

# **OIL ANALYSIS REPORT**

# Sample Rating Trend

# NORMAL Normal Normal



Machine Id
912083
Component
Diesel Engine
Fluid

MOBIL DELVAC 1300 SUPER15W40 (10 GAL)

# 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

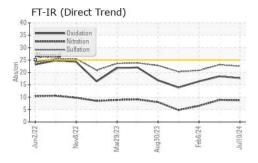
## **Fluid Condition**

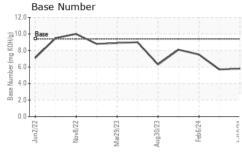
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

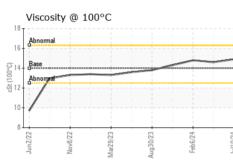
Sample Number   Client Info   GFL0110870   GFL010805   GFL008846   Sample Date   Client Info   10 Jul 2024   09 Apr 2024   09 Feb 202   09 Apr 2024   09 Apr 202	OPEN 15W40 (1	IU GAL)	Junzuzz	NOVZUZZ Marzuza	Augzuzs Febzuz4	Jul2024	
Client Info	SAMPLE INFOR	RMATION	method	limit/base	current	history1	history2
Machine Age   hrs   Client Info   6607   5957   5384	Sample Number		Client Info		GFL0110870	GFL0110805	GFL008846
Dil Age	Sample Date		Client Info		10 Jul 2024	09 Apr 2024	06 Feb 2024
Contained   Client Info   Changed   NORMAL   NEG   N	Machine Age	hrs	Client Info		6607	5957	5384
NORMAL   NORMAL   NORMAL   NORMAL   CONTAMINATION   method   limit/base   current   history1   history2   history3   hi	Oil Age	hrs	Client Info		600	600	600
CONTAMINATION	Oil Changed		Client Info		Changed	Changed	Changed
Fuel	Sample Status				NORMAL	NORMAL	NORMAL
Water         WC Method         >0.2         NEG         NEG         NEG           Glycol         WC Method         NEG         NEG         NEG           WEAR METALS         method         limit/base         current         history1         history1           Iron         ppm         ASTM D5185m         >120         9         10         5           Chromium         ppm         ASTM D5185m         >20         <1         0         <1           Nickel         ppm         ASTM D5185m         >5         <1         0         1           Silver         ppm         ASTM D5185m         >2         <1         <1         <1         <1           Silver         ppm         ASTM D5185m         >2         0         0         <1            Silver         ppm         ASTM D5185m         >20         2         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1 <td>CONTAMINA</td> <td>TION</td> <td>method</td> <td>limit/base</td> <th>current</th> <td>history1</td> <td>history2</td>	CONTAMINA	TION	method	limit/base	current	history1	history2
WEAR METALS	Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
WEAR METALS	Water		WC Method	>0.2	NEG	NEG	NEG
Chromium	Glycol		WC Method		NEG	NEG	NEG
Chromium         ppm         ASTM D5185m         >20         <1         0         <1           Nickel         ppm         ASTM D5185m         >5         <1         0         1           Titanium         ppm         ASTM D5185m         >5         <1         0         1           Silver         ppm         ASTM D5185m         >2         <1         <1         <1           Aluminum         ppm         ASTM D5185m         >20         2         <1         2           Lead         ppm         ASTM D5185m         >40         <1         0         <1           Copper         ppm         ASTM D5185m         >330         2         0         1           Tin         ppm         ASTM D5185m         >15         <1         <1         <1           Vanadium         ppm         ASTM D5185m         0         0         0         <1           Cadmium         ppm         ASTM D5185m         0         56         85         162           Barium         ppm         ASTM D5185m         0         0         0         13           Molybdenum         ppm         ASTM D5185m         0         3         0	WEAR META	LS	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>120	9	10	5
Titanium	Chromium	ppm	ASTM D5185m	>20	<1	0	<1
Silver	Nickel	ppm	ASTM D5185m	>5	<1	0	1
Silver	Titanium		ASTM D5185m	>2	<1	<1	<1
Lead	Silver		ASTM D5185m	>2	0	0	<1
Copper         ppm         ASTM D5185m         >330         2         0         1           Tin         ppm         ASTM D5185m         >15         <1	Aluminum	ppm	ASTM D5185m	>20	2	<1	2
Tin	Lead	ppm	ASTM D5185m	>40	<1	0	<1
Tin	Copper	ppm	ASTM D5185m	>330	2	0	1
Vanadium         ppm         ASTM D5185m         <1         0         <1           Cadmium         ppm         ASTM D5185m         0         0         <1           ADDITIVES         method         limit/base         current         history1           Boron         ppm         ASTM D5185m         0         56         85         162           Barium         ppm         ASTM D5185m         0         0         0         13           Molybdenum         ppm         ASTM D5185m         0         3         0         4           Manganese         ppm         ASTM D5185m         0         32         23         21           Calcium         ppm         ASTM D5185m         2262         2206         1855           Phosphorus         ppm         ASTM D5185m         874         896         881           Zinc         ppm         ASTM D5185m         1146         1119         1058           Sulfur         ppm         ASTM D5185m         2642         3226         3308           CONTAMINANTS         method         limit/base         current         history1         history2           Sodium         ppm         ASTM D5185m					<1	<1	<1
Cadmium         ppm         ASTM D5185m         0         0         <1           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         56         85         162           Barium         ppm         ASTM D5185m         0         0         0         13           Molybdenum         ppm         ASTM D5185m         0         3         0         4           Manganese         ppm         ASTM D5185m         0         3         0         4           Magnesium         ppm         ASTM D5185m         0         32         23         21           Calcium         ppm         ASTM D5185m         2262         2206         1855           Phosphorus         ppm         ASTM D5185m         874         896         881           Zinc         ppm         ASTM D5185m         2642         3226         3308           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         25         3         3         4           Sodium </td <td>Vanadium</td> <td></td> <td>ASTM D5185m</td> <td></td> <th>&lt;1</th> <td>0</td> <td>&lt;1</td>	Vanadium		ASTM D5185m		<1	0	<1
Boron   ppm   ASTM D5185m   0   0   0   0   13	Cadmium		ASTM D5185m		0		<1
Barium         ppm         ASTM D5185m         0         0         0         13           Molybdenum         ppm         ASTM D5185m         0         3         0         4           Manganese         ppm         ASTM D5185m         0         0         -1           Magnesium         ppm         ASTM D5185m         0         32         23         21           Calcium         ppm         ASTM D5185m         2262         2206         1855           Phosphorus         ppm         ASTM D5185m         874         896         881           Zinc         ppm         ASTM D5185m         1146         1119         1058           Sulfur         ppm         ASTM D5185m         2642         3226         3308           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         3         3         4           Sodium         ppm         ASTM D5185m         2         <1	ADDITIVES		method	limit/base	current	history1	history2
Barium	Boron	ppm	ASTM D5185m	0	56	85	162
Molybdenum         ppm         ASTM D5185m         0         3         0         4           Manganese         ppm         ASTM D5185m         0         0         <1           Magnesium         ppm         ASTM D5185m         0         32         23         21           Calcium         ppm         ASTM D5185m         22662         2206         1855           Phosphorus         ppm         ASTM D5185m         874         896         881           Zinc         ppm         ASTM D5185m         1146         1119         1058           Sulfur         ppm         ASTM D5185m         2642         3226         3308           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         3         3         4           Sodium         ppm         ASTM D5185m         22         <1         0           Potassium         ppm         ASTM D5185m         20         9         7         8           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %	Barium		ASTM D5185m	0	0	0	13
