

OIL ANALYSIS REPORT

Sample Rating Trend





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

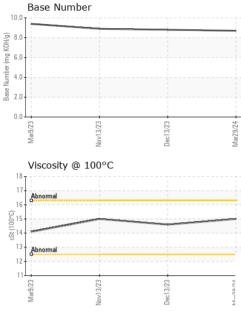
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0108607	GFL0066175	GFL0066024
Sample Date		Client Info		29 Mar 2024	13 Dec 2023	13 Nov 2023
Machine Age	hrs	Client Info		13385	11358	0
Oil Age	hrs	Client Info		2027	500	0
Oil Changed		Client Info		Changed	Changed	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT		method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method		NEG	NEG	NEG
Glycol		WC Method	20.2	NEG	NEG	NEG
-	0		1	-	-	-
WEAR METAL		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m		24	11	34
Chromium	ppm	ASTM D5185m		1	<1	2
Nickel	ppm	ASTM D5185m		0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m		3	<1	1
Lead	ppm	ASTM D5185m		0	<1	<1
Copper	ppm	ASTM D5185m		0	<1	<1
Tin	ppm	ASTM D5185m	>15	<1	0	<1
Vanadium	ppm	ASTM D5185m		0	<1	<1
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 9	history1 7	history2 3
	ppm ppm		limit/base			
Boron		ASTM D5185m	limit/base	9	7	3
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	9 0	7 0	3 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	9 0 59	7 0 57	3 0 57
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	9 0 59 <1	7 0 57 0	3 0 57 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	9 0 59 <1 959 1082 1057	7 0 57 0 900 1052 931	3 0 57 <1 951 1116 1076
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	9 0 59 <1 959 1082	7 0 57 0 900 1052 931 1149	3 0 57 <1 951 1116
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	9 0 59 <1 959 1082 1057	7 0 57 0 900 1052 931	3 0 57 <1 951 1116 1076
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	9 0 59 <1 959 1082 1057 1244	7 0 57 0 900 1052 931 1149	3 0 57 <1 951 1116 1076 1209
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		9 0 59 <1 959 1082 1057 1244 3487	7 0 57 0 900 1052 931 1149 2958	3 0 57 <1 951 1116 1076 1209 2842
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	9 0 59 <1 959 1082 1057 1244 3487 current	7 0 57 0 900 1052 931 1149 2958 history1	3 0 57 <1 951 1116 1076 1209 2842 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm 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	limit/base	9 0 59 <1 959 1082 1057 1244 3487 <u>current</u> 4	7 0 57 0 900 1052 931 1149 2958 history1 3	3 0 57 <1 951 1116 1076 1209 2842 history2 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm 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 ASTM D5185m	limit/base >25 >118	9 0 59 <1 959 1082 1057 1244 3487 <u>current</u> 4 3	7 0 57 0 900 1052 931 1149 2958 history1 3 <1	3 0 57 <1 951 1116 1076 1209 2842 <u>history2</u> 4 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	limit/base >25 >118 >20	9 0 59 <1 959 1082 1057 1244 3487 current 4 3 0	7 0 57 0 900 1052 931 1149 2958 history1 3 < 1 0	3 0 57 <1 951 1116 1076 1209 2842 history2 4 4 4 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	limit/base >25 >118 >20	9 0 59 <1 959 1082 1057 1244 3487 <u>current</u> 4 3 0 0 <u>current</u>	7 0 57 0 900 1052 931 1149 2958 history1 3 <1 0 history1	3 0 57 <1 951 1116 1076 1209 2842 history2 4 4 0 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >118 >20 limit/base >6	9 0 59 <1 959 1082 1057 1244 3487 <i>current</i> 4 3 0 <i>current</i> 1.9	7 0 57 0 900 1052 931 1149 2958 history1 3 <1 0 history1 1	3 0 57 <1 951 1116 1076 1209 2842 history2 4 4 4 0 history2 2.5
Boron Barium Molybdenum Manganese 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 D5185m	limit/base >25 >118 >20 limit/base >6 >20	9 0 59 <1 959 1082 1057 1244 3487 <i>current</i> 4 3 0 <i>current</i> 1.9 8.7	7 0 57 0 900 1052 931 1149 2958 history1 3 <1 0 history1 1 6.8	3 0 57 <1 951 1116 1076 1209 2842 history2 4 4 4 0 bistory2 2.5 10.6
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7844	limit/base >25 >118 >20 limit/base >6 >20 >30 limit/base	9 0 59 <1 959 1082 1057 1244 3487 <i>current</i> 4 3 3 0 <i>current</i> 1.9 8.7 21.6	7 0 57 0 900 1052 931 1149 2958 history1 3 <1 0 history1 1 6.8 19.8 history1	3 0 57 <1 951 1116 1076 1209 2842 history2 4 4 4 0 V history2 2.5 10.6 24.2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >118 >20 limit/base >6 >20 >30	9 0 59 <1 959 1082 1057 1244 3487 <u>current</u> 4 3 0 <u>current</u> 1.9 8.7 21.6	7 0 57 0 900 1052 931 1149 2958 history1 3 <1 0 history1 1 6.8 19.8	3 0 57 <1 951 1116 1076 1209 2842 history2 4 4 4 0 history2 2.5 10.6 24.2



OIL ANALYSIS REPORT

VISUAL



		VIOUAL		method	mmebase	ourront	Thotory	11101	.0192
		White Metal	scalar	*Visual	NONE	NONE	NONE	NON	E
		Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NON	E
		Precipitate	scalar	*Visual	NONE	NONE	NONE	NON	
		Silt	scalar	*Visual	NONE	NONE	NONE	NON	
		Debris		*Visual	NONE	NONE	NONE	NON	
			scalar						
	4	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NON	
Dec13/23	Mar29/24	Appearance	scalar	*Visual	NORML	NORML	NORML	NOR	
De	Ma	Odor	scalar	*Visual	NORML	NORML	NORML	NOR	ML
		Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG	
		Free Water	scalar	*Visual		NEG	NEG	NEG	
		FLUID PROPE	ERTIES	method	limit/base	current	history1	hist	tory2
		Visc @ 100°C	cSt	ASTM D445		15.0	14.6	15.0	
		GRAPHS							
		Ferrous Alloys							
3/23 -	N.C.	60 - iron							
Dec13/23	C 0 C ~ W	50-							
	-								
		₽ ⁴⁰ 30							
		30							
		20-							
		10-							

		Mar9/23 Vov13/23		Dec13/23	Mar29/24				
		Ma		Deci	Mar2				
		Non-ferrous Meta	als						
		10 copper							
		8							
		tin							
		6							
		udd							
		4							
		2							
			and the state of the	and the Andreas of Street, or other stre					
		0 0		(1)	States -				
		Mar9/23 Nov13/23		Dec13/23	Mar29/24				
		—		De	M				
		Viscosity @ 100°	С			Base Numbe	er		
		17-			10.	⁰		1	
		Abnormal			(B) 8.	0			
					KOH	0			
		()-15 ()-15)			Base Number (mg KOH/g) • • • • • • • •				
		ở 14 -			qui 4.	0-			
		13 - Abnormal			ase				
		12-			⁶⁰ 2.	0			
		11			0.	0			
				3/23		Mar9/23	3/23 -	3/23	
		Mar9/23 Nov13/23		Dec13/23	Mar29/24	Mar	Nov13/23	Dec13/23	
	Laboratory Sample No. Lab Number Unique Number		11888 & 11 Cł	I - 904 - Chippewa Falls H & 11863 30th Avenu Chippewa Falls, W US 5472 Contact: Andy Kan					
ertificate L2367	Test Package	: FLEET , contact Customer Serv					Co	ntact: Andy	y Kar

Submitted By: See also GFL904,A,B,C, 927, 938 - Andy Kane Page 2 of 2