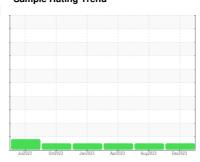


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id 1128 Component

Diesel Engine

CHEVRON DELO 400 XLE 10W30 (--- LTR)

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 Mistory2			Jul2022	Oct2022 Jan2023	3 Apr2023 Aug2023	Dec2023	
Sample Date	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Date Client Info 21 Dec 2023 16 Aug 2023 19 Apr 2023 Machine Age kms Client Info 285441 233592 183170 Oil Age kms Client Info 55000 65000 65000 Oil Changed Client Info Changed Changed Changed Changed Sample Status Image: Client Info Changed NoRMAL NORMAL NORMAL CONTAMINATION method Imitibase current history1 history2 Fuel WC Method >3.0 <1.0	Sample Number		Client Info		WC0851820	WC0733112	WC0733059
Oil Age kms Client Info 55000 65000 65000 Oil Changed Client Info Changed Ch			Client Info		21 Dec 2023	16 Aug 2023	19 Apr 2023
Client Info Changed Changed NORMAL NORMAL NORMAL NORMAL	Machine Age	kms	Client Info		285441	233592	183170
Sample Status	Oil Age	kms	Client Info		55000	65000	65000
CONTAMINATION method limit/base current history1 history2 Fuel WC Method >3.0 <1.0 <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 >65 18 19 16 Chromium ppm ASTM D5185m >55 1 2 2 Nickel ppm ASTM D5185m >3 0 0 0 Silver ppm ASTM D5185m >5 4 6 13 Lead ppm ASTM D5185m >10 <1 0 <1 Copper ppm ASTM D5185m >18 36 1 1 1 Vanadium ppm ASTM D5185m >10 0 0 0	Oil Changed		Client Info		Changed	Changed	Changed
Fuel	Sample Status				NORMAL	NORMAL	NORMAL
Water Glycol WC Method WC Method >0.2 NEG NEG NEG NEG NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >65 18 19 16 Chromium ppm ASTM D5185m >5 1 2 2 Nickel ppm ASTM D5185m >3 0 0 0 Silver ppm ASTM D5185m >3 0 0 0 Silver ppm ASTM D5185m >5 -1 0 0 Silver ppm ASTM D5185m >35 4 6 13 Lead ppm ASTM D5185m >10 <1	CONTAMINATIO	Ν	method	limit/base	current	history1	history2
WEAR METALS	Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >65 18 19 16 Chromium ppm ASTM D5185m >5 1 2 2 Nickel ppm ASTM D5185m >5 -1 0 0 Silver ppm ASTM D5185m >5 -1 0 -1 Aluminum ppm ASTM D5185m >2 0 -1 -1 Lead ppm ASTM D5185m >10 -1 0 -1 Copper ppm ASTM D5185m >10 -1 0 -1 Copper ppm ASTM D5185m >8 -1 -1 1 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 20 20 23 23 Boron ppm ASTM D5185m -1 0 0	Water		WC Method	>0.2	NEG	NEG	NEG
Iron	Glycol		WC Method		NEG	NEG	NEG
Chromium ppm ASTM D5185m >5 1 2 2 Nickel ppm ASTM D5185m >3 0 0 0 Titanium ppm ASTM D5185m >5 <1 0 0 Silver ppm ASTM D5185m >2 0 <1 <1 Aluminum ppm ASTM D5185m >35 4 6 13 Lead ppm ASTM D5185m >10 <1 0 <1 Copper ppm ASTM D5185m >180 15 18 36 Tin ppm ASTM D5185m >8 <1 <1 1 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 20 20 23 Barium ppm ASTM D5185m 20 20 23 Barium ppm ASTM D5185m 1 0 1 Mangaesium	WEAR METALS		method	limit/base	current	history1	history2
Nickel ppm ASTM D5185m >3 0 0 0 Titanium ppm ASTM D5185m >5 <1	Iron	ppm	ASTM D5185m	>65	18	19	16
Titanium ppm ASTM D5185m >5 <1 0 0 Silver ppm ASTM D5185m >2 0 <1	Chromium	ppm	ASTM D5185m	>5	1	2	2
Silver	Nickel	ppm	ASTM D5185m	>3	0	0	0
Aluminum	Titanium	ppm	ASTM D5185m	>5	<1	0	0
