

OIL ANALYSIS REPORT

Sample Rating Trend





Area (BD56681) {UNASSIGNED} Machine Id 914047

Component
1 Diesel Engine

DIESEL ENGINE OIL SAE 40 (9 GAL)

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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 INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0115180	GFL0106638	GFL0097666
Sample Date		Client Info		19 Mar 2024	10 Jan 2024	30 Oct 2023
Machine Age	hrs	Client Info		1792	1195	599
Oil Age	hrs	Client Info		597	636	599
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0	<1.0	0.4
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	>120	14	22	33
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	<1	2	3
Titanium	ppm	ASTM D5185m	>2	0	0	<1
Silver	ppm	ASTM D5185m	>2	0	<1	1
Aluminum	ppm	ASTM D5185m	>20	<1	<1	4
Lead	maa	ASTM D5185m	>40	0	0	<1
Copper	ppm	ASTM D5185m	>330	5	30	133
Tin	ppm	ASTM D5185m	>15	0	1	3
Vanadium	ppm	ASTM D5185m		د د1	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0
		mathad	limit/base	ourropt	biotorud	biotory 0
ADDITIVES				current	nistory i	TIIStory2
Boron	ppm	ASTM D5185m	250	1	8	202
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	49	62	103
Manganese	ppm	ASTM D5185m		_1	1	E
Magnesium				<1		5
	ppm	ASTM D5185m	450	820	978	5 670
Calcium	ppm ppm	ASTM D5185m ASTM D5185m	450 3000	820 898	978 1105	5 670 1342
Calcium Phosphorus	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	450 3000 1150	820 898 851	978 1105 1059	5 670 1342 697
Calcium Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	450 3000 1150 1350	820 898 851 1000	978 1105 1059 1261	5 670 1342 697 858
Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	450 3000 1150 1350 4250	820 898 851 1000 2750	978 1105 1059 1261 2850	5 670 1342 697 858 2232
Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	450 3000 1150 1350 4250 limit/base	820 898 851 1000 2750 current	978 1105 1059 1261 2850 history1	5 670 1342 697 858 2232 history2
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	450 3000 1150 1350 4250 limit/base >25	820 898 851 1000 2750 current 3	978 1105 1059 1261 2850 history1 8	5 670 1342 697 858 2232 history2 52
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	450 3000 1150 1350 4250 limit/base >25 >216	820 898 851 1000 2750 current 3 3	978 1105 1059 1261 2850 history1 8 3	5 670 1342 697 858 2232 history2 52 3
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	450 3000 1150 1350 4250 limit/base >25 >216 >20	820 898 851 1000 2750 current 3 3 3 0	978 1105 1059 1261 2850 history1 8 3 <1	5 670 1342 697 858 2232 history2 52 3 8
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	450 3000 1150 1350 4250 imit/base >25 >216 >20 imit/base	820 898 851 1000 2750 current 3 3 0 current	978 1105 1059 1261 2850 history1 8 3 <1 history1	5 670 1342 697 858 2232 history2 52 3 8 history2
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	450 3000 1150 1350 4250 limit/base >25 >216 >20 limit/base >4	820 898 851 1000 2750 current 3 3 0 current 0.4	978 1105 1059 1261 2850 history1 8 3 <1 history1 0.4	5 670 1342 697 858 2232 history2 52 3 8 8 history2 0.3
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm TS ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844	450 3000 1150 4250 limit/base >25 >216 >20 limit/base >4 >20	820 898 851 1000 2750 current 3 3 3 0 current 0.4 8.6	978 1105 1059 1261 2850 history1 8 3 <1 history1 0.4 8.9	5 670 1342 697 858 2232 history2 52 3 8 history2 0.3 7.1
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm TS ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7845	450 3000 1150 4250 limit/base >25 >216 >20 limit/base >20 >4 >20 >30	820 898 851 1000 2750 current 3 3 0 current 0.4 8.6 20.5	978 1105 1059 1261 2850 history1 8 3 <1 history1 0.4 8.9 20.3	5 670 1342 697 858 2232 history2 52 3 8 8 history2 0.3 7.1 19.7
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE	ppm ppm ppm ppm TS ppm ppm ppm ppm % Abs/cm Abs/cm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7624	450 3000 1150 4250 Imit/base >25 >216 >20 Imit/base >4 >20 >30	820 898 851 1000 2750 current 3 3 3 0 current 0.4 8.6 20.5 current	978 1105 1059 1261 2850 history1 8 3 <1 history1 0.4 8.9 20.3 history1	5 670 1342 697 858 2232 history2 52 3 8 history2 0.3 7.1 19.7 history2
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE Oxidation	ppm ppm ppm ppm TS ppm ppm ppm ppm ppm Abs/cm Abs/cm Abs/1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7415	450 3000 1150 1350 4250 limit/base >20 limit/base >20 >30 limit/base >20	 820 898 851 1000 2750 current 3 3 0 current 0.4 8.6 20.5 current 16.9 	978 1105 1059 1261 2850 history1 8 3 <1 history1 0.4 8.9 20.3 history1 17.0	5 670 1342 697 858 2232 history2 52 3 8 history2 0.3 7.1 19.7 history2 15.5



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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		
10/24	19/24	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML		
Jan	Mar	Odor	scalar	*Visual	NORML	NORML	NORML	NORML		
C		Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG		
	· · · · · · · · · · · · · · · · · · ·	Free Water	scalar	*Visual		NEG	NEG	NEG		
	1	FLUID PROPE	RTIES	method	limit/base	current	history1	history2		
		Visc @ 100°C	cSt	ASTM D445	14.4	13.9	13.3	10.2		
		GRAPHS								
		Ferrous Alloys								
		35								
10/24	V Cr D F	30								
Jan	li il no	25 -								
		E 20								
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		5-								
		0	*****							
		130/23	10/24		r19/24					
		00	Jan		Mar					
		Non-ferrous Metals	5							
		copper								
		120 - management lead								
		E 80								
		60								
		40-								
		20								
		0 L #111	24		24					
		lct30/	an 10/7		lar19/					
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		16			。 デ100)_				
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	Laboratory	: GFL0115180	ived · ?P	Mar 2024	ar 2024 ar 2024 7811 Chubb Rd					
ACCREDITED	Lab Number	: 06129192	Tested : 27 Mar 2024			, NO	NORTHVILLE, MI			
TESTING LABORATORY	Unique Number	: 10943343	Diagr	nosed : 27	Mar 2024 - W	les Davis		US 48168		
Certificate 12367 Test Package : FLEET						Contact: Anthony Hopkins				
: 0 aiscuss this * - Denotes test	sample report, t methods that	contact Customer Servi are outside of the ISO 1	ce at 1-8 7025 scr	000-237-1369	ı. litation		anopkin	s@giienv.com T∙		
Statements of c	conformity to sp	pecifications are based of	n the sin	nple accepta	nce decision	rule (JCGM 106:2	2012)	F:		

Submitted By: John Nahal Page 2 of 2