Manganese         ppm         ASTM D5185m         0         0         <1           Magnesium         ppm         ASTM D5185m         0         32         23         21           Calcium         ppm         ASTM D5185m         2262         2206         1855           Phosphorus         ppm         ASTM D5185m         874         896         881           Zinc         ppm         ASTM D5185m         1146         1119         1058           Sulfur         ppm         ASTM D5185m         2642         3226         3308           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         3         3         4           Sodium         ppm         ASTM D5185m         2         <1							
Magnesium         ppm         ASTM D5185m         0         32         23         21           Calcium         ppm         ASTM D5185m         2262         2206         1855           Phosphorus         ppm         ASTM D5185m         874         896         881           Zinc         ppm         ASTM D5185m         1146         1119         1058           Sulfur         ppm         ASTM D5185m         2642         3226         3308           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         3         3         4           Sodium         ppm         ASTM D5185m         >20         9         7         8           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >4         0.6         0.6         0.3           Nitration         Abs/cm         *ASTM D7624         >20         8.7         8.9         6.5           Sulfation         Abs/.1mm         *ASTM D7415         >30         22.5         23.1         20.8	-		ASTM D5185m		0		<1
Calcium         ppm         ASTM D5185m         2262         2206         1855           Phosphorus         ppm         ASTM D5185m         874         896         881           Zinc         ppm         ASTM D5185m         1146         1119         1058           Sulfur         ppm         ASTM D5185m         2642         3226         3308           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         3         3         4           Sodium         ppm         ASTM D5185m         2         <1	-			0			
Phosphorus         ppm         ASTM D5185m         874         896         881           Zinc         ppm         ASTM D5185m         1146         1119         1058           Sulfur         ppm         ASTM D5185m         2642         3226         3308           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         3         3         4           Sodium         ppm         ASTM D5185m         2         <1	Calcium		ASTM D5185m		2262	2206	1855
Zinc         ppm         ASTM D5185m         1146         1119         1058           Sulfur         ppm         ASTM D5185m         2642         3226         3308           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         3         3         4           Sodium         ppm         ASTM D5185m         2         <1         0           Potassium         ppm         ASTM D5185m         >20         9         7         8           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >4         0.6         0.6         0.3           Nitration         Abs/cm         *ASTM D7624         >20         8.7         8.9         6.5           Sulfation         Abs/.1mm         *ASTM D7415         >30         22.5         23.1         20.8           FLUID DEGRADATION method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         17.7         18.4							
Sulfur         ppm         ASTM D5185m         2642         3226         3308           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         3         3         4           Sodium         ppm         ASTM D5185m         2         <1	Zinc		ASTM D5185m		1146		1058
Silicon         ppm         ASTM D5185m         >25         3         3         4           Sodium         ppm         ASTM D5185m         2         <1         0           Potassium         ppm         ASTM D5185m         >20         9         7         8           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >4         0.6         0.6         0.3           Nitration         Abs/cm         *ASTM D7624         >20         8.7         8.9         6.5           Sulfation         Abs/.1mm         *ASTM D7415         >30         22.5         23.1         20.8           FLUID DEGRADATION method limit/base current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         17.7         18.4         16.4							
Sodium         ppm         ASTM D5185m         2         <1         0           Potassium         ppm         ASTM D5185m         >20         9         7         8           INFRA-RED         method         limit/base         current         history1         history2           Soot %         *ASTM D7844         >4         0.6         0.6         0.3           Nitration         Abs/cm         *ASTM D7624         >20         8.7         8.9         6.5           Sulfation         Abs/.1mm         *ASTM D7415         >30         22.5         23.1         20.8           FLUID DEGRADATION method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         17.7         18.4         16.4	CONTAMINAL	NTS	method	limit/base	current	history1	history2
Sodium         ppm         ASTM D5185m         2         <1         0           Potassium         ppm         ASTM D5185m         >20         9         7         8           INFRA-RED         method         limit/base         current         history1         history2           Soot %         *ASTM D7844         >4         0.6         0.6         0.3           Nitration         Abs/cm         *ASTM D7624         >20         8.7         8.9         6.5           Sulfation         Abs/.1mm         *ASTM D7415         >30         22.5         23.1         20.8           FLUID DEGRADATION method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         17.7         18.4         16.4	Silicon	ppm	ASTM D5185m	>25	3	3	4
Potassium         ppm         ASTM D5185m         >20         9         7         8           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >4         0.6         0.6         0.3           Nitration         Abs/cm         *ASTM D7624         >20         8.7         8.9         6.5           Sulfation         Abs/.1mm         *ASTM D7415         >30         22.5         23.1         20.8           FLUID DEGRADATION method limit/base current history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         17.7         18.4         16.4	Sodium		ASTM D5185m		2	<1	0
Soot %         %         *ASTM D7844         >4         0.6         0.6         0.3           Nitration         Abs/cm         *ASTM D7624         >20         8.7         8.9         6.5           Sulfation         Abs/.1mm         *ASTM D7415         >30         22.5         23.1         20.8           FLUID DEGRADATION method limit/base current history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         17.7         18.4         16.4	Potassium		ASTM D5185m	>20	9	7	8
Nitration         Abs/cm         *ASTM D7624         >20         8.7         8.9         6.5           Sulfation         Abs/.1mm         *ASTM D7415         >30         22.5         23.1         20.8           FLUID DEGRADATION method limit/base current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         17.7         18.4         16.4	INFRA-RED		method	limit/base	current	history1	history2
Sulfation         Abs/.1mm         *ASTM D7415         >30         22.5         23.1         20.8           FLUID DEGRADATION method limit/base current history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         17.7         18.4         16.4	Soot %	%	*ASTM D7844	>4	0.6	0.6	0.3
Sulfation         Abs/.1mm         *ASTM D7415         >30         22.5         23.1         20.8           FLUID DEGRADATION method limit/base current history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         17.7         18.4         16.4		Abs/cm		>20			
Oxidation Abs/.1mm *ASTM D7414 >25 <b>17.7</b> 18.4 16.4							
	FLUID DEGRA	DATION	method	limit/base	current	history1	history2
	Oxidation	Abs/.1mm	*ASTM D7414	>25	17.7	18.4	16.4
	Base Number (BN)		ASTM D2896		5.8	5.7	7.5



