PROBLEM SUMMARY

Machine Id 929054-182539



Diesel Engine Fluid CHEVRON DELO 400 MULTIGRADE 15W40 (--- LTR)

COMPONENT CONDITION SUMMARY

Component



RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

PROBLEMATIC	C TEST	RESULT	S			
Sample Status				ABNORMAL	NORMAL	NORMAL
Copper	ppm	ASTM D5185m	>85	<u> </u>	<1	<1

Customer Id: GFL867 Sample No.: GFL0045426 Lab Number: 05885385 Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data: Don Baldridge +1 don.b505@comcast.net

To change component or sample information: Customer Service +1 1-800-237-1369 customerservice@wearcheck.com

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

31 May 2023 Diag: Wes Davis



Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

01 May 2023 Diag: Wes Davis



Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

24 Feb 2023 Diag: Wes Davis

NORMAL



Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.





view report

Report Id: GFL867 [WUSCAR] 05885385 (Generated: 06/30/2023 14:40:33) Rev: 1



OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id 929054-182539

Component Diesel Engine

Fluid

CHEVRON DELO 400 MULTIGRADE 15W40 (--- LTR)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

🔺 Wear

The copper level is abnormal. All other 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.

		method	limit/base	current	Thistory I	TISLOTY Z
Sample Number		Client Info		GFL0045426	GFL0071659	GFL0051143
Sample Date		Client Info		21 Jun 2023	31 May 2023	01 May 2023
Machine Age	hrs	Client Info		10283	10157	10011
Oil Age	hrs	Client Info		126	3083	2937
Oil Changed		Client Info		N/A	Changed	Not Changd
Sample Status				ABNORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history 1	history 2
Fuel		WC Method	>5	~10	<10	<10
Glycol		WC Method	20	NEG	NEG	NEG
					HEG	NEG.
WEAR METAL	S	method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m	>110	14	7	6
Chromium	ppm	ASTM D5185m	>4	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	0	<1
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>25	6	4	1
Lead	ppm	ASTM D5185m	>45	2	0	<1
Copper	ppm	ASTM D5185m	>85	<u> </u>	<1	<1
Tin	ppm	ASTM D5185m	>4	<1	0	<1
Vanadium	ppm	ASTM D5185m		0	<1	<1
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES		method	limit/base	current	history 1	history 2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 158	history 1 184	history 2 161
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	limit/base 151 0.4	current 158 <1	history 1 184 0	history 2 161 0
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 151 0.4 250	current 158 <1 81	history 1 184 0 96	history 2 161 0 91
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 151 0.4 250	current 158 <1 81 <1	history 1 184 0 96 <1	history 2 161 0 91 <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 151 0.4 250 0	current 158 <1 81 <1 742	history 1 184 0 96 <1 795	history 2 161 0 91 <1 785
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 151 0.4 250 0 2046	current 158 <1 81 <1 742 1744	history 1 184 0 96 <1 795 1410	history 2 161 0 91 <1 785 1271
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 151 0.4 250 0 2046 1043	current 158 <1 81 <1 742 1744 778	history 1 184 0 96 <1 795 1410 887	history 2 161 0 91 <1 785 1271 878
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 151 0.4 250 0 2046 1043 943	Current 158 <1 81 <1 742 1744 778 1267	history 1 184 0 96 <1 795 1410 887 1025	history 2 161 0 91 <1 785 1271 878 1046
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base 151 0.4 250 0 2046 1043 943 5012	current 158 <1 81 <1 742 1744 778 1267 3535	history 1 184 0 96 <1 795 1410 887 1025 3267	history 2 161 0 91 <1 785 1271 878 1046 3451
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 151 0.4 250 0 2046 1043 943 5012 limit/base	current 158 <1 81 <1 742 1744 778 1267 3535 current	history 1 184 0 96 <1 795 1410 887 1025 3267 history 1	history 2 161 0 91 <1 785 1271 878 1046 3451 history 2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base 151 0.4 250 0 2046 1043 943 5012 limit/base >30	current 158 <1 81 <1 742 1744 778 1267 3535 current 7	history 1 184 0 96 <1 795 1410 887 1025 3267 history 1	history 2 161 0 91 <1 785 1271 878 1046 3451 history 2 4
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base 151 0.4 250 0 2046 1043 943 5012 limit/base >30	current 158 <1 81 <1 742 1744 778 1267 3535 current 7 4	history 1 184 0 96 <1 795 1410 887 1025 3267 history 1 4 2	history 2 161 0 91 <1 785 1271 878 1046 3451 history 2 4 3
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS	method ASTM D5185m	limit/base 151 0.4 250 0 2046 1043 943 5012 limit/base >30 >20	current 158 <1 81 <1 742 1744 778 1267 3535 current 7 4 17	history 1 184 0 96 <1 795 1410 887 1025 3267 history 1 4 2 0	history 2 161 0 91 <1 785 1271 878 1046 3451 history 2 4 3 3
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	method ASTM D5185m	limit/base 151 0.4 250 0 2046 1043 943 5012 limit/base >30 \$20	current 158 <1 81 <1 742 1744 778 1267 3535 current 7 4 17 current	history 1 184 0 96 <1 795 1410 887 1025 3267 history 1 4 2 0 history 1	history 2 161 0 91 <1 785 1271 878 1046 3451 history 2 4 3 3 history 2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	method ASTM D5185m	limit/base 151 0.4 250 0 2046 1043 943 5012 limit/base >30 >20 limit/base >3	current 158 <1 81 <1 742 1744 778 1267 3535 current 7 4 17 current 0.2	history 1 184 0 96 <1 795 1410 887 1025 3267 history 1 4 2 0 history 1 0 0	history 2 161 0 91 <1 785 1271 878 1046 3451 history 2 4 3 3 history 2 0,1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	method ASTM D5185m	limit/base 151 0.4 250 0 2046 1043 943 5012 limit/base >30 >20 limit/base >3 >20	current 158 <1 81 <1 742 1744 778 1267 3535 current 7 4 17 current 0.2 8.3	history 1 184 0 96 <1 795 1410 887 1025 3267 history 1 4 2 0 history 1 0.1 6.3	history 2 161 0 91 <1 785 1271 878 1046 3451 history 2 4 3 3 history 2 0.1 5.7
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base 151 0.4 250 0 2046 1043 943 5012 limit/base >30 >20 limit/base >3 >20 >30	current 158 <1 81 <1 742 1744 778 1267 3535 current 7 4 17 current 0.2 8.3 22.2	history 1 184 0 96 <1 795 1410 887 1025 3267 history 1 4 2 0 history 1 0.1 6.3 21.4	history 2 161 0 91 <1 785 1271 878 1046 3451 history 2 4 3 3 history 2 0.1 5.7 20.4
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base 151 0.4 250 0 2046 1043 943 5012 limit/base >30 limit/base >30 20 limit/base >3 >20 limit/base	current 158 <1 81 <1 742 1744 778 1267 3535 current 7 4 17 current 0.2 8.3 22.2	history 1 184 0 96 <1 795 1410 887 1025 3267 history 1 4 2 0 history 1 0.1 6.3 21.4	history 2 161 0 91 <1 785 1271 878 1046 3451 history 2 4 3 3 history 2 0.1 5.7 20.4
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415 method	limit/base 151 0.4 250 0 2046 1043 943 5012 limit/base >30 limit/base >3 >20 limit/base >3 >20 limit/base	current 158 <1 81 <1 742 1744 778 1267 3535 current 7 4 17 current 0.2 8.3 22.2 current	history 1 184 0 96 <1 795 1410 887 1025 3267 history 1 4 2 0 history 1 0.1 6.3 21.4 history 1	history 2 161 0 91 <1 785 1271 878 1046 3451 history 2 4 3 history 2 0.1 5.7 20.4
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAI	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm ppm Abs/cm Abs/1mm	method ASTM D5185m ASTM D7844 *ASTM D7414 *ASTM D7414	limit/base 151 0.4 250 0 2046 1043 943 5012 limit/base >30 limit/base >3 >20 limit/base >3 >20 limit/base	current 158 <1 81 <1 742 1744 778 1267 3535 current 7 4 17 current 0.2 8.3 22.2 current 17.9	history 1 184 0 96 <1 795 1410 887 1025 3267 history 1 4 2 0 history 1 0.1 6.3 21.4 history 1 15.4	history 2 161 0 91 <1 785 1271 878 1046 3451 history 2 4 3 1045 3451 history 2 0.1 5.7 20.4 history 2 14.8



OIL ANALYSIS REPORT





		method	limit/base	current	history 1	history 2
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 PROPE	ERTIES	method	limit/base	current	history 1	history 2
Visc @ 100°C	cSt	ASTM D445	14.4	16.1	13.7	13.9
nickel	\wedge					
chromium nickel	23	23	23			
Non-ferrous Meta	Feb24/23	ES/VeW	Jun21/23			

lun21/23

14.0

12.0

8.0

2.0

0.0

Aug9/21

(mg KOH/g) 10.0

mber 6.0

Base 4 (

Jun21/23 -

: 28 Jun 2023

: 30 Jun 2023

Base Number

Nov10/22

Nov23/22

Feb24/23

lav31/23



: 10535868 Unique Number Diagnostician : Don Baldridge Test Package : FLEET Contact: Jonathan Williams Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. jonathan.williams@gflenv.com * - 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)

eb24/23

C/2010

Viscosity @ 100°C

/lav1/23

May1/23 -

Vlay31/23

Feb24/23

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

Received

Diagnosed

10

18

17

16

cSt (100°C) 11

13

12

11-

Laboratory

Sample No.

Lab Number

Aug9/21.

Ba

Abnorma

Nov10/22

: GFL0045426

: 05885385

Nov23/22

Submitted By: see also GFL868 - Chelsea Bryan

May1/23 -

GFL environmental - 867 - Trafford (Blount Hauling)

Mav31/23

1130 County Line Rd

Trafford, AL

US 35172

Jun21/23

Т:

F: