

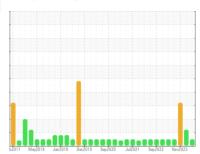
# **OIL ANALYSIS REPORT**



(ELL926)

**Diesel Engine** 

**DIESEL ENGINE OIL SAE 15W30 (11 GAL)** 



Sample Rating Trend



## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

All component wear rates are normal.

## Contamination

There is no indication of any contamination in the oil.

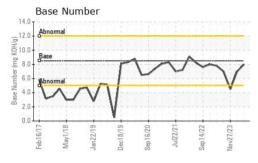
### **Fluid Condition**

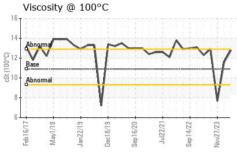
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

AE 15W3U (11 G	AL)	b2017 May20	018 Jan2019 Dec2019	Sep2020 Jul2021 Sep2022	Nov2U23	
SAMPLE INFORM	NOITAN	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0103432	GFL0074649	GFL007463
Sample Date		Client Info		25 Mar 2024	19 Jan 2024	27 Nov 2023
Machine Age	hrs	Client Info		15355	15083	14799
Oil Age	hrs	Client Info		580	285	565
Oil Changed		Client Info		Changed	Not Changd	Changed
Sample Status				NORMAL	ABNORMAL	ATTENTION
CONTAMINATI	ON	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0	<u> </u>	<u>^</u> 2.9
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>130	19	20	30
Chromium	ppm	ASTM D5185m	>10	1	<1	<1
Nickel	ppm	ASTM D5185m	>4	1	0	<1
Titanium	ppm	ASTM D5185m	>2	<1	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	5	5	6
Lead	ppm	ASTM D5185m	>20	<1	0	0
Copper	ppm	ASTM D5185m	>125	1	<1	1
Tin	ppm	ASTM D5185m	>4	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	8	3	1
Barium	ppm	ASTM D5185m	10	<1	0	0
Molybdenum	ppm	ASTM D5185m	100	63	45	21
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	817	724	304
Calcium	ppm	ASTM D5185m	3000	1065	902	372
Phosphorus	ppm	ASTM D5185m	1150	1036	785	518
Zinc				.000	. 00	
ZIIIC	ppm	ASTM D5185m	1350	1116	945	605
	ppm ppm	ASTM D5185m ASTM D5185m	1350 4250			605 1322
Sulfur CONTAMINAN	ppm			1116	945	1322
Sulfur	ppm	ASTM D5185m	4250	1116 2974	945 2213 history1	1322
Sulfur CONTAMINAN <sup>-</sup>	ppm TS	ASTM D5185m method	4250 limit/base	1116 2974 current	945 2213 history1	1322 history2
Sulfur CONTAMINAN <sup>*</sup> Silicon	ppm TS ppm	ASTM D5185m method ASTM D5185m	4250 limit/base >25	1116 2974 current	945 2213 history1	1322 history2
Sulfur CONTAMINAN <sup>*</sup> Silicon Sodium	ppm TS ppm ppm	ASTM D5185m  method  ASTM D5185m  ASTM D5185m	4250 limit/base >25 >25	1116 2974 current 6 2	945 2213 history1 3 2	history2 4 2 2
Sulfur  CONTAMINAN  Silicon  Sodium  Potassium	ppm TS ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m	4250 limit/base >25 >25 >25 >20	1116 2974 current 6 2 5	945 2213 history1 3 2 3	history2 4 2 2
Sulfur  CONTAMINAN  Silicon  Sodium  Potassium  INFRA-RED	ppm TS ppm ppm ppm	ASTM D5185m  method  ASTM D5185m  ASTM D5185m  ASTM D5185m  method	4250 limit/base >25 >25 >20 limit/base	1116 2974 current 6 2 5	945 2213 history1 3 2 3 history1	history2  4 2 2 history2
Sulfur  CONTAMINAN  Silicon  Sodium  Potassium  INFRA-RED  Soot %	ppm TS ppm ppm ppm	ASTM D5185m  method  ASTM D5185m  ASTM D5185m  ASTM D5185m  method  *ASTM D7844	4250  limit/base >25 >25 >20  limit/base >6	1116 2974 current 6 2 5 current 0.2	945 2213 history1 3 2 3 history1 0.5	history2 4 2 2 history2 0.8
Sulfur  CONTAMINAN  Silicon  Sodium  Potassium  INFRA-RED  Soot %  Nitration	ppm TS ppm ppm ppm ppm Abs/cm Abs/.1mm	ASTM D5185m  method  ASTM D5185m  ASTM D5185m  ASTM D5185m  method  *ASTM D7844  *ASTM D7624  *ASTM D7415	4250  limit/base >25 >25 >20  limit/base >6 >20	1116 2974 current 6 2 5 current 0.2 5.8	945 2213 history1 3 2 3 history1 0.5 7.9	1322 history2 4 2 2 history2 0.8 7.4 14.5
Sulfur  CONTAMINAN  Silicon  Sodium  Potassium  INFRA-RED  Soot %  Nitration  Sulfation	ppm TS ppm ppm ppm ppm Abs/cm Abs/.1mm	ASTM D5185m  method  ASTM D5185m  ASTM D5185m  ASTM D5185m  method  *ASTM D7844  *ASTM D7624  *ASTM D7415	4250  limit/base >25 >25 >20  limit/base >6 >20 >30	1116 2974 current 6 2 5 current 0.2 5.8 16.8	945 2213  history1 3 2 3 history1 0.5 7.9 17.3	1322 history2 4 2 2 history2 0.8 7.4



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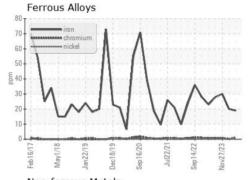


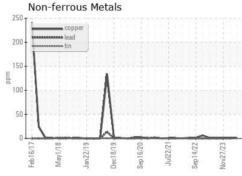


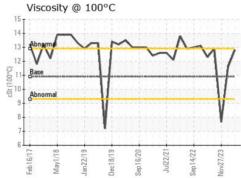
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

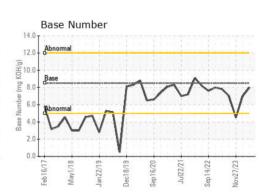
FLUID PROPERTIES		method			history1	history2	
Visc @ 100°C	cSt	ASTM D445	10.9	12.8	<u> </u>	7.66	

### **GRAPHS**













Certificate L2367

Laboratory Sample No.

: GFL0103432 Lab Number : 06130394 Unique Number: 10949859

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 27 Mar 2024 **Tested** 

: 28 Mar 2024 Diagnosed : 28 Mar 2024 - Wes Davis

GFL Environmental - 095 - Atlanta West 2699 Cochran Industrial Blvd Douglasville, GA

US 30127-1332 Contact: Darrell Welch

darrell.welch@gflenv.com T: (800)207-6618

Test Package : FLEET 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)