Lead ppm ASTM D5185m >10 <1 0 <1 Copper ppm ASTM D5185m >180 15 18 36 Tin ppm ASTM D5185m >8 <1 <1 1 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 20 20 23 Barium ppm ASTM D5185m 21 0 0 Molybdenum ppm ASTM D5185m 1 0 1 Manganese ppm ASTM D5185m 21 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <t< td=""><td>Silver</td><td>ppm</td><td>ASTM D5185m</td><td>>2</td><th>0</th><td><1</td><td><1</td></t<>	Silver	ppm	ASTM D5185m	>2	0	<1	<1
Copper ppm ASTM D5185m >180 15 18 36 Tin ppm ASTM D5185m >8 <1	Aluminum	ppm	ASTM D5185m	>35	4	6	13
Tin ppm ASTM D5185m >8 <1 <1 1 Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 20 20 23 Barium ppm ASTM D5185m <1 0 0 Molybdenum ppm ASTM D5185m 1 0 1 Manganese ppm ASTM D5185m 773 826 800 Calcium ppm ASTM D5185m 2900 1358 1523 1369 Phosphorus ppm ASTM D5185m 2900 1358 1523 1369 Phosphorus ppm ASTM D5185m 1200 849 921 859 Sulfur ppm ASTM D5185m 100 791 790 709 Zilicon ppm	Lead	ppm	ASTM D5185m	>10	<1	0	<1
Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 20 20 23 Barium ppm ASTM D5185m <1 0 0 Molybdenum ppm ASTM D5185m 1 0 1 Manganese ppm ASTM D5185m 773 826 800 Calcium ppm ASTM D5185m 2900 1358 1523 1369 Phosphorus ppm ASTM D5185m 1100 791 790 709 Zinc ppm ASTM D5185m 1200 849 921 859 Sulfur ppm ASTM D5185m 100 2989 3515 3220 CONTAMINANTS method limit/base current history1 history2 Silicon ppm <td>Copper</td> <td>ppm</td> <td>ASTM D5185m</td> <td>>180</td> <th>15</th> <td>18</td> <td>36</td>	Copper	ppm	ASTM D5185m	>180	15	18	36
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 20 20 23 Barium ppm ASTM D5185m <1	Tin	ppm	ASTM D5185m	>8	<1	<1	1
ADDITIVES	Vanadium	ppm	ASTM D5185m		0	0	0
Boron	Cadmium	ppm	ASTM D5185m		0	0	0
Barium ppm ASTM D5185m <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 1 0 1 Manganese ppm ASTM D5185m <1	Boron	ppm	ASTM D5185m		20	20	23
Manganese ppm ASTM D5185m <1 <1 <1 Magnesium ppm ASTM D5185m 773 826 800 Calcium ppm ASTM D5185m 2900 1358 1523 1369 Phosphorus ppm ASTM D5185m 1100 791 790 709 Zinc ppm ASTM D5185m 1200 849 921 859 Sulfur ppm ASTM D5185m 4000 2989 3515 3220 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 5 5 5 Sodium ppm ASTM D5185m >20 11 10 17 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 0.3 0.3 Nitration Abs/cm *ASTM D7815 >30 2	Barium	ppm	ASTM D5185m			0	0
Magnesium ppm ASTM D5185m 773 826 800 Calcium ppm ASTM D5185m 2900 1358 1523 1369 Phosphorus ppm ASTM D5185m 1100 791 790 709 Zinc ppm ASTM D5185m 1200 849 921 859 Sulfur ppm ASTM D5185m 4000 2989 3515 3220 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 5 5 5 Sodium ppm ASTM D5185m >20 11 10 17 INFRA-RED method limit/base current history1 history2 Soot % "ASTM D7844 >3 0.3 0.3 0.3 Nitration Abs/cm "ASTM D7624 >20 9.8 10.2 10.2 Sulfation Abs/.1mm "ASTM D7415 >30	Molybdenum	ppm	ASTM D5185m		-		
Calcium ppm ASTM D5185m 2900 1358 1523 1369 Phosphorus ppm ASTM D5185m 1100 791 790 709 Zinc ppm ASTM D5185m 1200 849 921 859 Sulfur ppm ASTM D5185m 4000 2989 3515 3220 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 5 5 5 Sodium ppm ASTM D5185m >20 11 10 17 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 0.3 0.3 Nitration Abs/.1mm *ASTM D7624 >20 9.8 10.2 10.2 Sulfation Abs/.1mm *ASTM D7415 >30 22.6 22.2 21.4 FLUID DEGRADATION	•	ppm			<1		
Phosphorus ppm ASTM D5185m 1100 791 790 709 Zinc ppm ASTM D5185m 1200 849 921 859 Sulfur ppm ASTM D5185m 4000 2989 3515 3220 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 5 5 5 Sodium ppm ASTM D5185m >0 <1	Magnesium	ppm	ASTM D5185m		_		
Zinc ppm ASTM D5185m 1200 849 921 859 Sulfur ppm ASTM D5185m 4000 2989 3515 3220 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 5 5 5 Sodium ppm ASTM D5185m 0 <1		ppm					
Sulfur ppm ASTM D5185m 4000 2989 3515 3220 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 5 5 5 Sodium ppm ASTM D5185m 0 <1		ppm			-		
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 5 5 5 Sodium ppm ASTM D5185m 0 <1	-	ppm			0.10		
Silicon ppm ASTM D5185m >15 5 5 Sodium ppm ASTM D5185m 0 <1 2 Potassium ppm ASTM D5185m >20 11 10 17 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 0.3 0.3 Nitration Abs/cm *ASTM D7624 >20 9.8 10.2 10.2 Sulfation Abs/.1mm *ASTM D7415 >30 22.6 22.2 21.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.6 18.4 18.0	Sulfur	ppm	ASTM D5185m	4000	2989	3515	3220
Sodium ppm ASTM D5185m 0 <1 2 Potassium ppm ASTM D5185m >20 11 10 17 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 0.3 0.3 Nitration Abs/cm *ASTM D7624 >20 9.8 10.2 10.2 Sulfation Abs/.1mm *ASTM D7415 >30 22.6 22.2 21.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.6 18.4 18.0		8	method	limit/base		· ·	
Potassium ppm ASTM D5185m >20 11 10 17 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 0.3 0.3 Nitration Abs/cm *ASTM D7624 >20 9.8 10.2 10.2 Sulfation Abs/.1mm *ASTM D7415 >30 22.6 22.2 21.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.6 18.4 18.0				>15			
INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 0.3 0.3 Nitration Abs/cm *ASTM D7624 >20 9.8 10.2 10.2 Sulfation Abs/.1mm *ASTM D7415 >30 22.6 22.2 21.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.6 18.4 18.0							
Soot % % *ASTM D7844 >3 0.3 0.3 0.3 Nitration Abs/cm *ASTM D7624 >20 9.8 10.2 10.2 Sulfation Abs/.1mm *ASTM D7415 >30 22.6 22.2 21.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.6 18.4 18.0		ppm	ASTM D5185m	>20	11		17
Nitration Abs/cm *ASTM D7624 >20 9.8 10.2 10.2 Sulfation Abs/.1mm *ASTM D7415 >30 22.6 22.2 21.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.6 18.4 18.0	INFRA-RED		method	limit/base	current	history1	
Sulfation Abs/.1mm *ASTM D7415 >30 22.6 22.2 21.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.6 18.4 18.0							
FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.1mm*ASTM D7414>2518.618.418.0				>20			
Oxidation Abs/.1mm *ASTM D7414 >25 18.6 18.4 18.0	Sulfation	Abs/.1mm	*ASTM D7415	>30	22.6	22.2	21.4
	FLUID DEGRADA	ATION	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 10.3 6.37 7.05 8.42	Oxidation	Abs/.1mm	*ASTM D7414	>25	18.6	18.4	18.0
	Base Number (BN)	mg KOH/g	ASTM D2896	10.3	6.37	7.05	8.42



OIL ANALYSIS REPORT







Laboratory Sample No. Lab Number

Unique Number : 10836498 Test Package : MOB 2

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

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : WC0851820 : 18 Jan 2024 Recieved : 06065116

Diagnostician

Diagnosed : 22 Jan 2024 : Sean Felton LYNDEN TRANSPORT - SPRUCE GROVE 27340 ACHESON RD, ACHESON INDUSTRIAL PARK

ACHESON, AB **CA T7X 6B1**

Contact: Mathieu Carby mcarby@lynden.com T:

* - 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)

F: