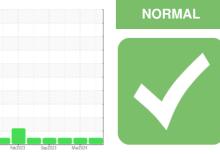


OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

921008-553

Diesel Engine Fluid CHEVRON DELO 400 XLE 15W40 (10 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.

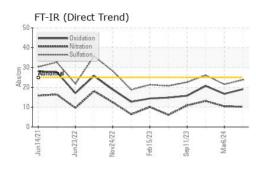
Fluid Condition

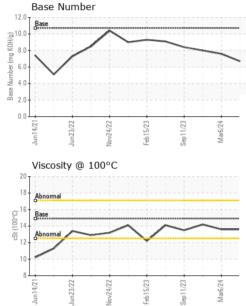
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0104673	GFL0104658	GFL0096268
Sample Date		Client Info		24 May 2024	06 Mar 2024	23 Nov 2023
Machine Age	hrs	Client Info		1235	8181	5801
Oil Age	hrs	Client Info		5801	5801	0
Oil Changed		Client Info		Changed	N/A	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
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	>100	11	14	39
Chromium	ppm	ASTM D5185m	>20	<1	<1	2
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		6	11	10
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	3	2	3
Lead	ppm	ASTM D5185m	>40	<1	<1	14
Copper	ppm	ASTM D5185m	>330	<1	<1	2
Tin	ppm	ASTM D5185m	>15	<1	<1	0
Vanadium	ppm	ASTM D5185m		<1	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 263	history1 117	history2 75
	ppm ppm		limit/base			
Boron		ASTM D5185m	limit/base	263	117	75
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	263 0	117 0	75 2
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	263 0 59	117 0 50	75 2 65
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	263 0 59 <1	117 0 50 <1	75 2 65 0
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	760	263 0 59 <1 528	117 0 50 <1 679 1548 758	75 2 65 0 680 1547 716
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		263 0 59 <1 528 1407	117 0 50 <1 679 1548	75 2 65 0 680 1547
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	760	263 0 59 <1 528 1407 841	117 0 50 <1 679 1548 758	75 2 65 0 680 1547 716
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	760 830	263 0 59 <1 528 1407 841 956	117 0 50 <1 679 1548 758 859	75 2 65 0 680 1547 716 837
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	760 830 2770 limit/base	263 0 59 <1 528 1407 841 956 3410	117 0 50 <1 679 1548 758 859 3360	75 2 65 0 680 1547 716 837 2960 history2 13
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	760 830 2770 limit/base	263 0 59 <1 528 1407 841 956 3410 current	117 0 50 <1 679 1548 758 859 3360 history1	75 2 65 0 680 1547 716 837 2960 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	760 830 2770 limit/base >25	263 0 59 <1 528 1407 841 956 3410 current 7	117 0 50 <1 679 1548 758 859 3360 history1 8	75 2 65 0 680 1547 716 837 2960 history2 13
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 ASTM D5185m ASTM D5185m	760 830 2770 limit/base >25	263 0 59 <1 528 1407 841 956 3410 current 7 2	117 0 50 <1 679 1548 758 859 3360 history1 8 4	75 2 65 0 680 1547 716 837 2960 history2 13 3
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	760 830 2770 limit/base >25 >20	263 0 59 <1 528 1407 841 956 3410 current 7 2 3	117 0 50 <1 679 1548 758 859 3360 history1 8 4 2	75 2 65 0 680 1547 716 837 2960 history2 13 3 5
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	760 830 2770 limit/base >25 >20 limit/base >3	263 0 59 <1 528 1407 841 956 3410 current 7 2 3 3 current	117 0 50 <1 679 1548 758 859 3360 history1 8 4 2 2 history1	75 2 65 0 680 1547 716 837 2960 history2 13 3 5 5
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 ppm ppm ppm	ASTM D5185m ASTM D5185m	760 830 2770 limit/base >25 >20 limit/base >3	263 0 59 <1 528 1407 841 956 3410 current 7 2 3 3 current 0.9	117 0 50 <1 679 1548 758 859 3360 history1 8 4 2 history1 0.9	75 2 65 0 680 1547 716 837 2960 history2 13 3 5 history2 1.8
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	760 830 2770 Iimit/base >25 >20 Iimit/base >3 >20	263 0 59 <1 528 1407 841 956 3410 <i>current</i> 7 2 3 <i>current</i> 0.9 10.2	117 0 50 <1 679 1548 758 859 3360 history1 8 4 2 history1 0.9 10.4	75 2 65 0 680 1547 716 837 2960 history2 13 3 5 history2 1.8 1.8 13.1
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 D5185m	760 830 2770 imit/base >25 >20 imit/base >20 imit/base >3 >20 >30	263 0 59 <1 528 1407 841 956 3410 <u>current</u> 7 2 3 3 <u>current</u> 0.9 10.2 23.8	117 0 50 <1 679 1548 758 859 3360 history1 8 4 2 2 history1 0.9 10.4 21.5	75 2 65 0 680 1547 716 837 2960 history2 13 3 5 bistory2 1.8 13.1 26.1



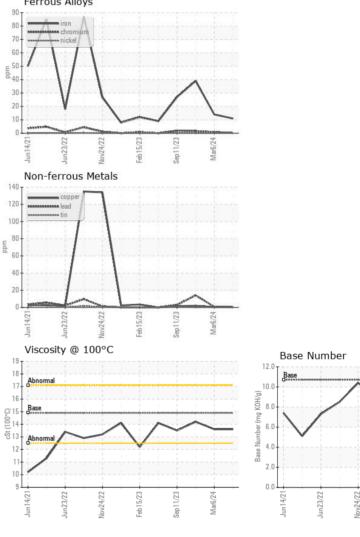
OIL ANALYSIS REPORT





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
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	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	14.9	13.6	13.6	14.2

GRAPHS Ferrous Alloys



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 GFL Environmental - 624 - Elmira Hauling Sample No. : GFL0104673 : 03 Jun 2024 Received 10164 M-32 Lab Number : 06198592 Tested : 04 Jun 2024 Elmira, MI US 49730 Unique Number : 11060715 Diagnosed : 04 Jun 2024 - Wes Davis Test Package : FLEET Contact: ANDY GROBASKI Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. andyg@americanwaste.org T: (989)370-2941 * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. F:

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Submitted By: KEITH CAMPBELL

Mar6/24

Sep11/23

Feb 15/23