



# OIL ANALYSIS REPORT

|                 |        |
|-----------------|--------|
| WEAR            | NORMAL |
| CONTAMINATION   | NORMAL |
| FLUID CONDITION | NORMAL |

Area  
**(CFKCX)**  
Machine Id  
**[CFKCX] BEECHCRAFT BARON 58 913259**  
Component  
**Right Piston Aircraft Engine**  
Fluid  
**PHILLIPS 66 AVIATION X/C OIL SAE20W50 (12 LTR)**

## RECOMMENDATION

Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>WC0820314</b>   | WC0648097   | WC0525772   |
| Sample Date    |     | Client Info |           | <b>22 Jun 2023</b> | 01 Mar 2022 | 26 Nov 2020 |
| TSN            | hrs | Client Info |           | <b>0</b>           | 3256        | 0           |
| TSO            | hrs | Client Info |           | <b>0</b>           | 0           | 1576        |
| Oil Age        | hrs | Client Info |           | <b>19</b>          | 34          | 46          |
| Filter Age     | hrs | Client Info |           | <b>19</b>          | 34          | 46          |
| Oil Changed    |     | Client Info |           | <b>Changed</b>     | Changed     | Changed     |
| Filter Changed |     | Client Info |           | <b>Changed</b>     | Changed     | Changed     |
| Sample Status  |     |             |           | <b>NORMAL</b>      | NORMAL      | NORMAL      |

## WEAR

All component wear rates are normal.

|              |        |               |        |              |      |      |
|--------------|--------|---------------|--------|--------------|------|------|
| PQ           |        | ASTM D8184*   |        | <b>12</b>    | 27   | 24   |
| Iron         | ppm    | ASTM D5185(m) | >90    | <b>123</b>   | 110  | 101  |
| Chromium     | ppm    | ASTM D5185(m) | >20    | <b>8</b>     | 10   | 12   |
| Nickel       | ppm    | ASTM D5185(m) | >15    | <b>12</b>    | 18   | 19   |
| Titanium     | ppm    | ASTM D5185(m) |        | <b>&lt;1</b> | <1   | <1   |
| Silver       | ppm    | ASTM D5185(m) | >5     | <b>0</b>     | 0    | <1   |
| Aluminum     | ppm    | ASTM D5185(m) | >25    | <b>19</b>    | 15   | 16   |
| Lead         | ppm    | ASTM D5185(m) | >20000 | <b>3854</b>  | 5573 | 6507 |
| Copper       | ppm    | ASTM D5185(m) | >25    | <b>5</b>     | 5    | 4    |
| Tin          | ppm    | ASTM D5185(m) | >30    | <b>0</b>     | 0    | 0    |
| Vanadium     | ppm    | ASTM D5185(m) |        | <b>0</b>     | 0    | <1   |
| White Metal  | scalar | Visual*       | NONE   | <b>NONE</b>  | NONE | NONE |
| Yellow Metal | scalar | Visual*       | NONE   | <b>NONE</b>  | NONE | NONE |

## CONTAMINATION

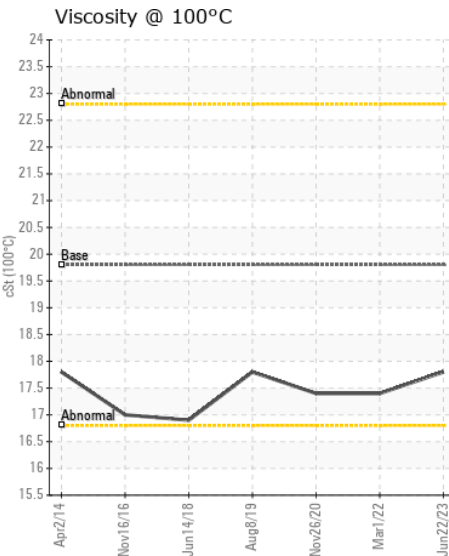
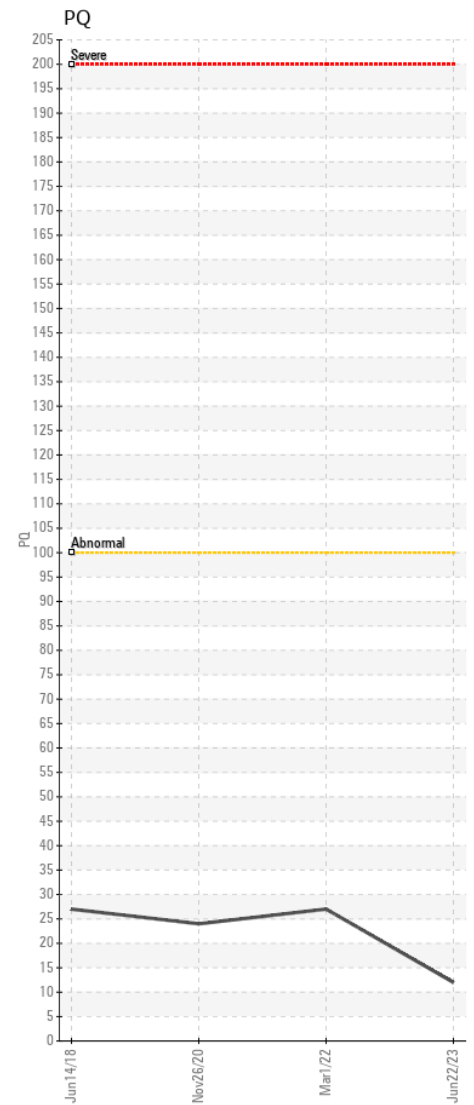
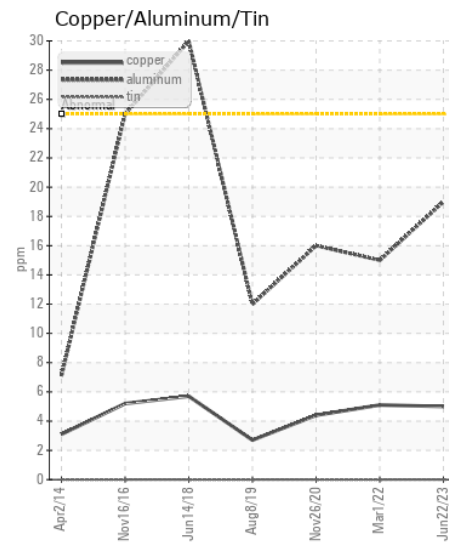
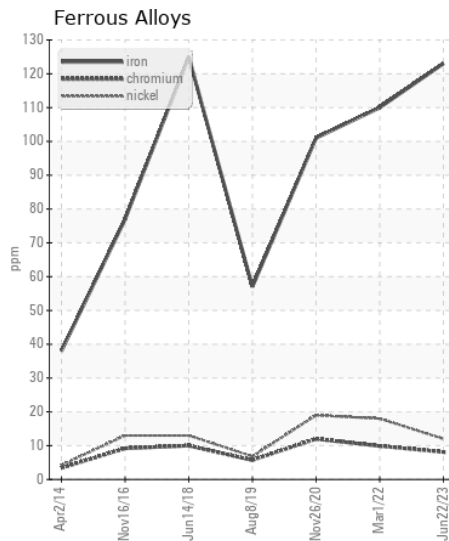
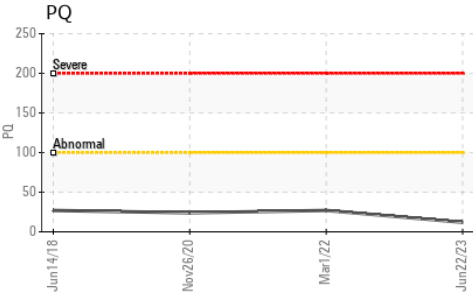
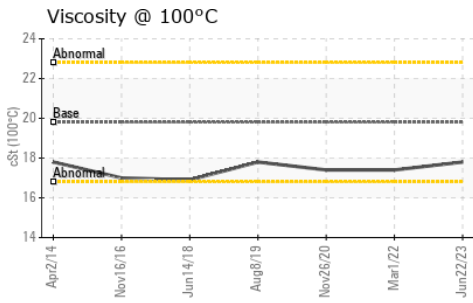
There is no indication of any contamination in the oil.

