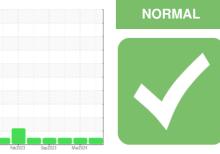


OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

921008-553

Diesel Engine Fluid CHEVRON DELO 400 XLE 15W40 (10 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.

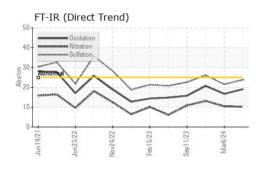
Fluid Condition

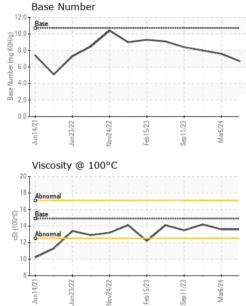
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| SAMPLE INFORI | MATION | method | limit/base | current | history1 | history2 |
|---|--|--|--|--|--|--|
| Sample Number | | Client Info | | GFL0104673 | GFL0104658 | GFL0096268 |
| Sample Date | | Client Info | | 24 May 2024 | 06 Mar 2024 | 23 Nov 2023 |
| Machine Age | hrs | Client Info | | 1235 | 8181 | 5801 |
| Oil Age | hrs | Client Info | | 5801 | 5801 | 0 |
| Oil Changed | | Client Info | | Changed | N/A | Changed |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |
| CONTAMINAT | ION | 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 METAL | S | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185m | >100 | 11 | 14 | 39 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | <1 | 2 |
| Nickel | ppm | ASTM D5185m | >4 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | 6 | 11 | 10 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 3 | 2 | 3 |
| Lead | ppm | ASTM D5185m | >40 | <1 | <1 | 14 |
| Copper | ppm | ASTM D5185m | >330 | <1 | <1 | 2 |
| Tin | ppm | ASTM D5185m | >15 | <1 | <1 | 0 |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| | | | | | | |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| ADDITIVES Boron | ppm | method ASTM D5185m | limit/base | current 263 | history1 117 | history2 75 |
| | ppm ppm | | limit/base | | | |
| Boron | | ASTM D5185m | limit/base | 263 | 117 | 75 |
| Boron Barium | ppm | ASTM D5185m ASTM D5185m | limit/base | 263 0 | 117 0 | 75 2 |
| Boron Barium Molybdenum | ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m | limit/base | 263 0 59 | 117 0 50 | 75 2 65 |
| Boron Barium Molybdenum Manganese | ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | limit/base | 263 0 59 <1 | 117 0 50 <1 | 75 2 65 0 |
| Boron Barium Molybdenum Manganese Magnesium | ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 760 | 263 0 59 <1 528 | 117 0 50 <1 679 1548 758 | 75 2 65 0 680 1547 716 |
| Boron Barium Molybdenum Manganese Magnesium Calcium | ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | | 263 0 59 <1 528 1407 | 117 0 50 <1 679 1548 | 75 2 65 0 680 1547 |
| 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 | 760 | 263 0 59 <1 528 1407 841 | 117 0 50 <1 679 1548 758 | 75 2 65 0 680 1547 716 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc | ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 760 830 | 263 0 59 <1 528 1407 841 956 | 117 0 50 <1 679 1548 758 859 | 75 2 65 0 680 1547 716 837 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon | ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 760 830 2770 limit/base | 263 0 59 <1 528 1407 841 956 3410 | 117 0 50 <1 679 1548 758 859 3360 | 75 2 65 0 680 1547 716 837 2960 history2 13 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN | ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 760 830 2770 limit/base | 263 0 59 <1 528 1407 841 956 3410 current | 117 0 50 <1 679 1548 758 859 3360 history1 | 75 2 65 0 680 1547 716 837 2960 history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon | ppm ppm ppm ppm ppm ppm ppm ppm TS | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method | 760 830 2770 limit/base >25 | 263 0 59 <1 528 1407 841 956 3410 current 7 | 117 0 50 <1 679 1548 758 859 3360 history1 8 | 75 2 65 0 680 1547 716 837 2960 history2 13 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium | ppm ppm ppm ppm ppm ppm ppm ppm TS | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 760 830 2770 limit/base >25 | 263 0 59 <1 528 1407 841 956 3410 current 7 2 | 117 0 50 <1 679 1548 758 859 3360 history1 8 4 | 75 2 65 0 680 1547 716 837 2960 history2 13 3 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium | ppm ppm ppm ppm ppm ppm ppm ppm TS | ASTM D5185m ASTM D5185m | 760 830 2770 limit/base >25 >20 | 263 0 59 <1 528 1407 841 956 3410 current 7 2 3 | 117 0 50 <1 679 1548 758 859 3360 history1 8 4 2 | 75 2 65 0 680 1547 716 837 2960 history2 13 3 5 |
| 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 | ASTM D5185m ASTM D5185m | 760 830 2770 limit/base >25 >20 limit/base >3 | 263 0 59 <1 528 1407 841 956 3410 current 7 2 3 3 current | 117 0 50 <1 679 1548 758 859 3360 history1 8 4 2 2 history1 | 75 2 65 0 680 1547 716 837 2960 history2 13 3 5 5 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % | ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm | ASTM D5185m ASTM D5185m | 760 830 2770 limit/base >25 >20 limit/base >3 | 263 0 59 <1 528 1407 841 956 3410 current 7 2 3 3 current 0.9 | 117 0 50 <1 679 1548 758 859 3360 history1 8 4 2 history1 0.9 | 75 2 65 0 680 1547 716 837 2960 history2 13 3 5 history2 1.8 |
| 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 ppm | ASTM D5185m ASTM D5185m | 760 830 2770 Iimit/base >25 >20 Iimit/base >3 >20 | 263 0 59 <1 528 1407 841 956 3410 <i>current</i> 7 2 3 <i>current</i> 0.9 10.2 | 117 0 50 <1 679 1548 758 859 3360 history1 8 4 2 history1 0.9 10.4 | 75 2 65 0 680 1547 716 837 2960 history2 13 3 5 history2 1.8 1.8 13.1 |
| 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 | ASTM D5185m ASTM D5185m | 760 830 2770 imit/base >25 >20 imit/base >20 imit/base >3 >20 >30 | 263 0 59 <1 528 1407 841 956 3410 <u>current</u> 7 2 3 3 <u>current</u> 0.9 10.2 23.8 | 117 0 50 <1 679 1548 758 859 3360 history1 8 4 2 2 history1 0.9 10.4 21.5 | 75 2 65 0 680 1547 716 837 2960 history2 13 3 5 bistory2 1.8 13.1 26.1 |



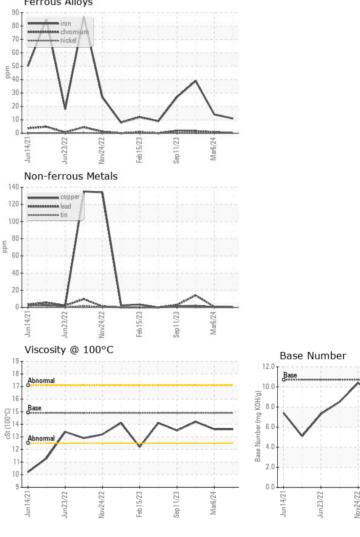
OIL ANALYSIS REPORT





| 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 | RTIES | method | limit/base | current | history1 | history2 |
| Visc @ 100°C | cSt | ASTM D445 | 14.9 | 13.6 | 13.6 | 14.2 |
| | | | | | | |

GRAPHS Ferrous Alloys



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 GFL Environmental - 624 - Elmira Hauling Sample No. : GFL0104673 : 03 Jun 2024 Received 10164 M-32 Lab Number : 06198592 Tested : 04 Jun 2024 Elmira, MI US 49730 Unique Number : 11060715 Diagnosed : 04 Jun 2024 - Wes Davis Test Package : FLEET Contact: ANDY GROBASKI Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. andyg@americanwaste.org T: (989)370-2941 * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. F:

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Submitted By: KEITH CAMPBELL

Mar6/24

Sep11/23

Feb 15/23