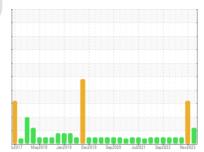


OIL ANALYSIS REPORT





Sample Rating Trend



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

Light fuel dilution occurring.

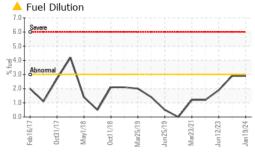
Fluid Condition

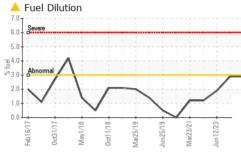
The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The condition of the oil is suitable for further service.

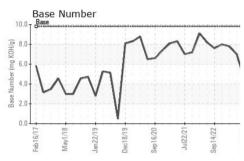
ม่ <u>ชื่อ17 May</u> 2018 <u>Jan2</u> 019 <u>Dec2013 Say2020 Jud2021 Say2022 Nev2023</u>						
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0074649	GFL0074631	GFL0092465
Sample Date		Client Info		19 Jan 2024	27 Nov 2023	07 Sep 2023
Machine Age	hrs	Client Info		15083	14799	14234
Oil Age	hrs	Client Info		285	565	0
Oil Changed		Client Info		Not Changd	Changed	Changed
Sample Status				ABNORMAL	ATTENTION	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>130	20	30	28
Chromium	ppm	ASTM D5185m	>10	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	<1
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	5	6	6
Lead	ppm	ASTM D5185m	>20	0	0	0
Copper	ppm	ASTM D5185m	>125	<1	1	2
Tin	ppm	ASTM D5185m	>4	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	OLUMNO 10 t	history1	history2
ADDITIVES		memod	IIIIIII/Dase	current	HISTORY	HISTOLYZ
Boron	ppm	ASTM D5185m	0	3	1	2
	ppm ppm		0			
Boron		ASTM D5185m	0	3	1	2
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0 0 60	3 0	1	2
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	3 0 45	1 0 21	2 0 60
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	3 0 45 <1	1 0 21 <1	2 0 60 <1
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	3 0 45 <1 724	1 0 21 <1 • 304	2 0 60 <1 945
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070	3 0 45 <1 724 902	1 0 21 <1 ▲ 304 ▲ 372	2 0 60 <1 945 1068
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150	3 0 45 <1 724 902 785	1 0 21 <1 ▲ 304 ▲ 372 ▲ 518	2 0 60 <1 945 1068 990
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 ASTM D5185m	0 0 60 0 1010 1070 1150	3 0 45 <1 724 902 785 945	1 0 21 <1	2 0 60 <1 945 1068 990 1233
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 ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	3 0 45 <1 724 902 785 945 2213	1 0 21 <1 ▲ 304 ▲ 372 ▲ 518 ▲ 605 ▲ 1322	2 0 60 <1 945 1068 990 1233 3338
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 ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	3 0 45 <1 724 902 785 945 2213	1 0 21 <1 ▲ 304 ▲ 372 ▲ 518 ▲ 605 ▲ 1322 history1	2 0 60 <1 945 1068 990 1233 3338 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	3 0 45 <1 724 902 785 945 2213 current	1 0 21 <1 ▲ 304 ▲ 372 ▲ 518 ▲ 605 ▲ 1322 history1	2 0 60 <1 945 1068 990 1233 3338 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base	3 0 45 <1 724 902 785 945 2213 current 3	1 0 21 <1 ▲ 304 ▲ 372 ▲ 518 ▲ 605 ▲ 1322 history1 4	2 0 60 <1 945 1068 990 1233 3338 history2 5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25	3 0 45 <1 724 902 785 945 2213 current 3 2	1 0 21 <1 ▲ 304 ▲ 372 ▲ 518 ▲ 605 ▲ 1322 history1 4 2	2 0 60 <1 945 1068 990 1233 3338 history2 5 2 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D3524	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 >3.0	3 0 45 <1 724 902 785 945 2213 current 3 2 3 ▲ 2.9	1 0 21 <1 ▲ 304 ▲ 372 ▲ 518 ▲ 605 ▲ 1322 history1 4 2 2 2 ▲ 2.9	2 0 60 <1 945 1068 990 1233 3338 history2 5 2 4 <1.0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1150 1270 2060 limit/base >25 >20 >3.0 limit/base	3 0 45 <1 724 902 785 945 2213 current 3 2 3 ▲ 2.9 current 0.5	1 0 21 <1 ▲ 304 ▲ 372 ▲ 518 ▲ 605 ▲ 1322 history1 4 2 2 2 10.8	2 0 60 <1 945 1068 990 1233 3338 history2 5 2 4 <1.0 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D3524	0 0 60 0 1010 1150 1270 2060 Iimit/base >25 >20 >3.0	3 0 45 <1 724 902 785 945 2213 current 3 2 3 ▲ 2.9	1 0 21 <1 ▲ 304 ▲ 372 ▲ 518 ▲ 605 ▲ 1322 history1 4 2 2 ▲ 2.9	2 0 60 <1 945 1068 990 1233 3338 history2 5 2 4 <1.0 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7624	0 0 60 0 1010 1150 1270 2060 limit/base >25 >20 >3.0 limit/base >6 >20	3 0 45 <1 724 902 785 945 2213 current 3 2 3 2.9 current 0.5 7.9	1 0 21 <1 ▲ 304 ▲ 372 ▲ 518 ▲ 605 ▲ 1322 history1 4 2 2 2 ▲ 2.9 history1 0.8 7.4	2 0 60 <1 945 1068 990 1233 3338 history2 5 2 4 <1.0 history2 1 9.7
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE	ppm	ASTM D5185m ASTM D78185m ASTM D7844 *ASTM D7624 *ASTM D7624 *ASTM D7415 method	0 0 0 1010 1070 1150 1270 2060 limit/base >25 >20 >3.0 limit/base >6 >20 >30 limit/base	3 0 45 <1 724 902 785 945 2213 current 3 2 3 ▲ 2.9 current 0.5 7.9 17.3 current	1 0 21 <1 ▲ 304 ▲ 372 ▲ 518 ▲ 605 ▲ 1322 history1 4 2 2 ▲ 2.9 history1 0.8 7.4 14.5 history1	2 0 60 <1 945 1068 990 1233 3338 history2 5 2 4 <1.0 history2 1 9.7 20.1 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7624	0 0 0 0 1010 1070 1150 1270 2060 limit/base >25 >20 >3.0 limit/base >6 >20 >30	3 0 45 <1 724 902 785 945 2213 current 3 2 3 ▲ 2.9 current 0.5 7.9 17.3	1 0 21 <1 ▲ 304 ▲ 372 ▲ 518 ▲ 605 ▲ 1322 history1 4 2 2 ▲ 2.9 history1 0.8 7.4 14.5	2 0 60 <1 945 1068 990 1233 3338 history2 5 2 4 <1.0 history2 1 9.7 20.1



