

OIL ANALYSIS REPORT

Sample Rating Trend









Machine Id
3274
Component
Diesel Engine
Fluid

CHEVRON DELO 400 LE 15W40 (--- QTS)

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

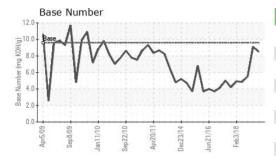
Fluid Condition

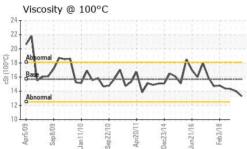
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

				Apr2011 Dec2014 Jun2016 F		
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0072385	GFL0048910	GFLI-218883
Sample Date		Client Info		06 Jul 2023	17 Jan 2023	28 Nov 2018
Machine Age	hrs	Client Info		236587	19066	15230
Oil Age	hrs	Client Info		572	171	473
Oil Changed		Client Info		Changed	Not Changd	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0	<1.0	0.5
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	0	mathad	limit/base	ourrent	hiotonyi	history?
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>120	15	17	7
Chromium	ppm	ASTM D5185m	>20	<1	<1	0
Nickel	ppm	ASTM D5185m	>5	0	0	1
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	8	2
Lead	ppm	ASTM D5185m	>40	0	8	0
Copper	ppm	ASTM D5185m	>330	3	2	5
Tin	ppm	ASTM D5185m	>15	0	<1	0
Antimony	ppm	ASTM D5185m				0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
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ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	method ASTM D5185m	limit/base	current 6	history1 15	265
	ppm		limit/base			
Boron		ASTM D5185m	limit/base	6	15	265
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	6 0	15 0	265
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	6 0 56	15 0 58	265 0 118
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	6 0 56 0	15 0 58 <1	265 0 118 0
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	6 0 56 0 931	15 0 58 <1 867	265 0 118 0 643
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		6 0 56 0 931 1083	15 0 58 <1 867 1086	265 0 118 0 643 1589
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 ASTM D5185m	1200	6 0 56 0 931 1083 1005	15 0 58 <1 867 1086 936	265 0 118 0 643 1589 750
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1200 1300	6 0 56 0 931 1083 1005	15 0 58 <1 867 1086 936 1126	265 0 118 0 643 1589 750 825
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1200 1300	6 0 56 0 931 1083 1005 1229 3541	15 0 58 <1 867 1086 936 1126 3495	265 0 118 0 643 1589 750 825
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1200 1300 3200	6 0 56 0 931 1083 1005 1229 3541	15 0 58 <1 867 1086 936 1126 3495	265 0 118 0 643 1589 750 825
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	1200 1300 3200	6 0 56 0 931 1083 1005 1229 3541 	15 0 58 <1 867 1086 936 1126 3495	265 0 118 0 643 1589 750 825 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	1200 1300 3200	6 0 56 0 931 1083 1005 1229 3541 	15 0 58 <1 867 1086 936 1126 3495 history1	265 0 118 0 643 1589 750 825 0 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium	ppm	ASTM D5185m	1200 1300 3200 limit/base >25	6 0 56 0 931 1083 1005 1229 3541 current	15 0 58 <1 867 1086 936 1126 3495 history1	265 0 118 0 643 1589 750 825 0 history2 5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm	ASTM D5185m	1200 1300 3200 limit/base >25 >20 limit/base	6 0 56 0 931 1083 1005 1229 3541 current 2 1 0	15 0 58 <1 867 1086 936 1126 3495 history1 9 <1 0	265 0 118 0 643 1589 750 825 0 history2 5 1 1 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m	1200 1300 3200 limit/base >25 >20 limit/base >4	6 0 56 0 931 1083 1005 1229 3541 current 2 1 0	15 0 58 <1 867 1086 936 1126 3495 history1 9 <1 0 history1 0.7	265 0 118 0 643 1589 750 825 0 history2 5 1 1 history2 2.2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm	ASTM D5185m method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Tethod *ASTM D7844 *ASTM D7844	1200 1300 3200 limit/base >25 >20 limit/base >4 >20	6 0 56 0 931 1083 1005 1229 3541 current 2 1 0 current 0.9 6.8	15 0 58 <1 867 1086 936 1126 3495 history1 9 <1 0 history1 0.7	265 0 118 0 643 1589 750 825 0 history2 5 1 1 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm	ASTM D5185m method *ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	1200 1300 3200 limit/base >25 >20 limit/base >4 >20 >30	6 0 56 0 931 1083 1005 1229 3541 current 2 1 0 current 0.9 6.8 20.2	15 0 58 <1 867 1086 936 1126 3495 history1 9 <1 0 history1 0.7 6.0 17.9	265 0 118 0 643 1589 750 825 0 history2 5 1 1 history2 2.2 8
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE	ppm	ASTM D5185m METHOD *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m METHOD *ASTM D7844 *ASTM D7624 *ASTM D7415 METHOD	1200 1300 3200 limit/base >25 >20 limit/base >4 >20 >30 limit/base	6 0 56 0 931 1083 1005 1229 3541 current 2 1 0 current 0.9 6.8 20.2 current	15 0 58 <1 867 1086 936 1126 3495 history1 9 <1 0 history1 0.7 6.0 17.9 history1	265 0 118 0 643 1589 750 825 0 history2 5 1 1 history2 2.2 8 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm	ASTM D5185m method *ASTM D5185m *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D76185m method *ASTM D7844 *ASTM D7624 *ASTM D76145 method *ASTM D7414	1200 1300 3200 limit/base >25 >20 limit/base >4 >20 >30	6 0 56 0 931 1083 1005 1229 3541 current 2 1 0 current 0.9 6.8 20.2	15 0 58 <1 867 1086 936 1126 3495 history1 9 <1 0 history1 0.7 6.0 17.9	265 0 118 0 643 1589 750 825 0 history2 5 1 1 history2 2.2 8



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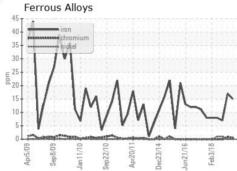


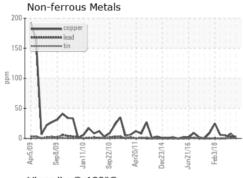


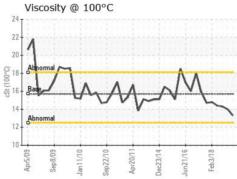
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
Precipitate	scalar	*Visual	NONE	NONE	NONE	
Silt	scalar	*Visual	NONE	NONE	NONE	
Debris	scalar	*Visual	NONE	NONE	NONE	
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
Appearance	scalar	*Visual	NORML	NORML	NORML	
Odor	scalar	*Visual	NORML	NORML	NORML	
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	
Free Water	scalar	*Visual		NEG	NEG	

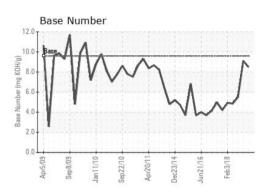
FLUID PROPERTIES		method				history2	
Visc @ 100°C	cSt	ASTM D445	15.7	13.3	14.0	14.3	

GRAPHS













Certificate L2367

Laboratory

Sample No. Lab Number Unique Number : 10551769 Test Package : FLEET

: GFL0072385 : 05895959

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 12 Jul 2023 Diagnosed : 13 Jul 2023

Diagnostician : Don Baldridge

GFL Environmental - 005 - Wilson/Tri-East(CNG)

2810 Contentnea Road S Wilson, NC US 27893-8501

Contact: SPENCER LIGGON spencer.liggon@gflenv.com T: (800)207-6618

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)