|                  |        |               |       |                |       |       |
|------------------|--------|---------------|-------|----------------|-------|-------|
| Silicon          | ppm    | ASTM D5185(m) | >15   | <b>8</b>       | 11    | 13    |
| Potassium        | ppm    | ASTM D5185(m) | >20   | <b>&lt;1</b>   | 1     | <1    |
| Fuel             |        | WC Method     | >4.0  | <b>&lt;1.0</b> | <1.0  | 0.6   |
| Water            |        | WC Method     | >0.1  | <b>NEG</b>     | NEG   | NEG   |
| Glycol           |        | WC Method     |       | <b>NEG</b>     | NEG   | NEG   |
| Silt             | scalar | Visual*       | NONE  | <b>VLITE</b>   | VLITE | LIGHT |
| Debris           | scalar | Visual*       | NONE  | <b>NONE</b>    | NONE  | NONE  |
| Sand/Dirt        | scalar | Visual*       | NONE  | <b>NONE</b>    | NONE  | NONE  |
| Appearance       | scalar | Visual*       | NORML | <b>NORML</b>   | NORML | NORML |
| Odor             | scalar | Visual*       | NORML | <b>NORML</b>   | NORML | NORML |
| Emulsified Water | scalar | Visual*       | >0.1  | <b>NEG</b>     | NEG   | NEG   |

## FLUID CONDITION

The condition of the oil is acceptable for the time in service.

|              |     |               |      |              |      |      |
|--------------|-----|---------------|------|--------------|------|------|
| Sodium       | ppm | ASTM D5185(m) |      | <b>2</b>     | <1   | <1   |
| Boron        | ppm | ASTM D5185(m) |      | <b>0</b>     | <1   | <1   |
| Barium       | ppm | ASTM D5185(m) |      | <b>0</b>     | 0    | 0    |
| Molybdenum   | ppm | ASTM D5185(m) |      | <b>6</b>     | 6    | 7    |
| Manganese    | ppm | ASTM D5185(m) |      | <b>&lt;1</b> | 1    | <1   |
| Magnesium    | ppm | ASTM D5185(m) |      | <b>&lt;1</b> | 1    | 1    |
| Calcium      | ppm | ASTM D5185(m) |      | <b>1</b>     | 4    | 3    |
| Phosphorus   | ppm | ASTM D5185(m) |      | <b>94</b>    | 404  | 476  |
| Zinc         | ppm | ASTM D5185(m) |      | <b>5</b>     | 6    | 5    |
| Sulfur       | ppm | ASTM D5185(m) |      | <b>1165</b>  | 1873 | 2056 |
| Visc @ 100°C | cSt | ASTM D7279(m) | 19.8 | <b>17.8</b>  | 17.4 | 17.4 |



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0820314  
**Lab Number** : 02566603  
**Unique Number** : 5603649  
**Test Package** : AVI 1 ( Additional Tests: PQ )  
**Received** : 27 Jun 2023  
**Tested** : 27 Jun 2023  
**Diagnosed** : 27 Jun 2023 - Kevin Marson

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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.