

OIL ANALYSIS REPORT

Sample Rating Trend





Machine Id Component **Diesel Engine** Eluid DIESEL ENGINE OIL SAE 40 (--- 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 INFORM	NATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0089597	GFL0046603	GFL0077896
Sample Date		Client Info		23 Aug 2023	07 Aug 2023	05 May 2023
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				NORMAL	ABNORMAL	SEVERE
CONTAMINAT	ON	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	0.4	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>110	5	39	9
Chromium	ppm	ASTM D5185m	>4	<1	1	<1
Nickel	ppm	ASTM D5185m	>2	0	6	<1
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>2	0	1	0
Aluminum	ppm	ASTM D5185m	>25	3	<u> </u>	<1
Lead	ppm	ASTM D5185m	>45	0	0	<1
Copper	ppm	ASTM D5185m	>85	0	20	<1
Tin	ppm	ASTM D5185m	>4	0	3	2
Vanadium	ppm	ASTM D5185m		0	0	<1
Cadmium	ppm	ASTM D5185m		0	0	<1
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base 250	current 7	history1 76	history2 21
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	limit/base 250 10	current 7 0	history1 76 <1	history2 21 0
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 250 10 100	current 7 0 63	history1 76 <1 109	history2 21 0 60
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 250 10 100	current 7 0 63 <1	history1 76 <1 109 5	history2 21 0 60 <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 250 10 100 450	current 7 0 63 <1 922	history1 76 <1 109 5 740	history2 21 0 60 <1 976
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 250 10 100 450 3000	current 7 0 63 <1 922 1084	history1 76 <1 109 5 740 1410	history2 21 0 60 <1 976 1080
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 250 10 100 450 3000 1150	current 7 0 63 <1 922 1084 1020	history1 76 <1 109 5 740 1410 726	history2 21 0 60 <1 976 1080 1062
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 250 10 100 450 3000 1150 1350	current 7 0 63 <1 922 1084 1020 1231	history1 76 <1 109 5 740 1410 726 927	history2 21 0 60 <1 976 1080 1062 1321
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 250 10 100 450 3000 1150 1350 4250	current 7 0 63 <1 922 1084 1020 1231 3625	history1 76 <1 109 5 740 1410 726 927 2762	history2 21 0 60 <1 976 1080 1062 1321 3655
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 250 10 100 450 3000 1150 1350 4250 limit/base	current 7 0 63 <1 922 1084 1020 1231 3625 current	history1 76 <1 109 5 740 1410 726 927 2762 history1	history2 21 0 60 <1 976 1080 1062 1321 3655 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base 250 10 100 450 3000 1150 1350 4250 limit/base >30	current 7 0 63 <1 922 1084 1020 1231 3625 current 4	history1 76 <1 109 5 740 1410 726 927 2762 1410 × 73	history2 21 0 60 <1 976 1080 1062 1321 3655 history2 5
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm	method ASTM D5185m	limit/base 250 10 100 450 3000 1150 1350 4250 limit/base >30 >216	current 7 0 63 <1 922 1084 1020 1231 3625 current 4 1	history1 76 <1 109 5 740 1410 726 927 2762 history1 ▲ 73 4	history2 21 0 60 <1 976 1080 1062 1321 3655 history2 5 3
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base 250 10 100 450 3000 1150 1350 4250 limit/base >30 >216 >20	current 7 0 63 <1 922 1084 1020 1231 3625 current 4 1 <1	history1 76 <1 109 5 740 1410 726 927 2762 bistory1 ▲ 73 4 34	history2 21 0 60 <1 976 1080 1062 1321 3655 history2 5 3 3
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base 250 10 100 450 3000 1150 1350 4250 limit/base >20 limit/base	current 7 0 63 <1 922 1084 1020 1231 3625 current 4 1 <1 <1 <1	history1 76 <1 109 5 740 1410 726 927 2762 history1 ▲ 73 4 34 history1	history2 21 0 60 <1 976 1080 1062 1321 3655 history2 5 3 3
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm	method ASTM D5185m	limit/base 250 10 100 450 3000 1150 1350 4250 limit/base >30 >216 >20 limit/base	current 7 0 63 <1 922 1084 1020 1231 3625 current 4 1 <1 <1 0.1	history1 76 <1 109 5 740 1410 726 927 2762 bistory1 ▲ 73 4 34 bistory1 0.4	history2 21 0 60 <1 976 1080 1062 1321 3655 history2 5 3 3 history2 0.3
ADDITIVES 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 t ppm ppm	method ASTM D5185m	limit/base 250 10 100 450 3000 1150 1350 4250 limit/base >30 >216 >20 limit/base >3 }	current 7 0 63 <1 922 1084 1020 1231 3625 current 4 1 <1 current 0.1 5.3	history1 76 <1 109 5 740 1410 726 927 2762 bistory1 ▲ 73 4 34 bistory1 0.4 10.4	history2 21 0 60 <1 976 1080 1062 1321 3655 history2 5 3 history2 0.3 16.6
ADDITIVES 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	method ASTM D5185m	limit/base 250 10 100 450 3000 1150 1350 4250 limit/base >30 >216 >20 limit/base >3 >20	current 7 0 63 <1 922 1084 1020 1231 3625 current 4 1 <1 0.1 5.3 17.0	history1 76 <1 109 5 740 1410 726 927 2762 history1 ▲ 73 4 34 history1 0.4 10.4 23.3	history2 21 0 60 <1 976 1080 1062 1321 3655 history2 5 3 history2 0.3 16.6 7.9
ADDITIVES 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	method ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415 Method	limit/base 250 10 10 450 3000 1150 1350 4250 limit/base >30 >216 >20 limit/base >3 >20 30 >30 >30 >30 >30 >30 >30 >30 >30 >30 >30 >30 >30 >30 >30 >30 >30	current 7 0 63 <1 922 1084 1020 1231 3625 current 4 1 <1 current 0.1 5.3 17.0 current	history1 76 <1 109 5 740 1410 726 927 2762 history1 ▲ 73 4 34 history1 0.4 10.4 23.3 history1	history2 21 0 60 <1 976 1080 1062 1321 3655 history2 5 3 history2 0.3 16.6 7.9 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE Oxidation	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm % Abs/cm Abs/cm Abs/.1mm	method ASTM D5185m ASTM D7844 *ASTM D7415 Method *ASTM D7414	limit/base 250 10 10 450 3000 1150 1350 4250 limit/base >216 >20 limit/base >33 >20 >30 limit/base >25	current 7 0 63 <1 922 1084 1020 1231 3625 current 4 1 <1 current 0.1 5.3 17.0 current 12.4	history1 76 <1 109 5 740 1410 726 927 2762 history1 ▲ 73 4 34 history1 0.4 10.4 23.3 history1 22.7	history2 21 0 60 <1 976 1080 1062 1321 3655 history2 5 3 history2 0.3 16.6 7.9 history2 19.9



OIL ANALYSIS REPORT

VISUAL



	White Metal	scalar	*Visual	NONE	NONE	NONE	LIGHT					
	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	*Vieual	NONE	NONE	NONE	NONE					
23 -		scalar	*Visual	NORM	NORE	NORM	NORM					
Aug7/		Scalar	*Visual		NORML	NORML	NORM					
		scalar	visual	NORIVIL	NORML	NORML						
С		scalar	*Visual	>0.2	NEG	NEG	U.2%					
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	FLUID PROP	ERTIES	method	limit/base	current	history1	history2					
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Certificate L2367 Test Packag	je : FLEET			-		Contact: WI	LLIAM BROWN					
To discuss this sample repor	t, contact Customer Ser	vice at 1-80	00-237-1369	Э.		william.brov	wn@gflenv.com					
* - Denotes test methods that	t are outside of the ISO	17025 scor	pe of accred	itation.		T	: (706)936-4065					
Statements of conformity to sp	ecifications are based on	the simple a	acceptance d	lecision rule ((JCGM 106:201	2)	F:					