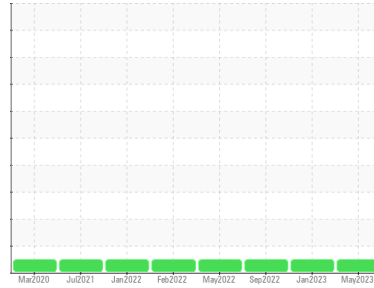


# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Area  
**EBI DE COSTA RICA**  
Machine Id  
**VOLVO A40F A40E-01**  
Component  
**Transmission (Auto)**  
Fluid  
**PETRO CANADA ATF D3M (38 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 fluid.

### Fluid Condition

The AN level is acceptable for this fluid. The condition of the fluid is suitable for further service.

## SAMPLE INFORMATION

|               | method      | limit/base  | current            | history1    | history2    |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info |             | <b>PC0069040</b>   | PC0063664   | PC0063654   |
| Sample Date   | Client Info |             | <b>19 May 2023</b> | 05 Jan 2023 | 22 Sep 2022 |
| Machine Age   | hrs         | Client Info | <b>20016</b>       | 0           | 18960       |
| Oil Age       | hrs         | Client Info | <b>500</b>         | 0           | 500         |
| Oil Changed   | Client Info |             | <b>Changed</b>     | N/A         | Changed     |
| Sample Status |             |             | <b>NORMAL</b>      | NORMAL      | NORMAL      |

## WEAR METALS

|           | method      | limit/base    | current  | history1     | history2 |    |
|-----------|-------------|---------------|----------|--------------|----------|----|
| PQ        | ASTM D8184* | >50           | <b>0</b> | 0            | ---      |    |
| Iron      | ppm         | ASTM D5185(m) | >160     | <b>14</b>    | 10       | 16 |
| Chromium  | ppm         | ASTM D5185(m) | >5       | <b>0</b>     | 0        | 0  |
| Nickel    | ppm         | ASTM D5185(m) | >5       | <b>1</b>     | <1       | 1  |
| Titanium  | ppm         | ASTM D5185(m) |          | <b>0</b>     | 0        | 0  |
| Silver    | ppm         | ASTM D5185(m) | >5       | <b>0</b>     | 0        | 0  |
| Aluminum  | ppm         | ASTM D5185(m) | >50      | <b>7</b>     | 5        | 9  |
| Lead      | ppm         | ASTM D5185(m) | >50      | <b>&lt;1</b> | <1       | <1 |
| Copper    | ppm         | ASTM D5185(m) | >225     | <b>21</b>    | 11       | 18 |
| Tin       | ppm         | ASTM D5185(m) | >10      | <b>2</b>     | 1        | 2  |
| Antimony  | ppm         | ASTM D5185(m) |          | <b>0</b>     | <1       | <1 |
| Vanadium  | ppm         | ASTM D5185(m) |          | <b>0</b>     | 0        | 0  |
| Beryllium | ppm         | ASTM D5185(m) |          | <b>0</b>     | 0        | 0  |
| Cadmium   | ppm         | ASTM D5185(m) |          | <b>0</b>     | 0        | 0  |

## ADDITIVES

|            | method | limit/base    | current | history1     | history2 |     |
|------------|--------|---------------|---------|--------------|----------|-----|
| Boron      | ppm    | ASTM D5185(m) | 98      | <b>84</b>    | 92       | 83  |
| Barium     | ppm    | ASTM D5185(m) | <0.00   | <b>0</b>     | 0        | 0   |
| Molybdenum | ppm    | ASTM D5185(m) |         | <b>0</b>     | <1       | <1  |
| Manganese  | ppm    | ASTM D5185(m) |         | <b>&lt;1</b> | <1       | <1  |
| Magnesium  | ppm    | ASTM D5185(m) | <1      | <b>2</b>     | 3        | 4   |
| Calcium    | ppm    | ASTM D5185(m) | 70      | <b>86</b>    | 88       | 88  |
| Phosphorus | ppm    | ASTM D5185(m) | 220     | <b>249</b>   | 246      | 245 |
| Zinc       | ppm    | ASTM D5185(m) |         | <b>21</b>    | 9        | 13  |
| Sulfur     | ppm    | ASTM D5185(m) | 710     | <b>801</b>   | 814      | 819 |
| Lithium    | ppm    | ASTM D5185(m) |         | <b>&lt;1</b> | <1       | <1  |

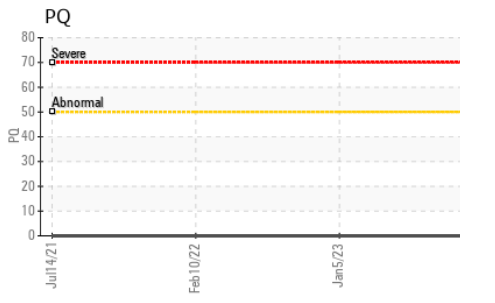
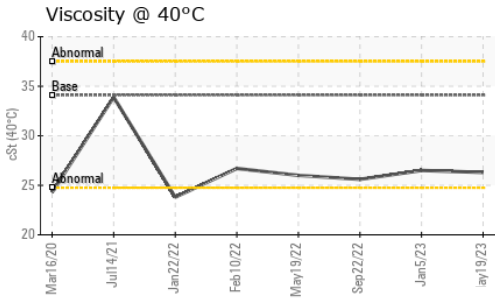
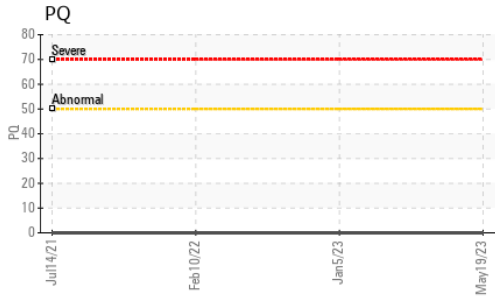
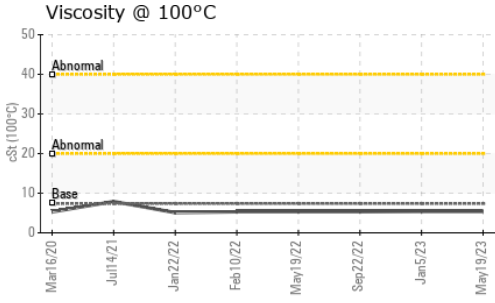
## CONTAMINANTS

|           | method | limit/base    | current | history1 | history2 |   |
|-----------|--------|---------------|---------|----------|----------|---|
| Silicon   | ppm    | ASTM D5185(m) | >20     | <b>3</b> | 3        | 4 |
| Sodium    | ppm    | ASTM D5185(m) |         | <b>4</b> | 3        | 5 |
| Potassium | ppm    | ASTM D5185(m) | >20     | <b>1</b> | <1       | 1 |

## FLUID DEGRADATION

|                  | method   | limit/base | current | history1    | history2 |      |
|------------------|----------|------------|---------|-------------|----------|------|
| Acid Number (AN) | mg KOH/g | ASTM D974* | 0.81    | <b>0.64</b> | 0.67     | 0.82 |

# OIL ANALYSIS REPORT

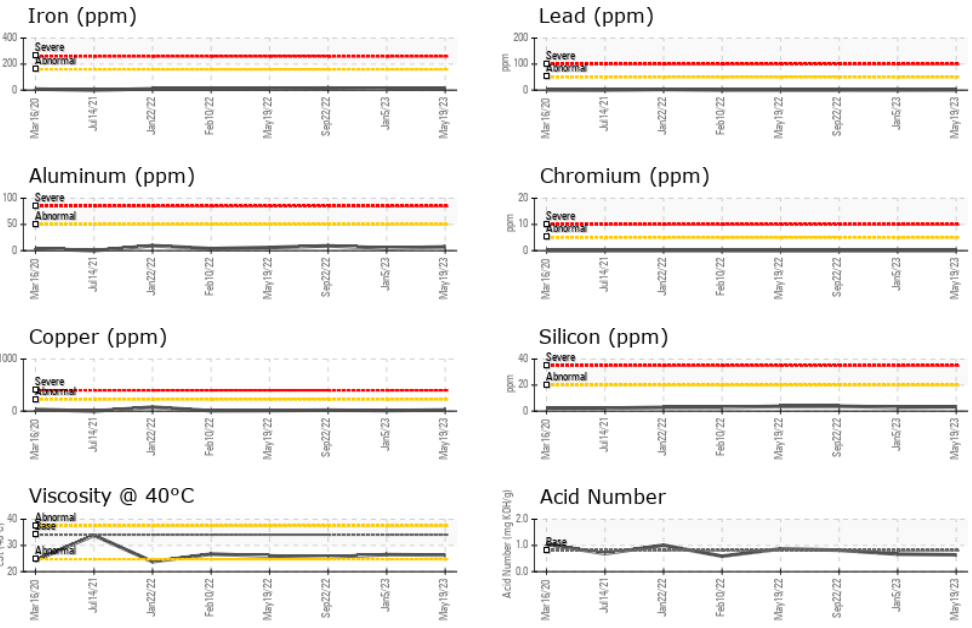


| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | Visual*    | NONE    | NONE     | NONE     |
| Yellow Metal     | scalar | Visual*    | NONE    | NONE     | NONE     |
| 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*    | >0.1    | NEG      | NEG      |
| Free Water       | scalar | Visual*    |         | NEG      | NEG      |

| FLUID PROPERTIES     | method | limit/base    | current | history1 | history2 |
|----------------------|--------|---------------|---------|----------|----------|
| Visc @ 40°C          | cSt    | ASTM D7279(m) | 34.11   | 26.5     | 25.6     |
| Visc @ 100°C         | cSt    | ASTM D7279(m) | 7.37    | 5.4      | 5.3      |
| Viscosity Index (VI) | Scale  | ASTM D2270*   | 190     | 143      | 145      |

| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---------------|--------|------------|---------|----------|----------|
| Color         |        |            |         |          |          |
| Bottom        |        |            |         |          |          |

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **INDUSTRIAS del PETROLEO CANAD. SA**  
**Sample No.** : PC0069040 **Received** : 06 Jun 2023 Contiguo FANAL, frente a la Autopista Bernardo Soto  
**Lab Number** : 02562302 **Diagnosed** : 07 Jun 2023 Grecia, A  
**Unique Number** : 5591343 **Diagnostician** : Wes Davis CR  
**Test Package** : MOB 2 ( Additional Tests: KV100, PQ, VI )

To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.

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