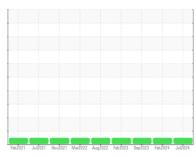


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id 123008-746

Component

Diesel Engine

CHEVRON DELO 400 XLE 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

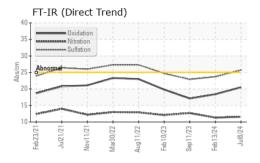
Fluid Condition

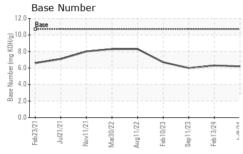
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

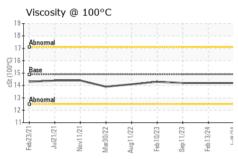
Machine Age hrs Client Info 19231 18591 17990 Oil Age hrs Client Info 640 601 738 Oil Changed Client Info Changed Changed			P802021 Ju	12021 NOV2021 WHIZUZZ	Augzozz reozoza aepzoza reozo	24 3012024	
Sample Date	SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Date Client Info 08 Jul 2024 13 Feb 2024 11 Sep 2023 Machine Age hrs Client Info 19231 18591 17990 Oil Age hrs Client Info 640 601 738 Oil Changed Client Info Changed Changed Changed Changed Sample Status Client Info Changed NORMAL NORMAL NORMAL CONTAMINATION method limit/base current history1 history2 Fuel WC Method >5 <1.0 <1.0 <1.0 <1.0 Water WC Method >0.2 NEG NEG NEG NEG Glycol WC Method >0.2 NEG NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >4 0 <1 <1 Chromium ppm ASTM D5185m >2 0 <1	Sample Number		Client Info		GFL0122754	GFL0096085	GFL0084503
Machine Age hrs Client Info 19231 18591 17990	Sample Date		Client Info		08 Jul 2024	13 Feb 2024	11 Sep 2023
Client Info Changed NORMAL NORMAL NORMAL NORMAL NORMAL	Machine Age	hrs	Client Info			18591	
Client Info Changed Changed NORMAL NORMAL NORMAL	Oil Age	hrs	Client Info		640	601	738
NORMAL NORMAL NORMAL NORMAL	-		Client Info		Changed	Changed	Changed
Fuel	Sample Status				_		
Water Glycol WC Method WC Method >0.2 NEG NEG NEG NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >11 0 18 14 24 Chromium ppm ASTM D5185m >4 0 <1 <1 Nickel ppm ASTM D5185m >2 0 <1 0 Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >25 2 3 4 Lead ppm ASTM D5185m >45 2 3 6 Copper ppm ASTM D5185m >4 0 <1 <1 Tin ppm ASTM D5185m 0 0 <1 <1 Cadmium ppm ASTM D5185m 91 91	CONTAMINAT	ION	method	limit/base	current	history1	history2
WEAR METALS	Fuel		WC Method	>5	<1.0	<1.0	<1.0
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >110 18 14 24 Chromium ppm ASTM D5185m >4 0 <1	Water		WC Method	>0.2	NEG	NEG	NEG
Irron	Glycol		WC Method		NEG	NEG	NEG
Chromium ppm ASTM D5185m >4 0 <1	WEAR METAL	S	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>110	18	14	24
Titanium	Chromium		ASTM D5185m	>4	0	<1	<1
Titanium	Nickel		ASTM D5185m	>2	0	<1	0
Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >25 2 3 4 Lead ppm ASTM D5185m >45 2 3 6 Copper ppm ASTM D5185m >85 0 1 1 Tin ppm ASTM D5185m >4 0 <1 <1 Vanadium ppm ASTM D5185m 0 <1 <1 Vanadium ppm ASTM D5185m 0 <1 <1 Cadmium ppm ASTM D5185m 0 <1 <1 Boron ppm ASTM D5185m 91 91 64 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	Titanium		ASTM D5185m		9	12	14
Lead	Silver	ppm	ASTM D5185m	>2	0	0	0
Copper ppm ASTM D5185m >85 0 1 1 Tin ppm ASTM D5185m >4 0 <1	Aluminum	ppm	ASTM D5185m	>25	2	3	4
Copper ppm ASTM D5185m >85 0 1 1 Tin ppm ASTM D5185m >4 0 <1	Lead	ppm	ASTM D5185m	>45	2	3	6
Vanadium ppm ASTM D5185m 0 <1 <1 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 91 91 64 Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 64 54 48 Manganese ppm ASTM D5185m 0 <1 <1 Magnesium ppm ASTM D5185m 668 683 741 Calcium ppm ASTM D5185m 760 986 728 722 Zinc ppm ASTM D5185m 830 1136 892 903 Sulfur ppm ASTM D5185m 270 3990 2982 3912 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m<	Copper		ASTM D5185m	>85	0	1	1
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 91 91 64 Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 64 54 48 Manganese ppm ASTM D5185m 0 <1	Tin	ppm	ASTM D5185m	>4	0	<1	<1
ADDITIVES	Vanadium	ppm	ASTM D5185m		0	<1	<1
Boron	Cadmium	ppm	ASTM D5185m		0	0	0
Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 64 54 48 Manganese ppm ASTM D5185m 0 <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 64 54 48 Manganese ppm ASTM D5185m 0 <1	Boron	ppm	ASTM D5185m		91	91	64
Manganese ppm ASTM D5185m 0 <1 <1 Magnesium ppm ASTM D5185m 668 683 741 Calcium ppm ASTM D5185m 668 683 741 Phosphorus ppm ASTM D5185m 760 986 728 722 Zinc ppm ASTM D5185m 830 1136 892 903 Sulfur ppm ASTM D5185m 2770 3990 2982 3912 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 5 6 6 Sodium ppm ASTM D5185m >30 5 6 6 Potassium ppm ASTM D5185m >20 2 4 5 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.8 0.9 <t< td=""><td>Barium</td><td>ppm</td><td>ASTM D5185m</td><td></td><th>0</th><td>0</td><td>0</td></t<>	Barium	ppm	ASTM D5185m		0	0	0
Magnesium ppm ASTM D5185m 668 683 741 Calcium ppm ASTM D5185m 1614 1462 1834 Phosphorus ppm ASTM D5185m 760 986 728 722 Zinc ppm ASTM D5185m 830 1136 892 903 Sulfur ppm ASTM D5185m 2770 3990 2982 3912 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 5 6 6 Sodium ppm ASTM D5185m >20 2 4 5 Potassium ppm ASTM D5185m >20 2 4 5 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.8 0.9 0.8 Nitration Abs/cmm *ASTM D7415 >30 25.7 <t< td=""><td>Molybdenum</td><td>ppm</td><td>ASTM D5185m</td><td></td><th>64</th><td>54</td><td>48</td></t<>	Molybdenum	ppm	ASTM D5185m		64	54	48
Calcium ppm ASTM D5185m 1614 1462 1834 Phosphorus ppm ASTM D5185m 760 986 728 722 Zinc ppm ASTM D5185m 830 1136 892 903 Sulfur ppm ASTM D5185m 2770 3990 2982 3912 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 5 6 6 Sodium ppm ASTM D5185m 4 5 6 Potassium ppm ASTM D5185m >20 2 4 5 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.8 0.9 0.8 Nitration Abs/.1mm *ASTM D7415 >30 25.7 23.7 22.9 FLUID DEGRADATION method limit/base cur	Manganese	ppm	ASTM D5185m		0	<1	<1
Phosphorus ppm ASTM D5185m 760 986 728 722 Zinc ppm ASTM D5185m 830 1136 892 903 Sulfur ppm ASTM D5185m 2770 3990 2982 3912 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 5 6 6 Sodium ppm ASTM D5185m >30 5 6 6 Potassium ppm ASTM D5185m >20 2 4 5 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.8 0.9 0.8 Nitration Abs/cm *ASTM D7624 >20 11.6 11.3 12.7 Sulfation Abs/.1mm *ASTM D7415 >30 25.7 23.7 22.9 FLUID DEGRADATION method </th <th>Magnesium</th> <th>ppm</th> <th>ASTM D5185m</th> <th></th> <th>668</th> <th>683</th> <th>741</th>	Magnesium	ppm	ASTM D5185m		668	683	741
Zinc ppm ASTM D5185m 830 1136 892 903 Sulfur ppm ASTM D5185m 2770 3990 2982 3912 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 5 6 6 Sodium ppm ASTM D5185m 4 5 6 Potassium ppm ASTM D5185m >20 2 4 5 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.8 0.9 0.8 Nitration Abs/cm *ASTM D7624 >20 11.6 11.3 12.7 Sulfation Abs/.1mm *ASTM D7415 >30 25.7 23.7 22.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25<	Calcium	ppm	ASTM D5185m		1614	1462	1834
Sulfur ppm ASTM D5185m 2770 3990 2982 3912 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 5 6 6 Sodium ppm ASTM D5185m 4 5 6 Potassium ppm ASTM D5185m >20 2 4 5 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.8 0.9 0.8 Nitration Abs/cm *ASTM D7624 >20 11.6 11.3 12.7 Sulfation Abs/.1mm *ASTM D7415 >30 25.7 23.7 22.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 20.5 18.4 17.1	Phosphorus	ppm	ASTM D5185m	760	986	728	722
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 5 6 6 Sodium ppm ASTM D5185m 4 5 6 Potassium ppm ASTM D5185m >20 2 4 5 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.8 0.9 0.8 Nitration Abs/cm *ASTM D7624 >20 11.6 11.3 12.7 Sulfation Abs/.1mm *ASTM D7415 >30 25.7 23.7 22.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 20.5 18.4 17.1	Zinc	ppm	ASTM D5185m	830	1136	892	903
Silicon ppm ASTM D5185m >30 5 6 6 Sodium ppm ASTM D5185m 4 5 6 Potassium ppm ASTM D5185m >20 2 4 5 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.8 0.9 0.8 Nitration Abs/cm *ASTM D7624 >20 11.6 11.3 12.7 Sulfation Abs/.1mm *ASTM D7415 >30 25.7 23.7 22.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 20.5 18.4 17.1	Sulfur	ppm	ASTM D5185m	2770	3990	2982	3912
Sodium ppm ASTM D5185m 4 5 6 Potassium ppm ASTM D5185m >20 2 4 5 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.8 0.9 0.8 Nitration Abs/cm *ASTM D7624 >20 11.6 11.3 12.7 Sulfation Abs/.1mm *ASTM D7415 >30 25.7 23.7 22.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 20.5 18.4 17.1	CONTAMINAN	ITS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 2 4 5 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.8 0.9 0.8 Nitration Abs/cm *ASTM D7624 >20 11.6 11.3 12.7 Sulfation Abs/.1mm *ASTM D7415 >30 25.7 23.7 22.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 20.5 18.4 17.1	Silicon	ppm	ASTM D5185m	>30	5	6	6
INFRA-RED	Sodium	ppm	ASTM D5185m		4	5	6
Soot % % *ASTM D7844 >3 0.8 0.9 0.8 Nitration Abs/cm *ASTM D7624 >20 11.6 11.3 12.7 Sulfation Abs/.1mm *ASTM D7415 >30 25.7 23.7 22.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 20.5 18.4 17.1	Potassium	ppm	ASTM D5185m	>20	2	4	5
Nitration Abs/cm *ASTM D7624 >20 11.6 11.3 12.7 Sulfation Abs/.1mm *ASTM D7415 >30 25.7 23.7 22.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 20.5 18.4 17.1	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 25.7 23.7 22.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 20.5 18.4 17.1	Soot %	%	*ASTM D7844	>3	0.8	0.9	0.8
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 20.5 18.4 17.1	Nitration	Abs/cm	*ASTM D7624	>20	11.6	11.3	12.7
Oxidation Abs/.1mm *ASTM D7414 >25 20.5 18.4 17.1	Sulfation	Abs/.1mm	*ASTM D7415	>30	25.7	23.7	22.9
	FLUID DEGRA	OATION	method	limit/base	current	history1	history2
	Oxidation	Abs/.1mm	*ASTM D7414	>25	20.5	18.4	17.1
	Base Number (BN)	mg KOH/g	ASTM D2896		6.2	6.3	6.0



