

# **OIL ANALYSIS REPORT**

Sample Rating Trend



Machine Id 934033 Component **Natural Gas Engine** {not provided} (--- GAL)

## DIAGNOSIS

### Recommendation

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

Metal levels are typical for a components first oil change.

### Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

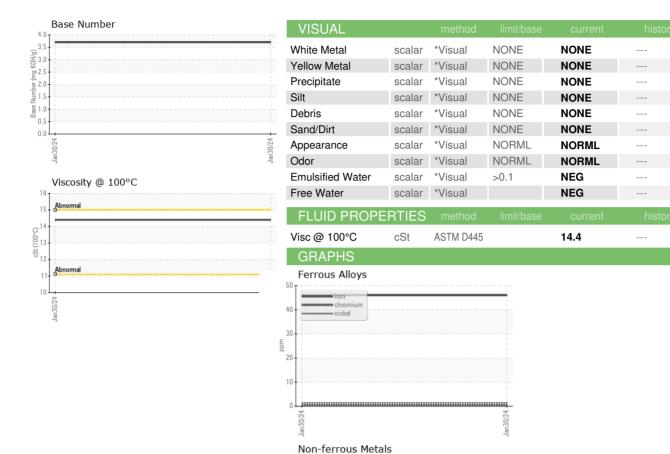
### **Fluid Condition**

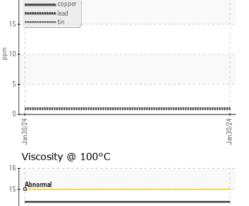
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

