

## Machine Id EPIROC D65-10SF TMG21SED0629 Component Air Compressor Fluid ATLAS COPCO PAROIL S (--- GAL)

\_\_\_\_\_

| RECOMMENDATION | RE | СОМІ | MEND | OITA |  |
|----------------|----|------|------|------|--|
|----------------|----|------|------|------|--|

Resample at the next service interval to monitor.

## WEAR

All component wear rates are normal.

## **CONTAMINATION**

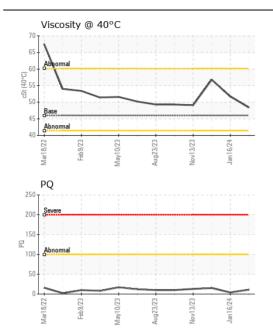
There is no indication of any contamination in the oil.

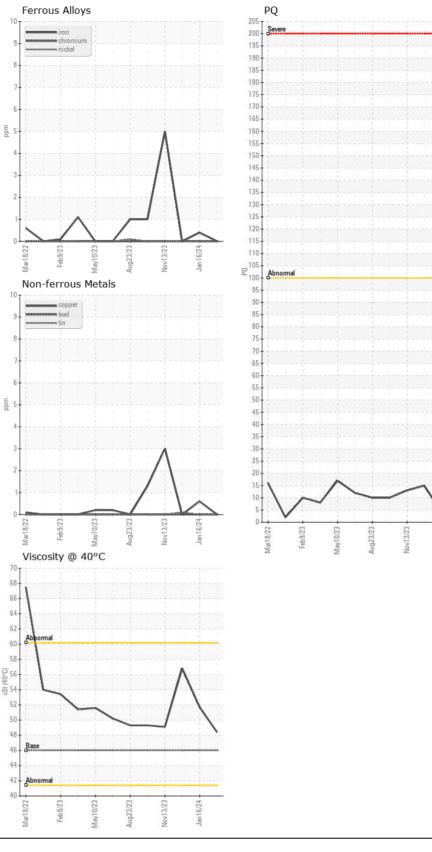
## **FLUID CONDITION**

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

| Test   | UOM   | Method  | Limit/Abn  | Current  | History1   | History2   |
|--|---|---|--|--|--|--|
| Sample Number  |   | Client Info   |  | JR0202354  | JR0197333  | JR0191092  |
| Sample Date  |   | Client Info   |  | 27 Feb 2024  | 16 Jan 2024  | 29 Nov 2023  |
| Machine Age  | hrs   | Client Info   |  | 4311   | 4098   | 3887   |
| Oil Age  | hrs   | Client Info   |  | 213  | 0  | 0  |
| Filter Age   | hrs   | Client Info   |  | 213  | 0  | 0  |
| Oil Changed  |   | Client Info   |  | Not Changd   | Changed  | Not Changd   |
| Filter Changed   |   | Client Info   |  | Not Changd   | Changed  | Not Changd   |
| Sample Status  |   |   |  | NORMAL   | NORMAL   | NORMAL   |
| PQ   |   | ASTM D8184  |  | 44   | 4  | 15   |
|  | 0000  |   | . 50   | 11<br>0  |  |  |
| Iron   | ppm   | ASTM D5185m   | >50  | -  | <1   | 0  |
| Chromium   | ppm   | ASTM D5185m   | >4   | 0  | 0  | 0  |
| Nickel   | ppm   | ASTM D5185m   | >4   | 0  | 0  | 0  |
| Titanium   | ppm   | ASTM D5185m   |  | 0  | 0  | 0  |
| Silver   | ppm   | ASTM D5185m   | 10   | 0  | 0  | 0  |
| Aluminum   | ppm   | ASTM D5185m   | >10  | <1   | 0  | 0  |
| Lead   | ppm   | ASTM D5185m   | >20  | 0  | 0  | 0  |
| Copper   | ppm   | ASTM D5185m   | >40  | 0  | <1   | 0  |
| Tin  | ppm   | ASTM D5185m   | >5   | 0  | 0  | <1   |
| Vanadium   | ppm   | ASTM D5185m   |  | <1   | <1   | 0  |
| White Metal  | scalar  | *Visual   | NONE   | NONE   | NONE   | NONE   |
|  |   |   |  |  |  |  |
| Yellow Metal   | scalar  | *Visual   | NONE   | NONE   | NONE   | NONE   |
| Yellow Metal<br>Silicon  | scalar<br>ppm   | *Visual<br>ASTM D5185m  | NONE<br>>25  | NONE   | NONE<br><1   | NONE<br>6  |
|  |   |   |  |  |  |  |
| Silicon  | ppm   | ASTM D5185m   | >25  | <1   | <1   | 6  |
| Silicon<br>Potassium   | ppm   | ASTM D5185m<br>ASTM D5185m  | >25<br>>20   | <1<br><1   | <1<br>0  | 6<br><1  |
| Silicon<br>Potassium<br>Water  | ppm<br>ppm  | ASTM D5185m<br>ASTM D5185m<br>WC Method   | >25<br>>20<br>>0.6   | <1<br><1<br>NEG  | <1<br>0<br>NEG   | 6<br><1<br>NEG   |
| Silicon<br>Potassium<br>Water<br>Silt  | ppm<br>ppm<br>scalar  | ASTM D5185m<br>ASTM D5185m<br>WC Method<br>*Visual  | >25<br>>20<br>>0.6<br>NONE   | <1<br><1<br>NEG<br>NONE  | <1<br>0<br>NEG<br>NONE   | 6<br><1<br>NEG<br>NONE   |
| Silicon<br>Potassium<br>Water<br>Silt<br>Debris  | ppm<br>ppm<br>scalar<br>scalar  | ASTM D5185m<br>ASTM D5185m<br>WC Method<br>*Visual<br>*Visual   | >25<br>>20<br>>0.6<br>NONE<br>NONE   | <1<br><1<br>NEG<br>NONE<br>NONE  | <1<br>0<br>NEG<br>NONE<br>NONE   | 6<br><1<br>NEG<br>NONE<br>NONE   |
| Silicon<br>Potassium<br>Water<br>Silt<br>Debris<br>Sand/Dirt   | ppm<br>ppm<br>scalar<br>scalar<br>scalar  | ASTM D5185m<br>ASTM D5185m<br>WC Method<br>*Visual<br>*Visual<br>*Visual  | >25<br>>20<br>>0.6<br>NONE<br>NONE<br>NONE   | <1<br><1<br>NEG<br>NONE<br>NONE<br>NONE  | <1<br>0<br>NEG<br>NONE<br>NONE<br>NONE   | 6<br><1<br>NEG<br>NONE<br>NONE   |
| Silicon<br>Potassium<br>Water<br>Silt<br>Debris<br>Sand/Dirt<br>Appearance   | ppm<br>ppm<br>scalar<br>scalar<br>scalar<br>scalar  | ASTM D5185m<br>ASTM D5185m<br>WC Method<br>*Visual<br>*Visual<br>*Visual<br>*Visual   | >25<br>>20<br>>0.6<br>NONE<br>NONE<br>NONE<br>NORML  | <1<br><1<br>NEG<br>NONE<br>NONE<br>NONE<br>NORML   | <1<br>0<br>NEG<br>NONE<br>NONE<br>NONE<br>NORML  | 6<br><1<br>NEG<br>NONE<br>NONE<br>NONE<br>NORML  |
| Silicon<br>Potassium<br>Water<br>Silt<br>Debris<br>Sand/Dirt<br>Appearance<br>Odor<br>Emulsified Water   | ppm<br>ppm<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar  | ASTM D5185m<br>ASTM D5185m<br>WC Method<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>*Visual   | >25<br>>20<br>>0.6<br>NONE<br>NONE<br>NONE<br>NORML<br>NORML   | <1<br><1<br>NEG<br>NONE<br>NONE<br>NONE<br>NORML<br>NEG  | <1<br>0<br>NEG<br>NONE<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG  | 6<br><1<br>NEG<br>NONE<br>NONE<br>NORM<br>NORML<br>NEG   |
| Silicon<br>Potassium<br>Water<br>Silt<br>Debris<br>Sand/Dirt<br>Appearance<br>Odor<br>Emulsified Water<br>Sodium   | ppm<br>ppm<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar<br>gpm                                 | ASTM D5185m<br>ASTM D5185m<br>WC Method<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>ASTM D5185m  | >25<br>>20<br>>0.6<br>NONE<br>NONE<br>NORML<br>NORML<br>>0.6   | <1<br><1<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG<br><1   | <1<br>0<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG<br>0   | 6<br><1<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG<br><1  |
| Silicon<br>Potassium<br>Water<br>Silt<br>Debris<br>Sand/Dirt<br>Appearance<br>Odor<br>Emulsified Water<br>Sodium<br>Boron  | ppm<br>ppm<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar<br>gpm                                 | ASTM D5185m<br>ASTM D5185m<br>WC Method<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>ASTM D5185m<br>ASTM D5185m   | >25<br>>20<br>>0.6<br>NONE<br>NONE<br>NORML<br>>0.6  | <1<br><1<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG<br><1<br>0  | <1<br>0<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG<br>0<br>0  | 6<br><1<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG<br><1<br>0   |
| Silicon<br>Potassium<br>Water<br>Silt<br>Debris<br>Sand/Dirt<br>Appearance<br>Odor<br>Emulsified Water<br>Sodium<br>Boron<br>Barium  | ppm<br>ppm<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar<br>ppm<br>ppm                          | ASTM D5185m<br>ASTM D5185m<br>WC Method<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>ASTM D5185m<br>ASTM D5185m   | >25<br>>20<br>>0.6<br>NONE<br>NONE<br>NORML<br>NORML<br>>0.6   | <1<br><1<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG<br><1<br>0<br>0   | <1<br>0<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG<br>0<br>0<br>0   | 6<br><1<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG<br><1<br>0<br>0  |
| Silicon<br>Potassium<br>Water<br>Silt<br>Debris<br>Sand/Dirt<br>Appearance<br>Odor<br>Emulsified Water<br>Sodium<br>Boron<br>Barium<br>Molybdenum  | ppm<br>ppm<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar<br>ppm<br>ppm<br>ppm                             | ASTM D5185m<br>ASTM D5185m<br>WC Method<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m   | >25<br>>20<br>>0.6<br>NONE<br>NONE<br>NORML<br>NORML<br>>0.6   | <1<br><1<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG<br><1<br>0<br>0<br>0<br>0   | <1<br>0<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG<br>0<br>0<br>0<br>0<br>0   | 6<br><1<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG<br><1<br>0<br>0<br>0<br>0                              |
| Silicon<br>Potassium<br>Water<br>Silt<br>Debris<br>Sand/Dirt<br>Appearance<br>Odor<br>Emulsified Water<br>Sodium<br>Boron<br>Barium<br>Molybdenum<br>Manganese   | ppm<br>ppm<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar<br>gpm<br>ppm<br>ppm                             | ASTM D5185m<br>ASTM D5185m<br>WC Method<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m  | >25<br>>20<br>>0.6<br>NONE<br>NONE<br>NORML<br>>0.6<br>0<br>0<br>0<br>0  | <1<br><1<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG<br><1<br>0<br>0<br>0<br>0<br>0<br>0   | <1<br>0<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0                               | 6<br><1<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG<br><1<br>0<br>0<br>0<br><1                             |
| Silicon<br>Potassium<br>Water<br>Silt<br>Debris<br>Sand/Dirt<br>Appearance<br>Odor<br>Emulsified Water<br>Sodium<br>Boron<br>Barium<br>Molybdenum<br>Manganese<br>Magnesium                                  | ppm<br>ppm<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm               | ASTM D5185m<br>ASTM D5185m<br>WC Method<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m                               | >25<br>>20<br>>0.6<br>NONE<br>NONE<br>NORML<br>NORML<br>>0.6   | <1<br><1<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG<br><1<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0   | <1 0 NEG NONE NONE NONE NORML NORML NORML 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  | 6<br><1<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG<br><1<br>0<br>0<br>0<br>0<br><1<br><1                  |
| Silicon<br>Potassium<br>Water<br>Silt<br>Debris<br>Sand/Dirt<br>Appearance<br>Odor<br>Emulsified Water<br>Sodium<br>Boron<br>Barium<br>Molybdenum<br>Manganese<br>Magnesium<br>Calcium                       | ppm<br>ppm<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm               | ASTM D5185m<br>ASTM D5185m<br>WC Method<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m                               | >25<br>>20<br>>0.6<br>NONE<br>NONE<br>NORML<br>NORML<br>>0.6<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0   | <1<br><1<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG<br><1<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0                          | <1<br>0<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0 | 6<br><1<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG<br><1<br>0<br>0<br>0<br><1<br><1<br>10                 |
| Silicon<br>Potassium<br>Water<br>Silt<br>Debris<br>Sand/Dirt<br>Appearance<br>Odor<br>Emulsified Water<br>Sodium<br>Boron<br>Barium<br>Molybdenum<br>Manganese<br>Magnesium<br>Calcium                       | ppm<br>ppm<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm | ASTM D5185m<br>ASTM D5185m<br>WC Method<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m                | >25<br>>20<br>>0.6<br>NONE<br>NONE<br>NORML<br>>0.6<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0  | <1<br><1<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG<br><1<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0                          | <1<br>0<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0 | 6<br><1<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG<br><1<br>0<br>0<br>0<br><1<br><1<br>10<br>25           |
| Silicon<br>Potassium<br>Water<br>Silt<br>Debris<br>Sand/Dirt<br>Appearance<br>Odor<br>Emulsified Water<br>Sodium<br>Boron<br>Barium<br>Molybdenum<br>Manganese<br>Magnesium<br>Calcium<br>Phosphorus<br>Zinc | ppm<br>ppm<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm | ASTM D5185m<br>ASTM D5185m<br>WC Method<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m | <ul> <li>&gt;25</li> <li>&gt;20</li> <li>&gt;0.6</li> <li>NONE</li> <li>NORML</li> <li>&gt;0.6</li> <li>0</li> <li>0</li> <li>0</li> <li>0</li> <li>0</li> <li>0</li> <li>0</li> <li>0</li> <li>100</li> <li>0</li> <li>0<th>&lt;1<br/>&lt;1<br/>NEG<br/>NONE<br/>NONE<br/>NORML<br/>NORML<br/>NEG<br/>&lt;1<br/>0<br/>0<br/>0<br/>0<br/>0<br/>0<br/>0<br/>0<br/>0<br/>0<br/>0<br/>0<br/>0<br/>0<br/>0<br/>0<br/>0<br/>0</th><th>&lt;1<br/>0<br/>NEG<br/>NONE<br/>NONE<br/>NORML<br/>NORML<br/>NEG<br/>0<br/>0<br/>0<br/>0<br/>0<br/>0<br/>0<br/>0<br/>0<br/>0<br/>0<br/>0<br/>0<br/>0<br/>0<br/>0<br/>0<br/>0<br/>0</th><th>6<br/>&lt;1<br/>NEG<br/>NONE<br/>NONE<br/>NORML<br/>NORML<br/>NEG<br/>&lt;1<br/>0<br/>0<br/>0<br/>0<br/>&lt;1<br/>&lt;1<br/>10<br/>25<br/>0</th></li></ul> | <1<br><1<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG<br><1<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0 | <1<br>0<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0 | 6<br><1<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG<br><1<br>0<br>0<br>0<br>0<br><1<br><1<br>10<br>25<br>0 |
| Silicon<br>Potassium<br>Water<br>Silt<br>Debris<br>Sand/Dirt<br>Appearance<br>Odor<br>Emulsified Water<br>Sodium<br>Boron<br>Barium<br>Molybdenum<br>Manganese<br>Magnesium<br>Calcium                       | ppm<br>ppm<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm | ASTM D5185m<br>ASTM D5185m<br>WC Method<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m                | >25<br>>20<br>>0.6<br>NONE<br>NONE<br>NORML<br>>0.6<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0  | <1<br><1<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG<br><1<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0                          | <1<br>0<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0 | 6<br><1<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG<br><1<br>0<br>0<br>0<br><1<br><1<br>10<br>25           |

Submitted By: JOHN GUASCHINO





: WearCheck USA - 501 Madison Ave., Cary, NC 27513 **GARNER - MARTIN MARIETTA** Laboratory : JR0202354 Received : 29 Feb 2024 1111 E GARNER RD Sample No. Lab Number : 06104568 :01 Mar 2024 GARNER, NC Tested Unique Number : 10902798 : 01 Mar 2024 - Wes Davis US 27529 Diagnosed Test Package : CONST (Additional Tests: PQ) Contact: JASON GILMORE Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. jason.gilmore@martinmarietta.com \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. Т: F: Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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