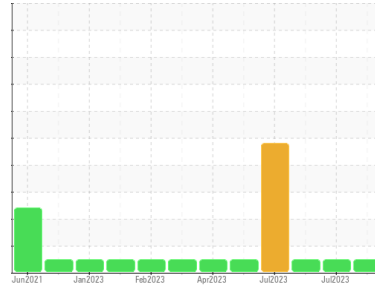




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
920056-102721

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	GFL0086327	GFL0086311	GFL0086314
Sample Date	Client Info	18 Aug 2023	24 Jul 2023	21 Jul 2023
Machine Age	hrs	5181	5038	0
Oil Age	hrs	4099	3956	0
Oil Changed	Client Info	Not Changed	Not Changed	Not 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 >110	16	16	14
Chromium	ppm	ASTM D5185m >4	<1	<1	<1
Nickel	ppm	ASTM D5185m >2	0	0	0
Titanium	ppm	ASTM D5185m	0	0	<1
Silver	ppm	ASTM D5185m >2	0	<1	0
Aluminum	ppm	ASTM D5185m >25	10	8	7
Lead	ppm	ASTM D5185m >45	0	0	0
Copper	ppm	ASTM D5185m >85	11	2	2
Tin	ppm	ASTM D5185m >4	0	0	<1
Vanadium	ppm	ASTM D5185m	0	0	<1
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m 151	78	94	98
Barium	ppm	ASTM D5185m 0.4	0	0	0
Molybdenum	ppm	ASTM D5185m 250	90	94	92
Manganese	ppm	ASTM D5185m	<1	<1	<1
Magnesium	ppm	ASTM D5185m 0	840	878	836
Calcium	ppm	ASTM D5185m 2046	1414	1411	1414
Phosphorus	ppm	ASTM D5185m 1043	857	937	897
Zinc	ppm	ASTM D5185m 943	1054	1138	1119
Sulfur	ppm	ASTM D5185m 5012	3299	3424	3437

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >30	27	6	5
Sodium	ppm	ASTM D5185m	2	1	2
Potassium	ppm	ASTM D5185m >20	6	3	5

INFRA-RED

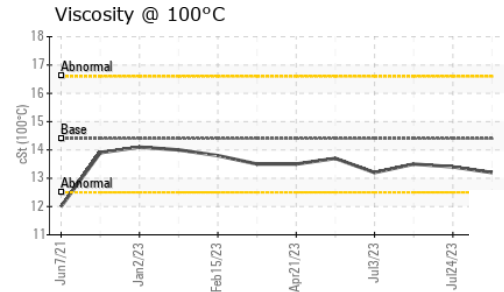
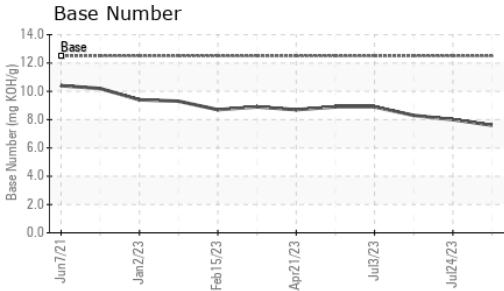
method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844 >3	0.3	0.3	0.3
Nitration	Abs/cm	*ASTM D7624 >20	8.6	8.4	8.4
Sulfation	Abs/.1mm	*ASTM D7415 >30	23.2	21.3	21.4

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	19.3	16.3	16.1
Base Number (BN)	mg KOH/g	ASTM D2896 12.5	7.6	8.0	8.3



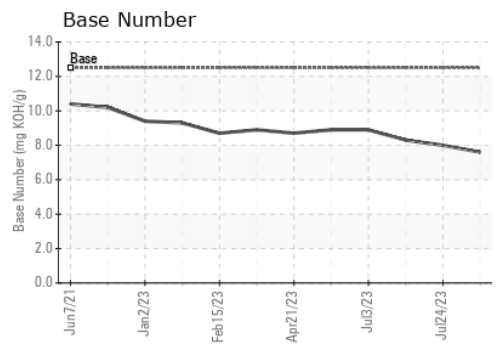
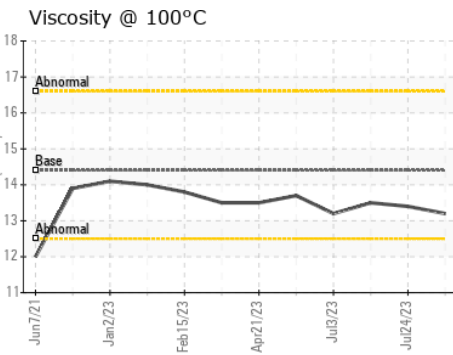
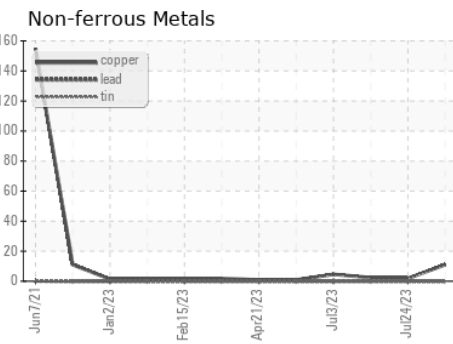
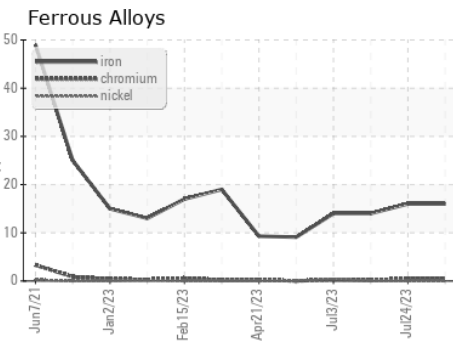
OIL ANALYSIS REPORT



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	13.2	13.4	13.5

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0086327 **Received** : 29 Aug 2023
Lab Number : **05937021** **Diagnosed** : 29 Aug 2023
Unique Number : 10622292 **Diagnostician** : Wes Davis
Test Package : FLEET

GFL Environmental - 180 - Tuscaloosa Hauling
 4701 12TH ST NE
 Tuscaloosa, AL
 US 35404
Contact: FREDERICK ROGERS
 fred.rogers@gflenv.com
 T:
 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)