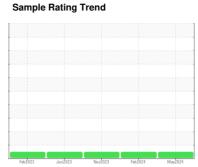


OIL ANALYSIS REPORT









Machine Id 712049 Diesel Engine

CHEVRON DELO 400 XLE 15W40 (10 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

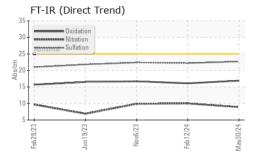
Fluid Condition

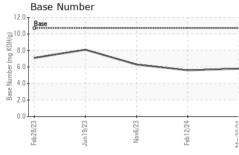
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

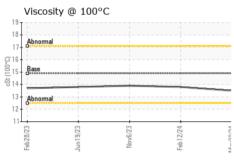
ALE 101140 (10 C	,					
SAMPLE INFORM	NOITAN	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0104697	GFL0096242	GFL0096237
Sample Date		Client Info		30 May 2024	12 Feb 2024	06 Nov 2023
Machine Age	hrs	Client Info		4843	4244	3649
Oil Age	hrs	Client Info		4244	3649	0
Oil Changed		Client Info		Not Changd	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATI	ON	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>120	10	8	8
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	3	3	4
Titanium	ppm	ASTM D5185m	>2	6	10	10
Silver	ppm	ASTM D5185m	>2	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	2	2	2
Lead	ppm	ASTM D5185m	>40	0	0	<1
Copper	ppm	ASTM D5185m	>330	3	<1	<1
Tin	ppm	ASTM D5185m	>15	0	<1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		179	69	63
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		61	47	48
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		514	626	663
Calcium	ppm	ASTM D5185m		1507		
Di i		/ TO THE DO TOOM		1507	1353	1433
Phosphorus	ppm	ASTM D5185m	760	842	1353 610	1433 672
Pnospnorus Zinc			760 830			
Zinc	ppm	ASTM D5185m		842	610	672
Zinc	ppm ppm	ASTM D5185m ASTM D5185m	830	842 976	610 767	672 837 2728
Zinc Sulfur	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	830 2770	842 976 3270	610 767 2596	672 837 2728
Zinc Sulfur CONTAMINAN	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method	830 2770 limit/base	842 976 3270 current	610 767 2596 history1	672 837 2728 history2
Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	830 2770 limit/base	842 976 3270 current	610 767 2596 history1	672 837 2728 history2
Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm TS ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	830 2770 limit/base >25	842 976 3270 current 0 4	610 767 2596 history1 4	672 837 2728 history2 5 4
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm TS ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m	830 2770 limit/base >25 >20	842 976 3270 current 0 4 <1	610 767 2596 history1 4 4 2	672 837 2728 history2 5 4
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	830 2770 limit/base >25 >20 limit/base	842 976 3270 current 0 4 <1	610 767 2596 history1 4 4 2 history1	672 837 2728 history2 5 4 3 history2
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method *ASTM D7844	830 2770 limit/base >25 >20 limit/base >4	842 976 3270 current 0 4 <1 current 0.6	610 767 2596 history1 4 4 2 history1 0.6	672 837 2728 history2 5 4 3 history2 0.6
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm TS ppm ppm ppm ppm Abs/cm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7415	830 2770 limit/base >25 >20 limit/base >4 >20	842 976 3270 current 0 4 <1 current 0.6 8.9	610 767 2596 history1 4 4 2 history1 0.6 10.0	672 837 2728 history2 5 4 3 history2 0.6 9.9
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm TS ppm ppm ppm ppm Abs/cm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7415	830 2770 limit/base >25 >20 limit/base >4 >20 >30	842 976 3270 current 0 4 <1 current 0.6 8.9 22.7	610 767 2596 history1 4 4 2 history1 0.6 10.0 22.2	672 837 2728 history2 5 4 3 history2 0.6 9.9 22.4



OIL ANALYSIS REPORT



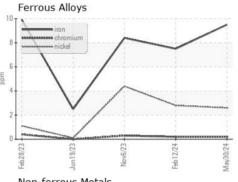


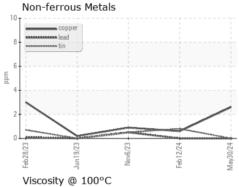


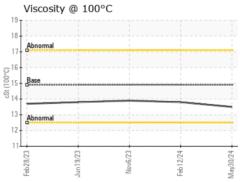
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

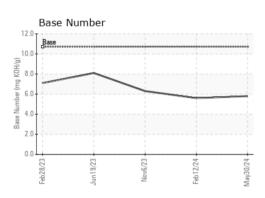
FLUID PROPI	ERIIES	method				history2
Visc @ 100°C	cSt	ASTM D445	14.9	13.5	13.8	13.9

GRAPHS













Laboratory Sample No.

: GFL0104697 Lab Number : 06198866

Unique Number : 11060989 Test Package : FLEET

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

: 04 Jun 2024 **Tested** : 05 Jun 2024

Diagnosed : 05 Jun 2024 - Wes Davis

10164 M-32 Elmira, MI US 49730 Contact: ANDY GROBASKI

andyg@americanwaste.org T: (989)370-2941

Certificate 12367

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)

Report Id: GFL624 [WUSCAR] 06198866 (Generated: 06/05/2024 04:40:12) Rev: 1

Submitted By: KEITH CAMPBELL

GFL Environmental - 624 - Elmira Hauling