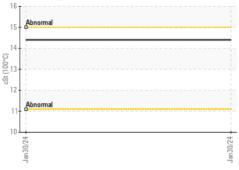
SAMPLE INFORMATION   method   limit/base   current   history1   history2							
Sample Number   Client Info   GFL0108300			<u> </u>		Jan 2024		
Sample Date   Client Info   30 Jan 2024	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Machine Age         hrs         Client Info         449	Sample Number		Client Info		GFL0108300		
Oil Age         hrs         Client Info         449             Oil Changed         Client Info         Not Changd             Sample Status         NORMAL             CONTAMINATION         method         limit/base         current         history1         history2           Water         WC Method         >0.1         NEG             WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >50         46             Chromium         ppm         ASTM D5185m         >20         46             Chromium         ppm         ASTM D5185m         >2         1             Silver         ppm         ASTM D5185m         >3         0             Lead         ppm         ASTM D5185m         >30         <1             Copper         ppm         ASTM D5185m         >35         20             Vanadium         ppm	Sample Date		Client Info		30 Jan 2024		
Contamped   Client Info   Not Changd   Contamped   C	Machine Age	hrs	Client Info		449		
NORMAL           NORMAL         NETWORK   NORMAL       NETWORK   NETWO	Oil Age	hrs	Client Info		449		
CONTAMINATION         method         limit/base         current         history1         history2           Water         WC Method         >0.1         NEG	Oil Changed		Client Info		Not Changd		
Water         WC Method         >0.1         NEG            WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >50         46             Chromium         ppm         ASTM D5185m         >4         -1             Nickel         ppm         ASTM D5185m         >2         1             Silver         ppm         ASTM D5185m         >3         0             Aluminum         ppm         ASTM D5185m         >9         17             Lead         ppm         ASTM D5185m         >9         17             Lead         ppm         ASTM D5185m         >35         20             Copper         ppm         ASTM D5185m         0             Vanadium         ppm         ASTM D5185m         0             Cadmium         ppm         ASTM D5185m         6             Barium         p	Sample Status				NORMAL		
WEAR METALS	CONTAMINAT	ION	method	limit/base	current	history1	history2
Irron	Water		WC Method	>0.1	NEG		
Chromium	WEAR METAL	S	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>50	46		
Titanium	Chromium		ASTM D5185m	>4	<1		
Silver				>2			
Silver	Titanium		ASTM D5185m		<1		
Aluminum         ppm         ASTM D5185m         >9         17             Lead         ppm         ASTM D5185m         >30         <1				>3			
Lead	Aluminum				-		
Copper         ppm         ASTM D5185m         >35         20             Tin         ppm         ASTM D5185m         >4         1             Vanadium         ppm         ASTM D5185m         0             Cadmium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         6             Barium         ppm         ASTM D5185m         3             Molybdenum         ppm         ASTM D5185m         58             Manganese         ppm         ASTM D5185m         10             Manganesium         ppm         ASTM D5185m         741             Calcium         ppm         ASTM D5185m         653             Phosphorus         ppm         ASTM D5185m         908             Sulfur         ppm         ASTM D5185m         2249							
Tin							
Vanadium         ppm         ASTM D5185m         0             Cadmium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         6             Barium         ppm         ASTM D5185m         3             Molybdenum         ppm         ASTM D5185m         58             Manganese         ppm         ASTM D5185m         10             Mangnesium         ppm         ASTM D5185m         741             Calcium         ppm         ASTM D5185m         1193             Phosphorus         ppm         ASTM D5185m         908             Zinc         ppm         ASTM D5185m         908             Sulfur         ppm         ASTM D5185m         >+100         33             CONTAMINANTS         method         limit/base         current	• •				-		
ADDITIVES				77			
ADDITIVES							
Boron	ADDITIVES	1-1-	method	limit/hase		history1	history2
Barium				mmo sass			
Molybdenum         ppm         ASTM D5185m         58             Manganese         ppm         ASTM D5185m         10             Magnesium         ppm         ASTM D5185m         741             Calcium         ppm         ASTM D5185m         1193             Phosphorus         ppm         ASTM D5185m         908             Zinc         ppm         ASTM D5185m         908             Sulfur         ppm         ASTM D5185m         2249             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >+100         33             Sodium         ppm         ASTM D5185m         >100         33             Potassium         ppm         ASTM D5185m         >20         43             INFRA-RED         method         limit/base         current         history1         history2           Soot %         *ASTM							
Manganese         ppm         ASTM D5185m         10             Magnesium         ppm         ASTM D5185m         741             Calcium         ppm         ASTM D5185m         1193             Phosphorus         ppm         ASTM D5185m         653             Zinc         ppm         ASTM D5185m         908             Sulfur         ppm         ASTM D5185m         2249             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >+100         33             Sodium         ppm         ASTM D5185m         >10         -1             Potassium         ppm         ASTM D5185m         >20         43             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         0             Nitration         Abs/:1mm <td></td> <td></td> <td></td> <td></td> <th>_</th> <td></td> <td></td>					_		
Magnesium         ppm         ASTM D5185m         741             Calcium         ppm         ASTM D5185m         1193             Phosphorus         ppm         ASTM D5185m         653             Zinc         ppm         ASTM D5185m         908             Sulfur         ppm         ASTM D5185m         2249             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >+100         33             Sodium         ppm         ASTM D5185m         <1	,						
Calcium         ppm         ASTM D5185m         1193             Phosphorus         ppm         ASTM D5185m         653             Zinc         ppm         ASTM D5185m         908             Sulfur         ppm         ASTM D5185m         2249             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >+100         33             Sodium         ppm         ASTM D5185m         >+100         33             Potassium         ppm         ASTM D5185m         >20         43             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         0             Sulfation         Abs/.1mm         *ASTM D7624         >20         12.3             FLUID DEGRADATION         method         limit/base         current         history1         history2      <	ŭ				-		
Phosphorus	•						
Sulfur   ppm   ASTM D5185m   908       Sulfur   ppm   ASTM D5185m   2249         Sulfur   ppm   ASTM D5185m   2249         Sulfur   ppm   ASTM D5185m   >+100   33         Sulfum   ppm   ASTM D5185m   <1           Sulfum   ppm   ASTM D5185m   >20   43         Sulfation   Abs/cm   *ASTM D7844   0       Sulfation   Abs/cm   *ASTM D7624   >20   12.3       Sulfation   Abs/.1mm   *ASTM D7415   >30   22.4       Sulfum   S							
Sulfur         ppm         ASTM D5185m         2249             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >+100         33             Sodium         ppm         ASTM D5185m         <1							
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >+100         33             Sodium         ppm         ASTM D5185m         <1	-						
Silicon         ppm         ASTM D5185m         >+100         33             Sodium         ppm         ASTM D5185m         <1             Potassium         ppm         ASTM D5185m         >20         43             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         0             Nitration         Abs/cm         *ASTM D7624         >20         12.3             Sulfation         Abs/.1mm         *ASTM D7415         >30         22.4             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         20.7							
Sodium		ITS				history1	history2
Potassium         ppm         ASTM D5185m         >20         43             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         0             Nitration         Abs/cm         *ASTM D7624         >20         12.3             Sulfation         Abs/.1mm         *ASTM D7415         >30         22.4             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         20.7				>+100			
INFRA-RED							
Soot %         %         *ASTM D7844         0             Nitration         Abs/cm         *ASTM D7624         >20         12.3             Sulfation         Abs/.1mm         *ASTM D7415         >30         22.4             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         20.7		ppm	ASTM D5185m		43		
Nitration         Abs/cm         *ASTM D7624         >20         12.3             Sulfation         Abs/.1mm         *ASTM D7415         >30         22.4             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         20.7				limit/base		history1	history2
Sulfation         Abs/.1mm         *ASTM D7415         >30         22.4             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         20.7		%					
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 20.7	Nitration	Abs/cm	*ASTM D7624	>20	12.3		
Oxidation Abs/.1mm *ASTM D7414 >25 <b>20.7</b>	Sulfation	Abs/.1mm	*ASTM D7415	>30	22.4		
	FLUID DEGRAI	OITAC	method	limit/base	current	history1	history2
	Oxidation	Abs/.1mm	*ASTM D7414	>25	20.7		
	Base Number (BN)	mg KOH/g	ASTM D2896		3.7		

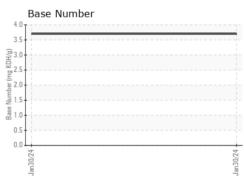


## **OIL ANALYSIS REPORT**













Certificate L2367

Laboratory Sample No. Lab Number Unique Number

: GFL0108300 : 06077583

: 10859674 Test Package : FLEET

To discuss this sample report, contact Customer Service at 1-800-237-1369.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Recieved : 01 Feb 2024 : 02 Feb 2024 Diagnosed

: Wes Davis Diagnostician

GFL Environmental - 652 - Fredericksburg Hauling

10954 Houser Drive Fredericksburg, VA US 22408

Contact: WILLIAM MILO wmilo@gflenv.com

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\* - 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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