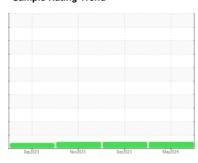


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
1184
Component
Diesel Engine

CHEVRON DELO 400 XLE 10W30 (--- 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.

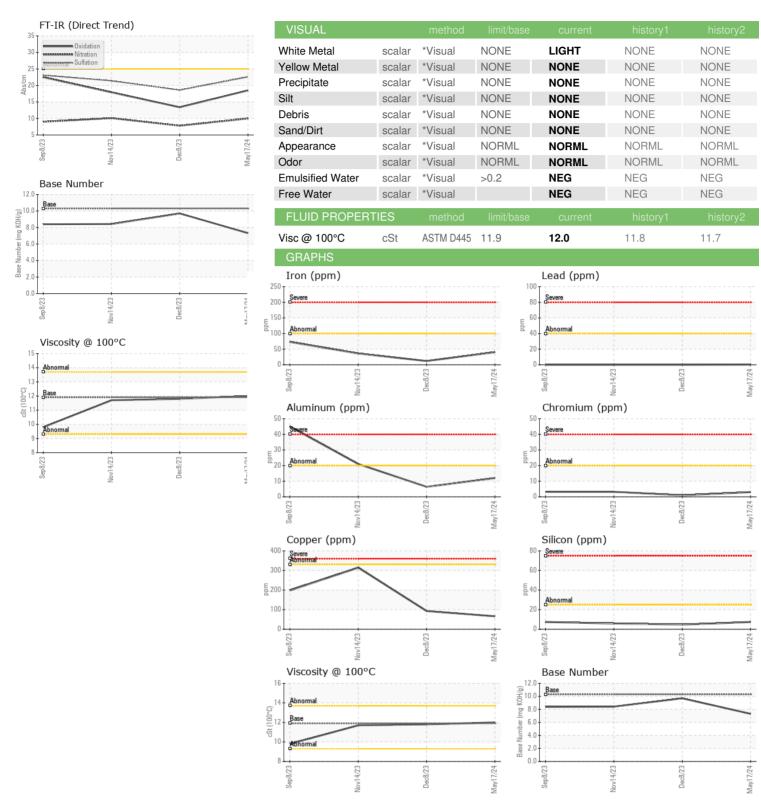
Fluid Condition

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

SAMPLE INFORMATION method limit/base current history1 history2			Sep 202	3 Nov2023	Dec2023 M	lay2024	
Sample Date	SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Date Client Info 17 May 2024 08 Dec 2023 14 Nov 2023 Machine Age mis Client Info 400000 40000 40000 400000 400000 400000 400000 400000 400000 400000 400000 400000 400000 400000 400000 4000000 40000000 400000000	Sample Number		Client Info		WC0851778	WC0733146	WC0733145
Machine Age mls Client Info 104792 100120 57148 Oil Age mls Client Info 40000 40000 40000 Oil Changed Client Info Changed N/A Changed Sample Status method Imilibase current history history2 Fuel WC Method >5 <1.0 <1.0 <1.0 Water WC Method >0.2 NEG NEG NEG Iron WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 40 12 36 Chromium ppm ASTM D5185m >100 40 12 36 Chromium ppm ASTM D5185m >20 3 1 3 Nickel ppm ASTM D5185m >20 3 1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1<			Client Info		17 May 2024	08 Dec 2023	14 Nov 2023
Oil Age mls Client Info 40000 40000 40000 Oil Changed Client Info Changed N/A Changed Sample Status NORMAL NORMAL NORMAL NORMAL NORMAL CONTAMINATION method limil/base current history1 history2 Fuel WC Method >5 <1.0 <1.0 <1.0 Water WC Method NEG NEG NEG NEG Glycol WC Method Imilibase current history1 history2 Iron ppm ASTM D5185m >100 40 12 36 Chromium ppm ASTM D5185m >20 3 1 3 Nickel ppm ASTM D5185m >3 <1 0 0 Silver ppm ASTM D5185m >20 12 6 21 Lead ppm ASTM D5185m >33 66 93 314 Tin <t< th=""><th></th><th>mls</th><th>Client Info</th><th></th><th>-</th><th>100120</th><th>57148</th></t<>		mls	Client Info		-	100120	57148
Oil Changed Sample Status Client Info Changed NORMAL NORMAL NORMAL NORMAL Changed NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMA		mls	Client Info		40000	40000	40000
CONTAMINATION 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 METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 40 12 36 Chromium ppm ASTM D5185m >20 3 1 3 Nickel ppm ASTM D5185m >4 <1 0 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	-		Client Info		Changed	N/A	Changed
Fuel	Sample Status				NORMAL	NORMAL	NORMAL
Water Glycol WC Method >0.2 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 40 12 36 Chromium ppm ASTM D5185m >20 3 1 3 Nickel ppm ASTM D5185m >4 <1	CONTAMINATIO	Ν	method	limit/base	current	history1	history2
Silycol WC Method MEG NEG NEG	Fuel		WC Method	>5	<1.0	<1.0	<1.0
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 40 12 36 Chromium ppm ASTM D5185m >20 3 1 3 Nickel ppm ASTM D5185m >4 <1 0 <1 Titanium ppm ASTM D5185m >3 <1 0 0 Aluminum ppm ASTM D5185m >3 <1 0 0 Aluminum ppm ASTM D5185m >20 12 6 21 Lead ppm ASTM D5185m >20 12 6 21 Lead ppm ASTM D5185m >20 12 6 21 Lead ppm ASTM D5185m >330 66 93 314 Tin ppm ASTM D5185m <1 0 <1 0 Cadmium ppm ASTM D5185m 33 78 42	Water		WC Method	>0.2	NEG	NEG	NEG
Iron	Glycol		WC Method		NEG	NEG	NEG
Chromium ppm ASTM D5185m >20 3 1 3 Nickel ppm ASTM D5185m >4 <1 0 <1 Titanium ppm ASTM D5185m >3 <1 0 0 Silver ppm ASTM D5185m >3 <1 0 0 Aluminum ppm ASTM D5185m >30 66 93 314 Lead ppm ASTM D5185m >40 <1 0 0 Copper ppm ASTM D5185m >330 66 93 314 Tin ppm ASTM D5185m >15 1 0 <1 Vanadium ppm ASTM D5185m <1 0 0 <1 Vanadium ppm ASTM D5185m <1 0 0 <1 Vanadium ppm ASTM D5185m <3 78 42 Barium ppm ASTM D5185m 2 3 10	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>100	40	12	36
Titanium	Chromium	ppm	ASTM D5185m	>20	3	1	3
Silver ppm ASTM D5185m >3 <1	Nickel	ppm	ASTM D5185m	>4	<1	0	<1
Aluminum ppm ASTM D5185m >20 12 6 21 Lead ppm ASTM D5185m >40 <1 0 0 Copper ppm ASTM D5185m >330 66 93 314 Tin ppm ASTM D5185m >15 1 0 <1 Vanadium ppm ASTM D5185m <1 0 0 Cadmium ppm ASTM D5185m <1 0 0 Cadmium ppm ASTM D5185m <1 0 0 Boron ppm ASTM D5185m 2 6 6 Barium ppm ASTM D5185m 2 6 6 Molybdenum ppm ASTM D5185m 2 3 10 Manganese ppm ASTM D5185m 798 698 706 Calcium ppm ASTM D5185m 2900 1427 1267 1370 Phosphorus ppm ASTM D5185m 120	Titanium	ppm	ASTM D5185m		<1	<1	<1
Lead ppm ASTM D5185m >40 <1	Silver	ppm	ASTM D5185m	>3	<1	0	0
Copper ppm ASTM D5185m >330 66 93 314 Tin ppm ASTM D5185m >15 1 0 <1 Vanadium ppm ASTM D5185m <1 0 0 Cadmium ppm ASTM D5185m <1 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 2 6 6 6 Barium ppm ASTM D5185m 2 6 6 6 Molybdenum ppm ASTM D5185m 2 3 10 1 Manganese ppm ASTM D5185m 2 3 10 1 Magnesium ppm ASTM D5185m 798 698 706 6 Calcium ppm ASTM D5185m 1100 826 787 808 21 25 787 808 866 866 866 866 866	Aluminum	ppm	ASTM D5185m	>20	12	6	21
Tin ppm ASTM D5185m >15 1 0 <1	Lead	ppm	ASTM D5185m	>40	<1	0	0
Vanadium ppm ASTM D5185m <1	Copper	ppm	ASTM D5185m	>330	66	93	314
Cadmium ppm ASTM D5185m <1	Tin	ppm	ASTM D5185m	>15	1	0	<1
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 33 78 42 Barium ppm ASTM D5185m 2 6 6 Molybdenum ppm ASTM D5185m 2 3 10 Manganese ppm ASTM D5185m 1 0 1 Magnesium ppm ASTM D5185m 798 698 706 Calcium ppm ASTM D5185m 2900 1427 1267 1370 Phosphorus ppm ASTM D5185m 2900 1427 1267 1370 Phosphorus ppm ASTM D5185m 1200 901 813 856 Sulfur ppm ASTM D5185m 4000 3023 3091 2651 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 34 16 56	Vanadium	ppm	ASTM D5185m		<1	0	0
Boron	Cadmium	ppm	ASTM D5185m		<1	0	0
Barium ppm ASTM D5185m 2 6 6 Molybdenum ppm ASTM D5185m 2 3 10 Manganese ppm ASTM D5185m 1 0 1 Magnesium ppm ASTM D5185m 798 698 706 Calcium ppm ASTM D5185m 2900 1427 1267 1370 Phosphorus ppm ASTM D5185m 1100 826 787 808 Zinc ppm ASTM D5185m 1200 901 813 856 Sulfur ppm ASTM D5185m 4000 3023 3091 2651 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 7 5 6 Sodium ppm ASTM D5185m >20 34 16 56 INFRA-RED method limit/base current history1 history2 <	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 2 3 10 Manganese ppm ASTM D5185m 1 0 1 Magnesium ppm ASTM D5185m 798 698 706 Calcium ppm ASTM D5185m 2900 1427 1267 1370 Phosphorus ppm ASTM D5185m 1100 826 787 808 Zinc ppm ASTM D5185m 1200 901 813 856 Sulfur ppm ASTM D5185m 4000 3023 3091 2651 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 7 5 6 Sodium ppm ASTM D5185m >20 34 16 56 INFRA-RED method limit/base current history1 history2 Soot % *ASTM D7844 >3 0.6 0.2 0.4	Boron	ppm	ASTM D5185m		33	78	42
Manganese ppm ASTM D5185m 1 0 1 Magnesium ppm ASTM D5185m 798 698 706 Calcium ppm ASTM D5185m 2900 1427 1267 1370 Phosphorus ppm ASTM D5185m 1100 826 787 808 Zinc ppm ASTM D5185m 1200 901 813 856 Sulfur ppm ASTM D5185m 4000 3023 3091 2651 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 7 5 6 Sodium ppm ASTM D5185m >20 34 16 56 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.6 0.2 0.4 Nitration Abs/cm *ASTM D7845 >30 22.6	Barium	ppm	ASTM D5185m		2	6	6
Magnesium ppm ASTM D5185m 798 698 706 Calcium ppm ASTM D5185m 2900 1427 1267 1370 Phosphorus ppm ASTM D5185m 1100 826 787 808 Zinc ppm ASTM D5185m 1200 901 813 856 Sulfur ppm ASTM D5185m 4000 3023 3091 2651 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 7 5 6 Sodium ppm ASTM D5185m >20 34 16 56 INFRA-RED method limit/base current history1 history2 Soot % "ASTM D7844 >3 0.6 0.2 0.4 Nitration Abs/cm "ASTM D7624 >20 10.0 7.8 10.1 Sulfation Abs/.1mm "ASTM D7415 >30 2	Molybdenum	ppm	ASTM D5185m		2		10
Calcium ppm ASTM D5185m 2900 1427 1267 1370 Phosphorus ppm ASTM D5185m 1100 826 787 808 Zinc ppm ASTM D5185m 1200 901 813 856 Sulfur ppm ASTM D5185m 4000 3023 3091 2651 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 7 5 6 Sodium ppm ASTM D5185m >20 34 16 56 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.6 0.2 0.4 Nitration Abs/cm *ASTM D7624 >20 10.0 7.8 10.1 Sulfation Abs/.1mm *ASTM D7415 >30 22.6 18.6 21.4 FLUID DEGRADATION <	Manganese	ppm	ASTM D5185m		1		1
Phosphorus ppm ASTM D5185m 1100 826 787 808 Zinc ppm ASTM D5185m 1200 901 813 856 Sulfur ppm ASTM D5185m 4000 3023 3091 2651 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 7 5 6 Sodium ppm ASTM D5185m >20 34 16 56 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >20 10.0 7.8 10.1 Nitration Abs/.1mm *ASTM D7415 >30 22.6 18.6 21.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.5 13.4 17.9	Magnesium	ppm	ASTM D5185m		798	698	706
Zinc ppm ASTM D5185m 1200 901 813 856 Sulfur ppm ASTM D5185m 4000 3023 3091 2651 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 7 5 6 Sodium ppm ASTM D5185m >20 34 16 56 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.6 0.2 0.4 Nitration Abs/cm *ASTM D7624 >20 10.0 7.8 10.1 Sulfation Abs/.1mm *ASTM D7415 >30 22.6 18.6 21.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.5 13.4 17.9	Calcium	ppm	ASTM D5185m	2900	1427	1267	1370
Sulfur ppm ASTM D5185m 4000 3023 3091 2651 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 7 5 6 Sodium ppm ASTM D5185m >20 34 4 3 Potassium ppm ASTM D5185m >20 34 16 56 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.6 0.2 0.4 Nitration Abs/cm *ASTM D7624 >20 10.0 7.8 10.1 Sulfation Abs/.1mm *ASTM D7415 >30 22.6 18.6 21.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.5 13.4 17.9	Phosphorus	ppm	ASTM D5185m	1100	826	787	808
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 7 5 6 Sodium ppm ASTM D5185m >20 34 4 3 Potassium ppm ASTM D5185m >20 34 16 56 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.6 0.2 0.4 Nitration Abs/cm *ASTM D7624 >20 10.0 7.8 10.1 Sulfation Abs/.1mm *ASTM D7415 >30 22.6 18.6 21.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.5 13.4 17.9	Zinc	ppm	ASTM D5185m	1200	901	813	856
Silicon ppm ASTM D5185m >25 7 5 6 Sodium ppm ASTM D5185m 4 4 3 Potassium ppm ASTM D5185m >20 34 16 56 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.6 0.2 0.4 Nitration Abs/cm *ASTM D7624 >20 10.0 7.8 10.1 Sulfation Abs/.1mm *ASTM D7415 >30 22.6 18.6 21.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.5 13.4 17.9			ASTM D5185m	4000	3023	3091	2651
Sodium ppm ASTM D5185m 4 4 3 Potassium ppm ASTM D5185m >20 34 16 56 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.6 0.2 0.4 Nitration Abs/cm *ASTM D7624 >20 10.0 7.8 10.1 Sulfation Abs/.1mm *ASTM D7415 >30 22.6 18.6 21.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.5 13.4 17.9	CONTAMINANTS	3	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 34 16 56 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.6 0.2 0.4 Nitration Abs/cm *ASTM D7624 >20 10.0 7.8 10.1 Sulfation Abs/.1mm *ASTM D7415 >30 22.6 18.6 21.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.5 13.4 17.9		ppm		>25	7	5	
INFRA-RED		ppm	ASTM D5185m		4		3
Soot % % *ASTM D7844 >3 0.6 0.2 0.4 Nitration Abs/cm *ASTM D7624 >20 10.0 7.8 10.1 Sulfation Abs/.1mm *ASTM D7415 >30 22.6 18.6 21.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.5 13.4 17.9	Potassium	ppm	ASTM D5185m	>20	34	16	56
Nitration Abs/cm *ASTM D7624 >20 10.0 7.8 10.1 Sulfation Abs/.1mm *ASTM D7415 >30 22.6 18.6 21.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.5 13.4 17.9	INFRA-RED		method	limit/base		history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 22.6 18.6 21.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.5 13.4 17.9	Soot %	%	*ASTM D7844	>3	0.6	0.2	0.4
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.5 13.4 17.9	Nitration	Abs/cm	*ASTM D7624	>20	10.0	7.8	10.1
Oxidation Abs/.1mm *ASTM D7414 >25 18.5 13.4 17.9	Sulfation	Abs/.1mm	*ASTM D7415	>30	22.6	18.6	21.4
	FLUID DEGRADA	ATION	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 10.3 7.32 9.70 8.42	Oxidation	Abs/.1mm	*ASTM D7414	>25	18.5	13.4	17.9
	Base Number (BN)	mg KOH/g	ASTM D2896	10.3	7.32	9.70	8.42



OIL ANALYSIS REPORT







Certificate 12367

Laboratory Sample No.

: WC0851778 Lab Number : 06196873 Unique Number : 11058996

Test Package : MOB 2

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 31 May 2024

Tested : 03 Jun 2024 Diagnosed : 03 Jun 2024 - Sean Felton

LYNDEN TRANSPORT - SPRUCE GROVE 27340 ACHESON RD, ACHESON INDUSTRIAL PARK

ACHESON, AB **CA T7X 6B1**

Contact: Mathieu Carby mcarby@lynden.com

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: LYNSPR [WUSCAR] 06196873 (Generated: 06/03/2024 16:07:09) Rev: 1

Contact/Location: Mathieu Carby - LYNSPR

T:

F: