



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>ABNORMAL</b>
FLUID CONDITION	<b>ABNORMAL</b>

Machine Id  
**727128**  
Component  
**Diesel Engine**  
Fluid  
**MOBIL 15W40 (6 GAL)**

**RECOMMENDATION**

We advise that you check for faulty combustion, plugged air filters, or aftercoolers. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. NOTE: High solids (carbon/soot) in the sample have limited the accuracy of Infra-Red data including Total Base Number (TBN) value.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0108610</b>	GFL0066173	GFL0066212
Sample Date		Client Info		<b>15 Feb 2024</b>	19 Dec 2023	18 Oct 2023
Machine Age	hrs	Client Info		<b>14919</b>	14482	500
Oil Age	hrs	Client Info		<b>500</b>	500	500
Filter Age	hrs	Client Info		<b>500</b>	500	500
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	ABNORMAL	SEVERE

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>110	<b>36</b>	36	92
Chromium	ppm	ASTM D5185m	>4	<b>2</b>	2	3
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>25	<b>2</b>	2	7
Lead	ppm	ASTM D5185m	>45	<b>&lt;1</b>	0	2
Copper	ppm	ASTM D5185m	>85	<b>&lt;1</b>	1	9
Tin	ppm	ASTM D5185m	>4	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

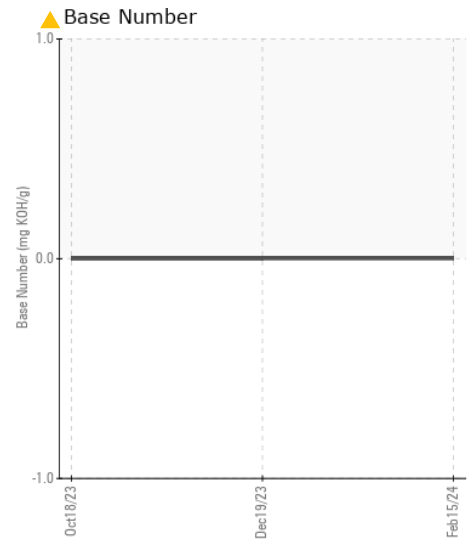
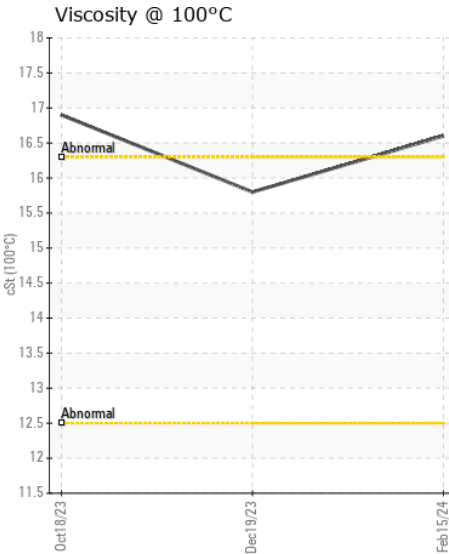
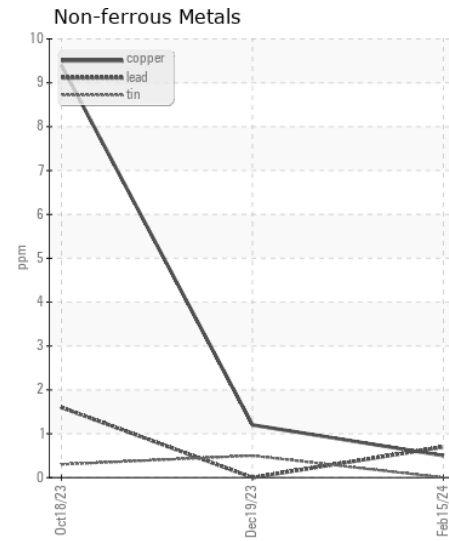
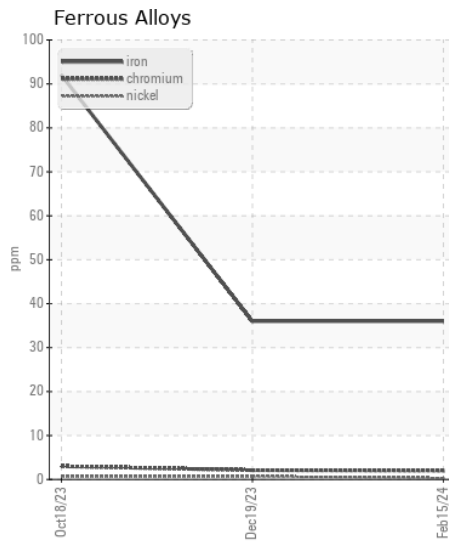
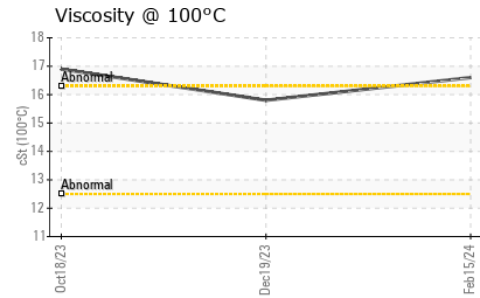
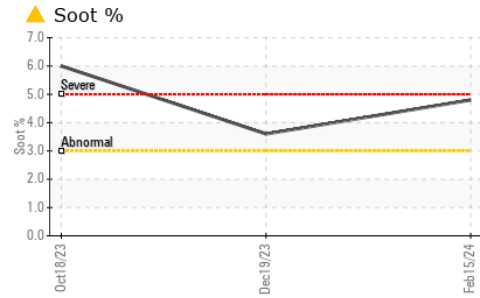
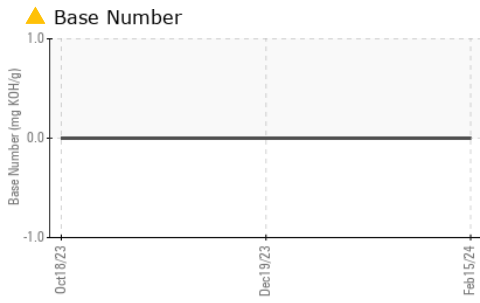
There is an abnormal amount of solids and carbon present in the oil.