OIL ANALYSIS REPORT



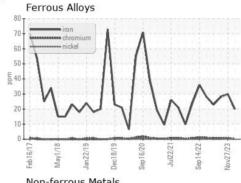


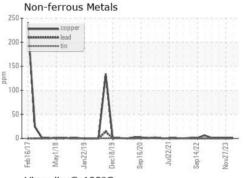


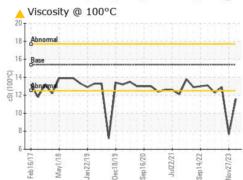
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

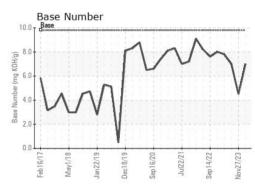
FLUID PROPER	11123	method	IIIIII/Dase	Current	HISTORY	HISTORYZ
Visc @ 100°C	cSt	ASTM D445	15.4	11.6	1.66	12.9

GRAPHS













Certificate L2367

Laboratory

Sample No. Lab Number **Unique Number**

: GFL0074649 : 06069948 : 10846625

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Recieved : 24 Jan 2024 Diagnosed : 26 Jan 2024

Diagnostician : Wes Davis Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

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)

GFL Environmental - 095 - Atlanta West

2699 Cochran Industrial Blvd Douglasville, GA US 30127-1332 Contact: Darrell Welch darrell.welch@gflenv.com

T: (800)207-6618