

## **OIL ANALYSIS REPORT**

Sample Rating Trend





Machine Id **7913** Component **Natural Gas Engine** Fluid NOT GIVEN (24 GAL)

### DIAGNOSIS Recommendation

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

### Wear

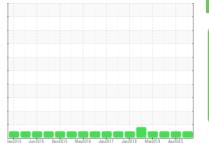
All component wear rates are normal.

### 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.



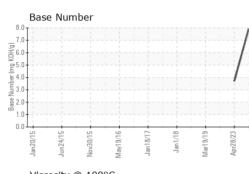


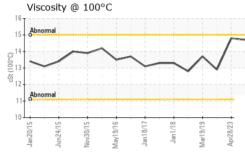
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0089718	GFL0077345	PC0025835
Sample Date		Client Info		08 Sep 2023	28 Apr 2023	31 May 2020
Machine Age	hrs	Client Info		23529	22694	0
Oil Age	hrs	Client Info		835	22694	0
Oil Changed		Client Info		Changed	Changed	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Glycol		WC Method				0.0
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	4	16	10
Chromium	ppm	ASTM D5185m	>4	<1	2	<1
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m		0	1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	<1	2	2
Lead	ppm	ASTM D5185m	>30	0	22	22
Copper	ppm	ASTM D5185m	>35	<1	2	34
Tin	ppm	ASTM D5185m	>4	<1	1	<1
Antimony	ppm	ASTM D5185m				<1
Vanadium	ppm	ASTM D5185m		0	0	0
Beryllium	ppm	ASTM D5185m				0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 27	history1 9	history2 6
	ppm ppm		limit/base			
Boron		ASTM D5185m	limit/base	27	9	6
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	27 0	9 0	6 <1
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	27 0 52	9 0 57	6 <1 113
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	27 0 52 <1	9 0 57 <1	6 <1 113 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	27 0 52 <1 618 1685 808	9 0 57 <1 585	6 <1 113 <1 141
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	27 0 52 <1 618 1685	9 0 57 <1 585 1714 796 1083	6 <1 113 <1 141 1908
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	27 0 52 <1 618 1685 808	9 0 57 <1 585 1714 796	6 <1 113 <1 141 1908 659 840 2079
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	27 0 52 <1 618 1685 808 1004	9 0 57 <1 585 1714 796 1083	6 <1 113 <1 141 1908 659 840
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	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	27 0 52 <1 618 1685 808 1004 3037	9 0 57 <1 585 1714 796 1083 2465	6 <1 113 <1 141 1908 659 840 2079
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium	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		27 0 52 <1 618 1685 808 1004 3037 	9 0 57 <1 585 1714 796 1083 2465 	6 <1 113 <1 141 1908 659 840 2079 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN	ppm 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	limit/base	27 0 52 <1 618 1685 808 1004 3037  Current	9 0 57 <1 585 1714 796 1083 2465  history1	6 <1 113 <1 141 1908 659 840 2079 <1 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon	ppm 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 ASTM D5185m	limit/base >+100	27 0 52 <1 618 1685 808 1004 3037  Current 3	9 0 57 <1 585 1714 796 1083 2465  history1 4	6 <1 113 <1 141 1908 659 840 2079 <1 <b>history2</b> 3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm <b>TS</b>	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	limit/base >+100	27 0 52 <1 618 1685 808 1004 3037  current 3 5	9 0 57 <1 585 1714 796 1083 2465  <u>history1</u> 4 8	6 <1 113 <1 141 1908 659 840 2079 <1 2079 <1 history2 3 25
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm <b>TS</b>	ASTM D5185m ASTM D5185m	limit/base >+100 >20	27 0 52 <1 618 1685 808 1004 3037  <b>current</b> 3 5 1	9 0 57 <1 585 1714 796 1083 2465  <u>history1</u> 4 8 11	6 <1 113 <1 141 1908 659 840 2079 <1 2079 <1 history2 3 25 7
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm <b>TS</b>	ASTM D5185m ASTM D5185m	limit/base >+100 >20 limit/base	27 0 52 <1 618 1685 808 1004 3037  current 3 5 1 1 current	9 0 57 <1 585 1714 796 1083 2465  history1 4 8 11 1 history1	6 <1 113 <1 141 1908 659 840 2079 <1 <b>bistory2</b> 3 25 7 <b>history2</b>
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	limit/base >+100 >20 limit/base	27 0 52 <1 618 1685 808 1004 3037  current 3 5 1 1 current 0.1	9 0 57 <1 585 1714 796 1083 2465  history1 4 8 11 1 history1 0	6 <1 113 <1 141 1908 659 840 2079 <1 <b>bistory2</b> 3 25 7 <b>bistory2</b> 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >+100 >20 limit/base	27 0 52 <1 618 1685 808 1004 3037  Current 3 5 1 2 5 1 2 0.1 8.4	9 0 57 <1 585 1714 796 1083 2465  history1 4 8 11 4 8 11 1 bistory1 0 11.0	6 <1 113 <1 141 1908 659 840 2079 <1 <b>history2</b> 3 25 7 <b>history2</b> 0 10.2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	imit/base >+100 >20  imit/base  >20  imit/base	27 0 52 <1 618 1685 808 1004 3037  <u>current</u> 3 5 1 1 <u>current</u> 0.1 8.4 17.9	9 0 57 <1 585 1714 796 1083 2465  <u>history1</u> 4 8 11 <u>history1</u> 0 11.0 23.4	6 <1 113 <1 141 1908 659 840 2079 <1 <b>history2</b> 3 25 7 <b>history2</b> 0 10.2 29.4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	 	27 0 52 <1 618 1685 808 1004 3037  Current 3 5 1 0.1 8.4 17.9 Current	9 0 57 <1 585 1714 796 1083 2465  history1 4 8 11 4 8 11 history1 0 11.0 23.4 history1	6 <1 113 <1 141 1908 659 840 2079 <1 <b>history2</b> 3 25 7 <b>history2</b> 0 10.2 29.4 <b>history2</b>

Submitted By: STEPHEN WEIL



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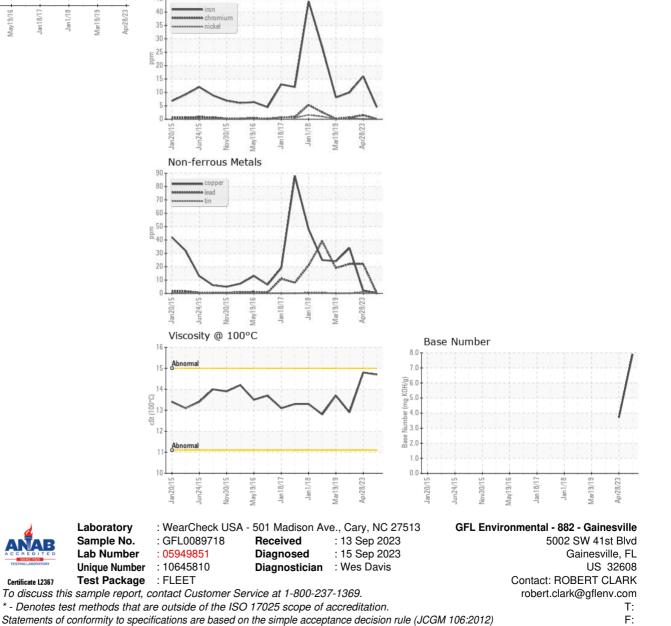




VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
Precipitate	scalar	*Visual	NONE	NONE	NONE	
Silt	scalar	*Visual	NONE	NONE	NONE	
Debris	scalar	*Visual	NONE	NONE	NONE	
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
Appearance	scalar	*Visual	NORML	NORML	NORML	
Odor	scalar	*Visual	NORML	NORML	NORML	
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPE	RTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445		14.7	14.8	12.9
GRAPHS						

Ferrous Alloys

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