Silicon	ppm	ASTM D5185m	>30	<b>4</b>	9	8
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	3	16
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>4.8</b>	3.6	6
Nitration	Abs/cm	*ASTM D7624	>20	<b>12.0</b>	10.6	17.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>29.3</b>	25.6	33.6
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

The BN level is low.

Sodium	ppm	ASTM D5185m	>118	<b>4</b>	4	8
Boron	ppm	ASTM D5185m		<b>7</b>	6	6
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>60</b>	53	55
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>974</b>	824	822
Calcium	ppm	ASTM D5185m		<b>1127</b>	991	1065
Phosphorus	ppm	ASTM D5185m		<b>1036</b>	931	891
Zinc	ppm	ASTM D5185m		<b>1252</b>	1116	1118
Sulfur	ppm	ASTM D5185m		<b>3125</b>	2694	2808
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.9</b>	15.0	28.0
Base Number (BN)	mg KOH/g	ASTM D2896		<b>0.0</b>	0.0	0.0
Visc @ 100°C	cSt	ASTM D445		<b>16.6</b>	15.8	16.9



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0108610 **Received** : 23 Feb 2024  
**Lab Number** : 06098989 **Tested** : 26 Feb 2024  
**Unique Number** : 10897219 **Diagnosed** : 26 Feb 2024 - Don Baldrige  
**Test Package** : FLEET

**GFL Environmental - 904B - Menomonie**  
 1706 MIDWAY RD  
 MENOMONIE, WI  
 US 54751  
 Contact: ANDY KANE

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: