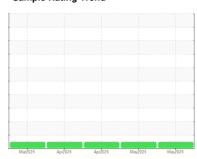


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
834009
Component
Natural Gas Engine
Fluid
NOT GIVEN (--- 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.

Wear

Metal levels are typical for a new component breaking in.

Contamination

There is no indication of any contamination in the oil

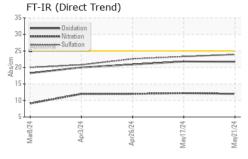
Fluid Condition

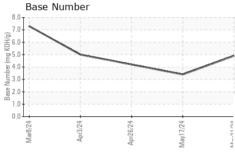
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

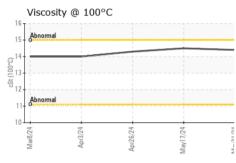
Machine Age hrs Client Info 651 617 504			Mar2024	Apr2024	Apr2024 May2024	May2024	
Client Info 21 May 2024 17 May 2024 26 Apr 2024 36 Apr 2024 37 May 2024 36 Apr 2024 37 May 2024 36 Apr 2024	SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Client Info 21 May 2024 17 May 2024 26 Apr 2024 36 Apr 2024 37 May 2024 36 Apr 2024	Sample Number		Client Info		GFL0116589	GFL0122043	GFL0116611
Machine Age hrs Client Info 651 617 504 Oil Age hrs Client Info 651 617 504 Oil Oil Changed Client Info Changed Not Changd	Sample Date		Client Info		21 May 2024	17 May 2024	26 Apr 2024
Oil Changed	•	hrs	Client Info		-		
Client Info Changed Not Changed NORMAL NORMAL		hrs	Client Info			617	504
NORMAL NORMAL NORMAL CONTAMINATION method limit/base current history1 history2 history2			Client Info			Not Changd	Not Changd
Water WC Method >0.1 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 50 41 40 Chromium ppm ASTM D5185m >4 2 -1 -1 Nickel ppm ASTM D5185m >2 2 -1 1 Nickel ppm ASTM D5185m >3 1 -1 -1 Aluminum ppm ASTM D5185m >9 8 6 7 Lead ppm ASTM D5185m >9 8 6 7 Lead ppm ASTM D5185m >35 20 16 17 Tin ppm ASTM D5185m >4 2 1 1 Copper ppm ASTM D5185m <1	Sample Status					Ü	Ŭ
WEAR METALS	CONTAMINAT	ION	method	limit/base	current	history1	history2
	Water		WC Method	>0.1	NEG	NEG	NEG
Chromium ppm ASTM D5185m >4 2 <1 <1 Nickel ppm ASTM D5185m >2 2 <1	WEAR METAL	S	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>50	50	41	40
Nickel	Chromium	ppm	ASTM D5185m	>4	2	<1	<1
Silver	Nickel	ppm	ASTM D5185m	>2	2	<1	1
Aluminum ppm ASTM D5185m >9 8 6 7 Lead ppm ASTM D5185m >30 2 1 1 Copper ppm ASTM D5185m >35 20 16 17 Tin ppm ASTM D5185m >4 2 1 1 Vanadium ppm ASTM D5185m <1	Titanium	ppm	ASTM D5185m		<1	0	<1
Lead	Silver	ppm	ASTM D5185m	>3	1	<1	<1
Lead	Aluminum	ppm	ASTM D5185m	>9	8	6	7
Tin	Lead		ASTM D5185m	>30	2	1	1
Vanadium ppm ASTM D5185m <1 0 <1 Cadmium ppm ASTM D5185m <1 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 8 6 9 Barium ppm ASTM D5185m 3 4 3 Molybdenum ppm ASTM D5185m 62 55 54 Manganese ppm ASTM D5185m 14 13 13 Magnesium ppm ASTM D5185m 838 793 727 Calcium ppm ASTM D5185m 1440 1372 1210 Phosphorus ppm ASTM D5185m 768 711 645 Zinc ppm ASTM D5185m 2615 2650 2231 CONTAMINANTS method limit/base current history1 history2 Solicon ppm ASTM D5185m >20 17	Copper	ppm	ASTM D5185m	>35	20	16	17
Cadmium ppm ASTM D5185m <1 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 8 6 9 Barium ppm ASTM D5185m 3 4 3 Molybdenum ppm ASTM D5185m 62 55 54 Manganese ppm ASTM D5185m 14 13 13 Magnesium ppm ASTM D5185m 838 793 727 Calcium ppm ASTM D5185m 1440 1372 1210 Phosphorus ppm ASTM D5185m 768 711 645 Zinc ppm ASTM D5185m 2615 2650 2231 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 32 29 32 Sodium ppm ASTM D5185m >20 <td>Tin</td> <td>ppm</td> <td>ASTM D5185m</td> <td>>4</td> <th>2</th> <td>1</td> <td>1</td>	Tin	ppm	ASTM D5185m	>4	2	1	1
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 8 6 9 Barium ppm ASTM D5185m 3 4 3 Molybdenum ppm ASTM D5185m 62 55 54 Manganese ppm ASTM D5185m 14 13 13 Magnesium ppm ASTM D5185m 838 793 727 Calcium ppm ASTM D5185m 1440 1372 1210 Phosphorus ppm ASTM D5185m 768 711 645 Zinc ppm ASTM D5185m 2615 2650 2231 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 32 29 32 Sodium ppm ASTM D5185m >20 17 11 12 INFRA-RED method limit/base	Vanadium	ppm	ASTM D5185m		<1	0	<1
Boron ppm ASTM D5185m 3	Cadmium	ppm	ASTM D5185m		<1	0	0
Barium ppm ASTM D5185m 3 4 3 Molybdenum ppm ASTM D5185m 62 55 54 Manganese ppm ASTM D5185m 14 13 13 Magnesium ppm ASTM D5185m 838 793 727 Calcium ppm ASTM D5185m 1440 1372 1210 Phosphorus ppm ASTM D5185m 768 711 645 Zinc ppm ASTM D5185m 1037 940 894 Sulfur ppm ASTM D5185m 2615 2650 2231 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 32 29 32 Sodium ppm ASTM D5185m >20 17 11 12 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 62 55 54 Manganese ppm ASTM D5185m 14 13 13 Magnesium ppm ASTM D5185m 838 793 727 Calcium ppm ASTM D5185m 1440 1372 1210 Phosphorus ppm ASTM D5185m 768 711 645 Zinc ppm ASTM D5185m 2615 2650 2231 CONTAMINANTS method limit/base current history1 history2 Solium ppm ASTM D5185m >+100 32 29 32 Solium ppm ASTM D5185m >+100 32 29 32 Solium ppm ASTM D5185m >20 17 11 12 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.4 0 0 <t< td=""><td>Boron</td><td>ppm</td><td>ASTM D5185m</td><td></td><th>8</th><td>6</td><td>9</td></t<>	Boron	ppm	ASTM D5185m		8	6	9
Manganese ppm ASTM D5185m 14 13 13 Magnesium ppm ASTM D5185m 838 793 727 Calcium ppm ASTM D5185m 1440 1372 1210 Phosphorus ppm ASTM D5185m 768 711 645 Zinc ppm ASTM D5185m 1037 940 894 Sulfur ppm ASTM D5185m 2615 2650 2231 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 32 29 32 Sodium ppm ASTM D5185m >+100 32 29 32 Sodium ppm ASTM D5185m >20 17 11 12 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.4 0 0 Nitration	Barium	ppm	ASTM D5185m		3	4	3
Magnesium ppm ASTM D5185m 838 793 727 Calcium ppm ASTM D5185m 1440 1372 1210 Phosphorus ppm ASTM D5185m 768 711 645 Zinc ppm ASTM D5185m 1037 940 894 Sulfur ppm ASTM D5185m 2615 2650 2231 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 32 29 32 Sodium ppm ASTM D5185m +100 32 29 32 Sodium ppm ASTM D5185m +20 17 11 12 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >20 12.0 12.2 12.0 Sulfation Abs/.1mm *ASTM D7415 >30 23.9 23.3 22	Molybdenum	ppm	ASTM D5185m		62	55	54
Calcium ppm ASTM D5185m 1440 1372 1210 Phosphorus ppm ASTM D5185m 768 711 645 Zinc ppm ASTM D5185m 1037 940 894 Sulfur ppm ASTM D5185m 2615 2650 2231 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 32 29 32 Sodium ppm ASTM D5185m >+100 32 29 32 Sodium ppm ASTM D5185m >20 17 11 12 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.4 0 0 Nitration Abs/cm *ASTM D7624 >20 12.0 12.2 12.0 Sulfation Abs/.1mm *ASTM D7415 >30 23.9 23.3 22	Manganese	ppm	ASTM D5185m		14	13	13
Phosphorus ppm ASTM D5185m 768 711 645 Zinc ppm ASTM D5185m 1037 940 894 Sulfur ppm ASTM D5185m 2615 2650 2231 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 32 29 32 Sodium ppm ASTM D5185m +100 32 29 32 Sodium ppm ASTM D5185m +100 32 29 32 Sodium ppm ASTM D5185m >20 17 11 12 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >20 12.0 12.2 12.0 Sulfation Abs/.1mm *ASTM D7415 >30 23.9 23.3 22.6 FLUID DEGRADATION method limit/base current	Magnesium	ppm	ASTM D5185m		838	793	727
Zinc ppm ASTM D5185m 1037 940 894 Sulfur ppm ASTM D5185m 2615 2650 2231 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 32 29 32 Sodium ppm ASTM D5185m 4 4 4 4 Potassium ppm ASTM D5185m >20 17 11 12 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.4 0 0 Nitration Abs/cm *ASTM D7624 >20 12.0 12.2 12.0 Sulfation Abs/.1mm *ASTM D7415 >30 23.9 23.3 22.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 <td< td=""><td>Calcium</td><td>ppm</td><td>ASTM D5185m</td><td></td><th>1440</th><td>1372</td><td>1210</td></td<>	Calcium	ppm	ASTM D5185m		1440	1372	1210
Sulfur ppm ASTM D5185m 2615 2650 2231 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 32 29 32 Sodium ppm ASTM D5185m 4 4 4 Potassium ppm ASTM D5185m >20 17 11 12 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.4 0 0 Nitration Abs/cm *ASTM D7624 >20 12.0 12.2 12.0 Sulfation Abs/.1mm *ASTM D7415 >30 23.9 23.3 22.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 21.7 21.8 20.9	Phosphorus	ppm	ASTM D5185m		768	711	645
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 32 29 32 Sodium ppm ASTM D5185m 4 4 4 Potassium ppm ASTM D5185m >20 17 11 12 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.4 0 0 Nitration Abs/cm *ASTM D7624 >20 12.0 12.2 12.0 Sulfation Abs/.1mm *ASTM D7415 >30 23.9 23.3 22.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 21.7 21.8 20.9	Zinc	ppm	ASTM D5185m		1037	940	894
Silicon ppm ASTM D5185m >+100 32 29 32 Sodium ppm ASTM D5185m 4 4 4 4 Potassium ppm ASTM D5185m >20 17 11 12 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.4 0 0 Nitration Abs/cm *ASTM D7624 >20 12.0 12.2 12.0 Sulfation Abs/.1mm *ASTM D7415 >30 23.9 23.3 22.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 21.7 21.8 20.9	Sulfur	ppm	ASTM D5185m		2615	2650	2231
Sodium ppm ASTM D5185m 4 4 4 4 Potassium ppm ASTM D5185m >20 17 11 12 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.4 0 0 Nitration Abs/cm *ASTM D7624 >20 12.0 12.2 12.0 Sulfation Abs/.1mm *ASTM D7415 >30 23.9 23.3 22.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 21.7 21.8 20.9	CONTAMINAN	TS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 17 11 12 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.4 0 0 Nitration Abs/cm *ASTM D7624 >20 12.0 12.2 12.0 Sulfation Abs/.1mm *ASTM D7415 >30 23.9 23.3 22.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 21.7 21.8 20.9	Silicon	ppm	ASTM D5185m	>+100	32	29	32
INFRA-RED	Sodium	ppm	ASTM D5185m		4	4	4
Soot % % *ASTM D7844 0.4 0 0 Nitration Abs/cm *ASTM D7624 >20 12.0 12.2 12.0 Sulfation Abs/.1mm *ASTM D7415 >30 23.9 23.3 22.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 21.7 21.8 20.9	Potassium	ppm	ASTM D5185m	>20	17	11	12
Nitration Abs/cm *ASTM D7624 >20 12.0 12.2 12.0 Sulfation Abs/.1mm *ASTM D7415 >30 23.9 23.3 22.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 21.7 21.8 20.9	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 23.9 23.3 22.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 21.7 21.8 20.9	Soot %	%	*ASTM D7844		0.4	0	0
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 21.7 21.8 20.9	Nitration	Abs/cm	*ASTM D7624	>20	12.0	12.2	12.0
Oxidation	Sulfation	Abs/.1mm	*ASTM D7415	>30	23.9	23.3	22.6
	FLUID DEGRA	DATION	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 4.9 3.4 4.2	Oxidation	Abs/.1mm	*ASTM D7414	>25	21.7	21.8	20.9
	Base Number (BN)	mg KOH/g	ASTM D2896		4.9	3.4	4.2



OIL ANALYSIS REPORT



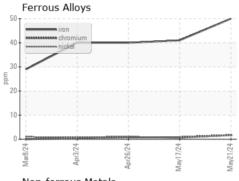


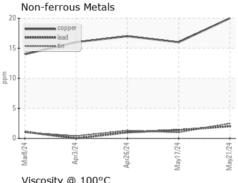


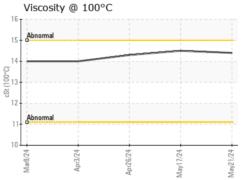
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

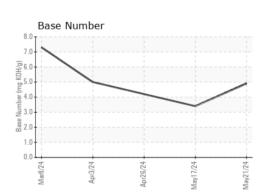
FLUID PROPI	EHIIES	method		riistory i	HIStory∠
Visc @ 100°C	cSt	ASTM D445	14.4	14.5	14.3

GRAPHS













Certificate 12367

Laboratory Sample No.

Lab Number : 06189907 Unique Number : 11046659 Test Package : FLEET

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

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : GFL0116589 Received : 23 May 2024 **Tested**

: 25 May 2024 Diagnosed : 25 May 2024 - Wes Davis

GFL Environmental - 652 - Fredericksburg Hauling 10954 Houser Drive

Fredericksburg, VA US 22408

Contact: WILLIAM MILO wmilo@gflenv.com T:

* - 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)

F: