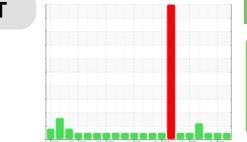


Area (YA144621) Machine Id

OIL ANALYSIS REPORT

SAMPLE INFORMATION method



Sample Rating Trend



3778C Component **Natural Gas Engine** Fluid CHEVRON DELO 400 NG (46 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

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 INFOR		method	limit/base	current	nistory i	nistory2
Sample Number		Client Info		GFL0115992	GFL0080515	GFL0066842
Sample Date		Client Info		02 Jul 2024	13 Oct 2023	20 Jul 2023
Machine Age	hrs	Client Info		10464	10464	10464
Oil Age	hrs	Client Info		0	10464	10464
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT		method	limit/base	ourropt	biotory1	history2
				current	history1	
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method				0.0
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	12	13	10
Chromium	ppm	ASTM D5185m	>4	<1	1	<1
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	2	0	1
Lead	ppm	ASTM D5185m	>30	0	<1	0
Copper	ppm	ASTM D5185m	>35	<1	<1	<1
Tin	ppm	ASTM D5185m	>4	0	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 26	history1 9	history2 27
	ppm ppm		limit/base		,	
Boron		ASTM D5185m	limit/base	26	9	27
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	26 0	9	27 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	26 0 53	9 2 54	27 0 55
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	26 0 53 0	9 2 54 <1	27 0 55 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	26 0 53 0 589	9 2 54 <1 533	27 0 55 <1 787
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	800	26 0 53 0 589 1558	9 2 54 <1 533 1496	27 0 55 <1 787 1425
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	800	26 0 53 0 589 1558 817	9 2 54 <1 533 1496 691	27 0 55 <1 787 1425 1017
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	800	26 0 53 0 589 1558 817 1019	9 2 54 <1 533 1496 691 922	27 0 55 <1 787 1425 1017 1232
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	800 880	26 0 53 0 589 1558 817 1019 2407	9 2 54 <1 533 1496 691 922 2346	27 0 55 <1 787 1425 1017 1232 3666
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	800 880 limit/base	26 0 53 0 589 1558 817 1019 2407 current	9 2 54 <1 533 1496 691 922 2346 history1	27 0 55 <1 787 1425 1017 1232 3666 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	800 880 limit/base >+100	26 0 53 0 589 1558 817 1019 2407 current 4	9 2 54 <1 533 1496 691 922 2346 history1 4	27 0 55 <1 787 1425 1017 1232 3666 history2 5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	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 method ASTM D5185m	800 880 limit/base >+100	26 0 53 0 589 1558 817 1019 2407 current 4 6	9 2 54 <1 533 1496 691 922 2346 history1 4 4	27 0 55 <1 787 1425 1017 1232 3666 history2 5 10
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	800 880 880 limit/base >+100 >20	26 0 53 0 589 1558 817 1019 2407 current 4 6 34	9 2 54 <1 533 1496 691 922 2346 history1 4 4 4 14	27 0 55 <1 787 1425 1017 1232 3666 history2 5 10 41
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	ASTM D5185m ASTM D5185m	800 880 880 >+100 >20 limit/base	26 0 53 0 589 1558 817 1019 2407 current 4 6 34 240 current	9 2 54 <1 533 1496 691 922 2346 history1 4 4 4 14 14 0	27 0 55 <1 787 1425 1017 1232 3666 history2 5 10 41 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	800 880 880 >+100 >20 limit/base	26 0 53 0 589 1558 817 1019 2407 <u>current</u> 4 6 34 <u>current</u> 0.1	9 2 54 <1 533 1496 691 922 2346 history1 4 4 14 14 history1	27 0 55 <1 787 1425 1017 1232 3666 history2 5 10 41 41 history2 0
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 ppm	ASTM D5185m ASTM D5185m	800 880 limit/base >+100 >20 limit/base	26 0 53 0 589 1558 817 1019 2407 <i>current</i> 4 6 34 <i>current</i> 0.1 9.2	9 2 54 <1 533 1496 691 922 2346 history1 4 4 4 14 14 0 0 10.6	27 0 55 <1 787 1425 1017 1232 3666 history2 5 10 41 41 history2 0 7.1
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	800 880 880 >+100 >=>20 imit/base >=>20 >=>30	26 0 53 0 589 1558 817 1019 2407 <i>current</i> 4 6 34 <i>current</i> 0.1 9.2 21.8 <i>current</i>	9 2 54 <1 533 1496 691 922 2346 history1 4 4 4 14 14 0 0 10.6 20.9 history1	27 0 55 <1 787 1425 1017 1232 3666 history2 5 10 41 5 10 41 history2 0 7.1 18.6 history2
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 D5185m	800 880 201 201 201 201 202 202 2030 201 202 202 2030 202 202 202 202 202 202 20	26 0 53 0 589 1558 817 1019 2407 <i>current</i> 4 6 34 <i>current</i> 0.1 9.2 21.8	9 2 54 <1 533 1496 691 922 2346 history1 4 4 4 14 14 0 0 10.6 20.9	27 0 55 <1 787 1425 1017 1232 3666 history2 5 10 41 history2 0 7.1 18.6

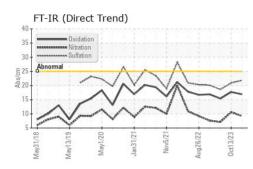


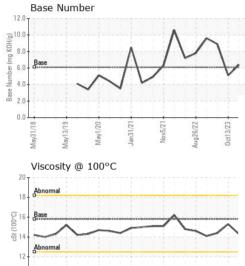
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OIL ANALYSIS REPORT





Mav1/20

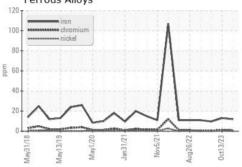
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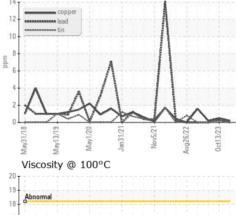
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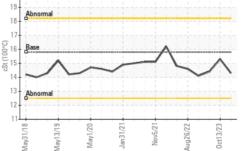
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	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	15.8	14.3	15.3	14.4
GRAPHS						

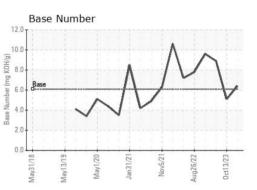
Ferrous Alloys











Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 GFL Environmental - 018 - Fayetteville Sample No. : GFL0115992 Received : 03 Jul 2024 4621 Marracco Drive Lab Number : 06227110 Tested : 05 Jul 2024 Hope Mills, NC Unique Number : 11110603 Diagnosed : 05 Jul 2024 - Wes Davis US 28348 Test Package : FLEET Contact: Robert Carter Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. robert.carter@gflenv.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (910)596-1170 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F:

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Report Id: GFL018 [WUSCAR] 06227110 (Generated: 07/09/2024 16:22:08) Rev: 1
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Submitted By: CHRIS HALL