

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id 834050 Component

Natural Gas Engine

Fluid NOT GIVEN (--- 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

Metal levels are typical for a new component breaking in.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

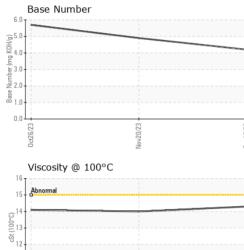
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

		0ct	2023	Nov2023 Dec20	23	
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0102513	GFL0098641	GFL0098665
Sample Date		Client Info		12 Dec 2023	20 Nov 2023	26 Oct 2023
Machine Age	hrs	Client Info		525	393	264
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	53	61	54
Chromium	ppm	ASTM D5185m	>5	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	2	2	1
Titanium	ppm	ASTM D5185m	>5	0	<1	<1
Silver	ppm	ASTM D5185m	>3	<1	<1	0
Aluminum	ppm	ASTM D5185m	>25	3	2	3
Lead	ppm	ASTM D5185m	>40	<1	1	1
Copper	ppm	ASTM D5185m	>150	17	20	17
Tin	ppm	ASTM D5185m	>4	1	2	1
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	<1	<1
ADDITIVES						
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	method ASTM D5185m	limit/base	current 23	history1 16	history2 22
	ppm ppm		limit/base			
Boron		ASTM D5185m	limit/base	23	16	22
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	23 3	16 0	22 2
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	23 3 65	16 0 51	22 2 50
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	23 3 65 9	16 0 51 10	22 2 50 9
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	23 3 65 9 753	16 0 51 10 699	22 2 50 9 688
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	23 3 65 9 753 1053	16 0 51 10 699 985	22 2 50 9 688 921
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	23 3 65 9 753 1053 745	16 0 51 10 699 985 627	22 2 50 9 688 921 744
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	23 3 65 9 753 1053 745 948	16 0 51 10 699 985 627 862	22 2 50 9 688 921 744 862
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		23 3 65 9 753 1053 745 948 2475	16 0 51 10 699 985 627 862 2391	22 2 50 9 688 921 744 862 2590
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	limit/base	23 3 65 9 753 1053 745 948 2475 current	16 0 51 10 699 985 627 862 2391 history1	22 2 50 9 688 921 744 862 2590 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 method ASTM D5185m	limit/base	23 3 65 9 753 1053 745 948 2475 current 29	16 0 51 10 699 985 627 862 2391 history1 35	22 2 50 9 688 921 744 862 2590 history2 33
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	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 method ASTM D5185m ASTM D5185m	limit/base >25	23 3 65 9 753 1053 745 948 2475 current 29 5	16 0 51 10 699 985 627 862 2391 history1 35 <1	22 2 50 9 688 921 744 862 2590 history2 33 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	limit/base >25 >20	23 3 65 9 753 1053 745 948 2475 current 29 5 3	16 0 51 10 699 985 627 862 2391 history1 35 <1 35	22 2 50 9 688 921 744 862 2590 history2 33 4 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base	23 3 65 9 753 1053 745 948 2475 current 29 5 3 current	16 0 51 10 699 985 627 862 2391 history1 35 <1 3 3	22 2 50 9 688 921 744 862 2590 history2 33 4 4 4 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base	23 3 65 9 753 1053 745 948 2475 Current 29 5 3 Current 0	16 0 51 10 699 985 627 862 2391 history1 35 <1 3 3 history1 0	22 2 50 9 688 921 744 862 2590 history2 33 4 4 4 4 bistory2
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 TS ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base	23 3 65 9 753 1053 745 948 2475 <i>current</i> 29 5 3 <i>current</i> 0 10.6	16 0 51 10 699 985 627 862 2391 history1 35 <1 3 3 history1 0 11.5	22 2 50 9 688 921 744 862 2590 history2 33 4 4 4 history2 0 9.7
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 D7844 *ASTM D7844 *ASTM D7844	limit/base >25 >20 limit/base >20 s30	23 3 65 9 753 1053 745 948 2475 <u>current</u> 29 5 3 <u>current</u> 0 10.6 21.7	16 0 51 10 699 985 627 862 2391 history1 35 <1 35 <1 3 history1 0 11.5 21.0	22 2 50 9 688 921 744 862 2590 history2 33 4 4 4 history2 0 9.7 19.6
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	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >20 >30 limit/base	23 3 65 9 753 1053 745 948 2475 Current 29 5 3 Current 0 10.6 21.7 Current	16 0 51 10 699 985 627 862 2391 history1 35 <1 35 <1 3 history1 0 11.5 21.0 history1	22 2 50 9 688 921 744 862 2590 history2 33 4 4 4 history2 0 9.7 19.6 history2



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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
0/23		scalar	*Visual	NORML	NORML	NORML	NORML
Nov20/23 Deci 2/23	Odor	scalar	*Visual	NORML	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		14.3	14.0	14.1
	GRAPHS						
	Ferrous Alloys						
	70 iron						
Nov20/23	60 - chromium						
No	50-						
	в ⁴⁰						
	E 30	 					
	20-						
	10-						
	0						
	0ct26/23	Vov20/23		Dec12/23			
	0ct2	Nov2		Dec1			
	Non-ferrous Meta	ls					
	20		Concession of the local division of the loca				
	copper						
	15						
	-						
	គ្មី 10 -						
	5 -						
	U	23+		23			
	0ct26/23	lov20/23		ec12/23			
	Viscosity @ 100°C	~					
	¹⁶	-		6.0 T	Base Number		
	15 - Abnormal			5.0-			
	14			H/g)			
				및 4.0 - 말			
	(100°C) 13			(B/HOX 4.0 - B/HOX B/m) as 3.0 - argumnv 2.0 - eseg			
	12			2.0			
	Abnormal						
	10	23 -		0.0		53	
	ct26/2	v20/2		sc12/2	ct26/i	v20/2	
	10 E2/92200	Nov20/23		0.0	CEI Env	ironmental - 83	7 - Harrisoi

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