OIL ANALYSIS REPORT



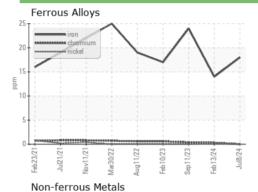


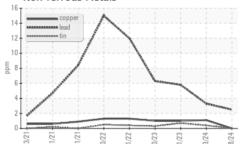


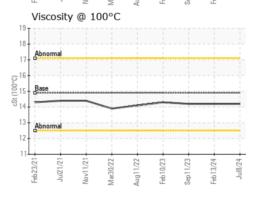
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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

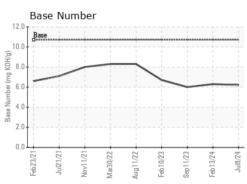
FLUID PROPI	ERHES	method				history2
Visc @ 100°C	cSt	ASTM D445	14.9	14.2	14.2	14.2

GRAPHS













Certificate 12367

Laboratory Sample No.

: GFL0122754 Lab Number : 06232964 Unique Number : 11116457 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 11 Jul 2024

Tested : 11 Jul 2024 Diagnosed

: 12 Jul 2024 - Don Baldridge

GFL Environmental - 629 - Northern A1

3947 US 131 N Kalkaska, MI US 49646-8428

T: (231)624-0848

Contact: MITCH HERSHBERGER

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Submitted By: Mitch Hershberger