

## **OIL ANALYSIS REPORT**

Sample Rating Trend





Machine Id 811070 Component

Fluid

Diesel Engine

### DIESEL ENGINE OIL SAE 40 (--- LTR)

## DIAGNOSIS Recommendation

Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) DIESEL ENGINE OIL SAE 40. Please confirm.

#### Wear

All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

#### Fluid Condition

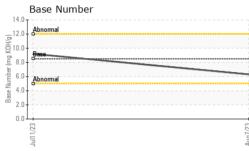
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

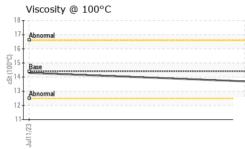
. ,			Jul2023	Aug2023		
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0083111	GFL0083106	
Sample Date		Client Info		07 Aug 2023	11 Jul 2023	
Machine Age	hrs	Client Info		0	0	
Oil Age	hrs	Client Info		0	0	
Oil Changed		Client Info		N/A	Not Changd	
Sample Status				NORMAL	NORMAL	
CONTAMINATI	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0	<1.0	
Glycol		WC Method		NEG	NEG	
WEAR METALS	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>120	24	9	
Chromium	ppm	ASTM D5185m	>20	2	<1	
Nickel	ppm	ASTM D5185m	>5	0	<1	
Titanium	ppm	ASTM D5185m	>2	<1	0	
Silver	ppm	ASTM D5185m	>2	0	0	
Aluminum	ppm	ASTM D5185m	>20	7	2	
Lead	ppm	ASTM D5185m	>40	2	<1	
Copper	ppm	ASTM D5185m	>330	2	1	
Tin	ppm	ASTM D5185m	>15	1	0	
Vanadium	ppm	ASTM D5185m		<1	<1	
Cadmium	ppm	ASTM D5185m		0	0	
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	2	42	
Barium	ppm	ASTM D5185m	10	0	2	
Molybdenum		LOTILDELOE				
	ppm	ASTM D5185m	100	59	55	
Manganese	ppm ppm	ASTM D5185m ASTM D5185m	100	59 1	55 <1	
-			100 450			
Magnesium	ppm	ASTM D5185m		1	<1	
Magnesium Calcium	ppm ppm	ASTM D5185m ASTM D5185m	450	1 908	<1 564	
Magnesium Calcium Phosphorus	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	450 3000	1 908 1276	<1 564 1475	
Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	450 3000 1150	1 908 1276 907	<1 564 1475 765	
Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	450 3000 1150 1350	1 908 1276 907 1235	<1 564 1475 765 948	  
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	450 3000 1150 1350 4250	1 908 1276 907 1235 2931	<1 564 1475 765 948 2786	
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b>	450 3000 1150 1350 4250 limit/base	1 908 1276 907 1235 2931 current	<1 564 1475 765 948 2786 history1	    history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	450 3000 1150 1350 4250 limit/base >25 >216	1 908 1276 907 1235 2931 current 19	<1 564 1475 765 948 2786 history1 7	    history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m ASTM D5185m	450 3000 1150 1350 4250 limit/base >25 >216	1 908 1276 907 1235 2931 current 19 2	<1 564 1475 765 948 2786 history1 7 4	   history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	450 3000 1150 1350 4250 <i>limit/base</i> >25 >216 >20	1 908 1276 907 1235 2931 current 19 2 <1	<1 564 1475 765 948 2786 history1 7 4 <1	   history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	450 3000 1150 1350 4250 imit/base >25 >216 >20 imit/base >4	1 908 1276 907 1235 2931 current 19 2 <1 current	<1 564 1475 765 948 2786 history1 7 4 <1 kistory1	   history2  history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	450 3000 1150 1350 4250 <b>limit/base</b> >25 >216 >20 <b>limit/base</b> >4 >20	1 908 1276 907 1235 2931 current 19 2 <1 2 <1 current 0.7	<1 564 1475 765 948 2786 history1 7 4 <1 4 <1 history1 0.1	  history2  history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624	450 3000 1150 1350 4250 <b>limit/base</b> >25 >216 >20 <b>limit/base</b> >4 >20	1 908 1276 907 1235 2931 <u>current</u> 19 2 <1 <u>current</u> 0.7 9.1	<1 564 1475 765 948 2786 history1 7 4 <1 history1 0.1 6.8	   history2  history2
Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624	450 3000 1150 1350 4250 <b>limit/base</b> >25 >216 >20 <b>limit/base</b> >4 >20 >30	1 908 1276 907 1235 2931 <u>current</u> 19 2 <1 2 <1 0.7 9.1 21.0	<1 564 1475 765 948 2786 history1 7 4 <1 0.1 6.8 18.8	   history2  history2  history2



# **OIL ANALYSIS REPORT**

VISUAL





	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	
Aug7/23	Appearance	scalar	*Visual	NORML	NORML	NORML	
Aug	Odor	scalar	*Visual	NORML	NORML	NORML	
с	Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	
L 	Free Water	scalar	*Visual		NEG	NEG	
				12 . 1. 0			
	FLUID PROPE		method	limit/base	current	history1	history2
	Visc @ 100°C	cSt	ASTM D445	14.4	13.7	14.3	
	GRAPHS						
	Ferrous Alloys						
	iron						
	20 - nickel		Concession of the local division of the loca				
	15	Concession of the Owner of the					
	udd						
	<sup>10</sup>						
	5						
			100				
	Jul11/23			Aug7/23			
	Jul			Aug			
	Non-ferrous Meta	ls					
	10 copper						
	8-						
	essesses []]						
	6						
	E d						
	2						
			Real College Contraction and Contraction of Contrac				
	0			/23			
	Juli 1/23			Aug7/23			
	Viscosity @ 100°C	2					
	<sup>18</sup>			14.0	Base Number		
	17 Abnormal			12.0	Abnormal		
	16						
				(0) HOX Dea Mumper Mumper Base 4.0	Base		
	() 15 Base 8 14			0.8 ju a			
	₹ <sup>14</sup>				Abnormal		
	13 Abnormal			¥ 4.0			
	12			2.0			
	11				L		
	Jul11/23			Aug7/23	Jul11/23		Aug7/23
Laboratory Sample No. Lab Number Unique Number Unique Number Test Package	: <mark>05920571</mark> r : 10592485	501 Madis Received Diagnose Diagnost	d : 107 ed : 107			12 <sup>.</sup>	buglas - Transwaste 19 Landfill Roac Douglas, GA US 31533 act: Michael Tafi
To discuss this sample report,		ice at 1-8	00-237-1369	Э.			aft@gflenv.com
* - Denotes test methods that							T:
Statements of conformity to sne					ICCM 106.2012)		F.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Contact/Location: (Under account GFL070) - Michael Taft - GFL074

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