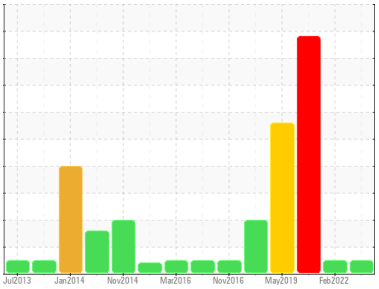
# OIL ANALYSIS REPORT

Sample Rating Trend




NORMAL

Machine Id
## 420.XX224 - 2 O2 REACTOR DISTRIBUTOR
Component
**Gearbox**
Fluid
**ROYAL PURPLE SYNFILM GT 320 (--- QTS)**

## DIAGNOSIS

**Recommendation**
Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

**Wear**
All component wear rates are normal.

**Contamination**
The water content is negligible. There is no indication of any contamination in the oil.

**Fluid Condition**
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **WC0432381** | WC0432383 | RP0000397 |
| Sample Date | | Client Info | | **09 Mar 2023** | 24 Feb 2022 | 14 Aug 2019 |
| Machine Age | hrs | Client Info | | **0** | 0 | 0 |
| Oil Age | hrs | Client Info | | **0** | 0 | 0 |
| Oil Changed | | Client Info | | **N/A** | N/A | N/A |
| Sample Status | | | | **NORMAL** | NORMAL | SEVERE |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >200 | **20** | 29 | 6 |
| Chromium | ppm | ASTM D5185m | >15 | **0** | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >15 | **0** | 0 | <1 |
| Titanium | ppm | ASTM D5185m | | **<1** | 0 | 0 |
| Silver | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >25 | **<1** | 1 | <1 |
| Lead | ppm | ASTM D5185m | >100 | **<1** | <1 | <1 |
| Copper | ppm | ASTM D5185m | >200 | **6** | 8 | 1 |
| Tin | ppm | ASTM D5185m | >25 | **<1** | <1 | 0 |
| Antimony | ppm | ASTM D5185m | >5 | **---** | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | **0** | 0 | 0 |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | | **0** | <1 | 2 |
| Barium | ppm | ASTM D5185m | | **15** | 0 | <1 |
| Molybdenum | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | **<1** | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 90 | **41** | 58 | 55 |
| Calcium | ppm | ASTM D5185m | | **14** | 2 | 4 |
| Phosphorus | ppm | ASTM D5185m | | **10** | 10 | 10 |
| Zinc | ppm | ASTM D5185m | | **11** | 0 | 3 |
| Sulfur | ppm | ASTM D5185m | | **17036** | 15547 | 15473 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >50 | **2** | 2 | 8 |
| Sodium | ppm | ASTM D5185m | | **0** | 2 | 2 |
| Potassium | ppm | ASTM D5185m | >20 | **<1** | <1 | 0 |
| Water | % | ASTM D6304 | >0.2 | **0.089** | 0.020 | 1.02 |
| ppm Water | ppm | ASTM D6304 | >2000 | **890** | 201.2 | 10200 |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.25 | **0.32** | 0.38 | 0.443 |

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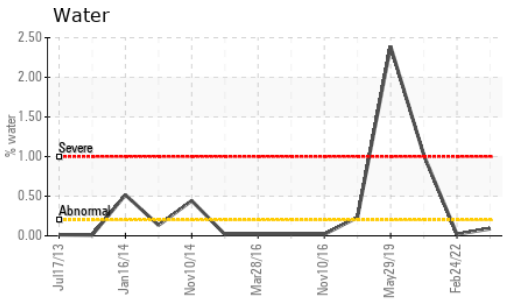
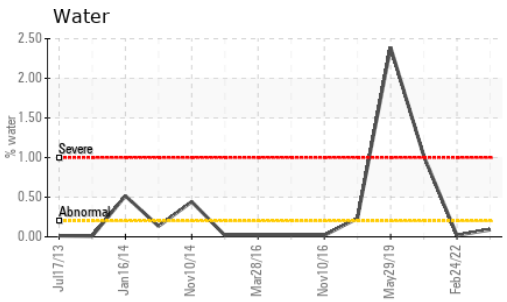
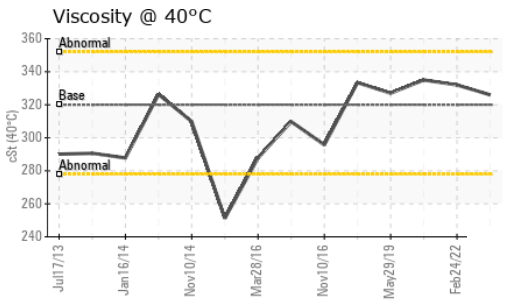
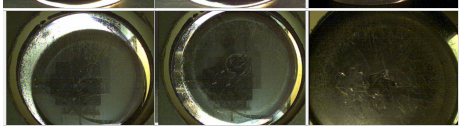


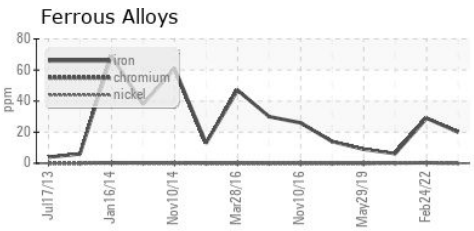



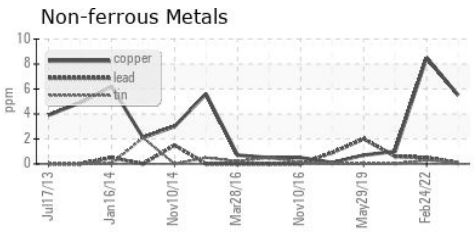

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| 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 | ▲ LAYRD |
| Odor | scalar | *Visual | NORML | **NORML** | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.2 | **0.2%** | NEG | ⬢ 0.2% |
| Free Water | scalar | *Visual | | **NEG** | NEG | ⬢ 10.0 |

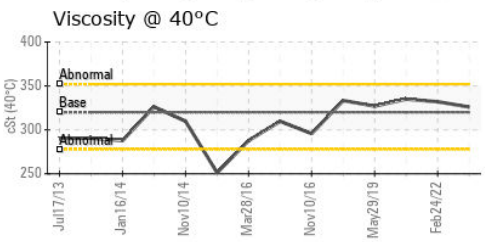
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 320 | **326** | 332 | 335 |

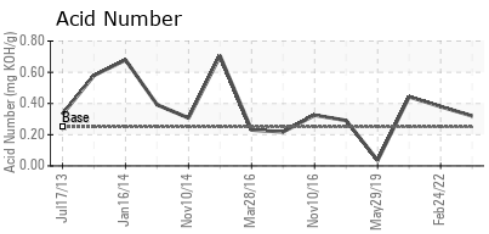
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  | | |
| Bottom | | |  | | |

## GRAPHS




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : WC0432381 **Received** : 13 Mar 2023
**Lab Number** : 05789798 **Diagnosed** : 14 Mar 2023
**Unique Number** : 10374469 **Diagnostician** : Wes Davis
**Test Package** : IND 2 ( Additional Tests: KF )

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

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