# **OIL ANALYSIS REPORT**



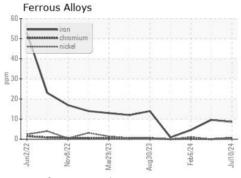


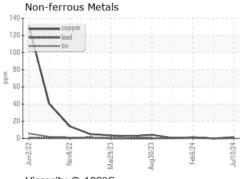


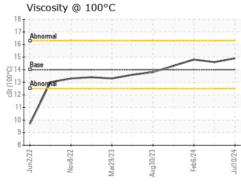
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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

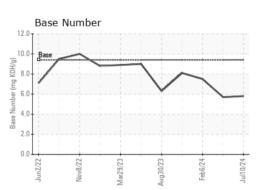
FLUID PROPI	ERTIES	method				history2
Visc @ 100°C	cSt	ASTM D445	14	14.9	14.6	14.8

## **GRAPHS**













Certificate 12367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. : GFL0110870 Lab Number : 06234551 Unique Number : 11123385

Test Package : FLEET

Received **Tested** 

: 12 Jul 2024 : 15 Jul 2024 - Don Baldridge Diagnosed

: 12 Jul 2024

GFL Environmental - 146 - Augusta

1064 Franke Industrial Augusta, GA US 30909

Contact: JEFFERY WASHINGTON jeff.washington@gflenv.com

\* - 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)

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

T:

F: