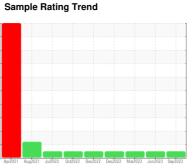


OIL ANALYSIS REPORT



NORMAL



929016-1270

Component

Diesel Engine

CHEVRON DELO 400 XLE 15W40 (--- 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

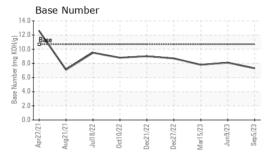
Fluid Condition

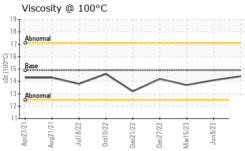
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

		Apr2021 Aug	2021 Jul2022 Oct2022	Dec2022 Dec2022 Mar2023 Jun20	23 Sep2023	
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0064474	GFL0064492	GFL0064449
Sample Date		Client Info		05 Sep 2023	09 Jun 2023	15 Mar 2023
Machine Age	hrs	Client Info		10663	10031	9702
Oil Age	hrs	Client Info		659	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	12	14	18
Chromium	ppm	ASTM D5185m	>20	<1	2	2
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m		7	4	11
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	1	2	10
Lead	ppm	ASTM D5185m	>40	0	2	0
Copper	ppm	ASTM D5185m	>330	<1	1	<1
Tin	ppm	ASTM D5185m	>15	<1	<1	0
Vanadium	ppm	ASTM D5185m		<1	<1	<1
Cadmium	ppm	ASTM D5185m		0	<1	0
Gaarriani	ppiii	AO I WI DO TOOIII		U	< 1	0
ADDITIVES	ррііі	method	limit/base	current	history1	history2
	ppm		limit/base			
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current	history1 163	history2
ADDITIVES Boron Barium	ppm	method ASTM D5185m ASTM D5185m	limit/base	current 111 0	history1 163 <1	history2 88 0
ADDITIVES Boron Barium Molybdenum	ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 111 0 82	history1 163 <1 96	history2 88 0 49
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 1111 0 82 <1	history1 163 <1 96 <1	history2 88 0 49 <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 1111 0 82 <1 735	history1 163 <1 96 <1 755	history2 88 0 49 <1 575
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		current 111 0 82 <1 735 1674	history1 163 <1 96 <1 755 1673	history2 88 0 49 <1 575 1409
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	method ASTM D5185m	760	current 111 0 82 <1 735 1674 713	history1 163 <1 96 <1 755 1673 760	history2 88 0 49 <1 575 1409 627
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	760 830	current 111 0 82 <1 735 1674 713 876	history1 163 <1 96 <1 755 1673 760 954	history2 88 0 49 <1 575 1409 627 770
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	760 830 2770 limit/base	current 111 0 82 <1 735 1674 713 876 3293	history1 163 <1 96 <1 755 1673 760 954 3327	history2 88 0 49 <1 575 1409 627 770 2531
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	760 830 2770 limit/base	current 111 0 82 <1 735 1674 713 876 3293 current	history1 163 <1 96 <1 755 1673 760 954 3327 history1	history2 88 0 49 <1 575 1409 627 770 2531 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	760 830 2770 limit/base	current 111 0 82 <1 735 1674 713 876 3293 current 5	history1 163 <1 96 <1 755 1673 760 954 3327 history1 5	history2 88 0 49 <1 575 1409 627 770 2531 history2 4
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	760 830 2770 limit/base >25	current 111 0 82 <1 735 1674 713 876 3293 current 5	history1 163 <1 96 <1 755 1673 760 954 3327 history1 5	history2 88 0 49 <1 575 1409 627 770 2531 history2 4
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	760 830 2770 limit/base >25 >20	current 111 0 82 <1 735 1674 713 876 3293 current 5 9	history1 163 <1 96 <1 755 1673 760 954 3327 history1 5 7	history2 88 0 49 <1 575 1409 627 770 2531 history2 4 4 23
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	760 830 2770 limit/base >25 >20	current 111 0 82 <1 735 1674 713 876 3293 current 5 9 current	history1 163 <1 96 <1 755 1673 760 954 3327 history1 5 7	history2 88 0 49 <1 575 1409 627 770 2531 history2 4 23
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 ppm	method ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	760 830 2770 limit/base >25 >20 limit/base >3	current 111 0 82 <1 735 1674 713 876 3293 current 5 9 current 1.2	history1 163 <1 96 <1 755 1673 760 954 3327 history1 5 7	history2 88 0 49 <1 575 1409 627 770 2531 history2 4 23 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm	method ASTM D5185m method ASTM D5185m ASTM D5185m *ASTM D5185m ASTM D5185m *ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D5185m ASTM D5185m *ASTM D76185m *ASTM D7624 *ASTM D7624	760 830 2770 limit/base >25 >20 limit/base >3 >20	current 111 0 82 <1 735 1674 713 876 3293 current 5 5 9 current 1.2 10.3	history1 163 <1 96 <1 755 1673 760 954 3327 history1 5 7 history1 1 9.9	history2 88 0 49 <1 575 1409 627 770 2531 history2 4 23 history2 1.1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm	method ASTM D5185m method ASTM D5185m ASTM D5185m *ASTM D5185m ASTM D5185m *ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D5185m ASTM D5185m *ASTM D76185m *ASTM D7624 *ASTM D7624	760 830 2770 limit/base >25 >20 limit/base >3 >20 >30	current 111 0 82 <1 735 1674 713 876 3293 current 5 9 current 1.2 10.3 23.0	history1 163 <1 96 <1 755 1673 760 954 3327 history1 5 7 history1 1 9.9 23.6	history2 88 0 49 <1 575 1409 627 770 2531 history2 4 23 history2 1.1 10.7 21.7



OIL ANALYSIS REPORT

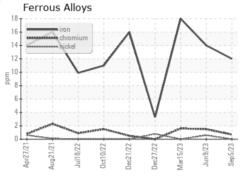


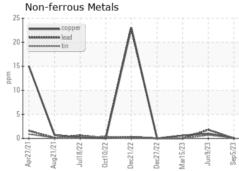


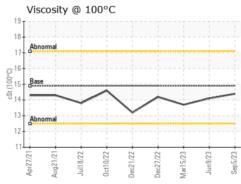
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

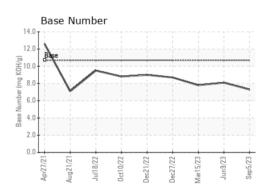
FLUID PROPE	:RHES	method				history2
Visc @ 100°C	cSt	ASTM D445	14.9	14.4	14.1	13.7

GRAPHS











Certificate L2367

Laboratory Sample No. Lab Number Unique Number : 10645753 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : GFL0064474 : 05949794

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

Received Diagnosed Diagnostician : Wes Davis

: 13 Sep 2023 : 15 Sep 2023 GFL Environmental - 624 - Elmira Hauling

10164 M-32 Elmira, MI US 49730

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

* - 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)