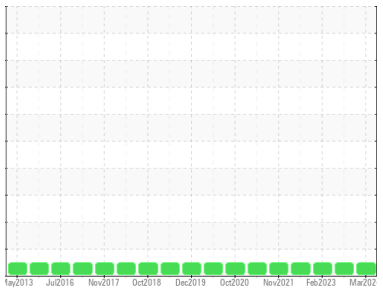
# OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
**HY/8WM**
Component
**Gearbox**
Fluid
**ROYAL PURPLE SYNFILM GT 320 (--- GAL)**

## DIAGNOSIS

**Recommendation**
Resample at the next service interval to monitor.

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

**Contamination**
The amount and size of particulates present in the system are acceptable. 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 | | **WC0807449** | WC0695206 | WC0695073 |
| Sample Date | | Client Info | | **12 Mar 2024** | 29 Sep 2023 | 06 Feb 2023 |
| Machine Age | hrs | Client Info | | **0** | 0 | 0 |
| Oil Age | hrs | Client Info | | **40320** | 36360 | 30720 |
| Oil Changed | | Client Info | | **N/A** | N/A | N/A |
| Sample Status | | | | **NORMAL** | NORMAL | NORMAL |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >200 | **9** | 5 | 8 |
| Chromium | ppm | ASTM D5185m | >15 | **<1** | <1 | 0 |
| Nickel | ppm | ASTM D5185m | >15 | **<1** | <1 | 0 |
| Titanium | ppm | ASTM D5185m | | **<1** | <1 | 0 |
| Silver | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >25 | **2** | 2 | 0 |
| Lead | ppm | ASTM D5185m | >100 | **<1** | <1 | 0 |
| Copper | ppm | ASTM D5185m | >200 | **2** | 2 | 1 |
| Tin | ppm | ASTM D5185m | >25 | **<1** | <1 | 0 |
| Vanadium | ppm | ASTM D5185m | | **<1** | <1 | 0 |
| Cadmium | ppm | ASTM D5185m | | **<1** | <1 | 0 |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Barium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | **<1** | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 90 | **15** | 13 | 41 |
| Calcium | ppm | ASTM D5185m | | **<1** | <1 | 0 |
| Phosphorus | ppm | ASTM D5185m | | **19** | 20 | 15 |
| Zinc | ppm | ASTM D5185m | | **3** | 2 | 0 |
| Sulfur | ppm | ASTM D5185m | | **18366** | 18329 | 19828 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >50 | **2** | 3 | 1 |
| Sodium | ppm | ASTM D5185m | | **0** | 0 | 2 |
| Potassium | ppm | ASTM D5185m | >20 | **2** | 2 | <1 |
| Water | % | ASTM D6304 | >0.2 | **NEG** | NEG | NEG |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >20000 | **541** | 90 | 236 |
| Particles >6µm | | ASTM D7647 | >5000 | **46** | 30 | 56 |
| Particles >14µm | | ASTM D7647 | >640 | **6** | 4 | 8 |
| Particles >21µm | | ASTM D7647 | >160 | **2** | 2 | 3 |
| Particles >38µm | | ASTM D7647 | >40 | **0** | 0 | 0 |
| Particles >71µm | | ASTM D7647 | >10 | **0** | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >21/19/16 | **16/13/10** | 14/12/9 | 15/13/10 |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.25 | **0.41** | 0.43 | 0.42 |

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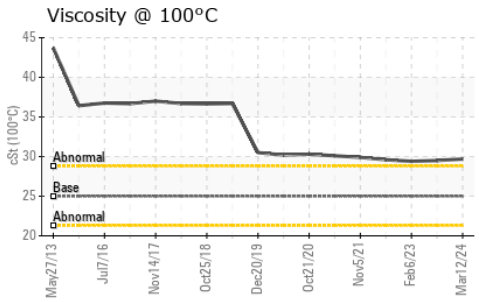
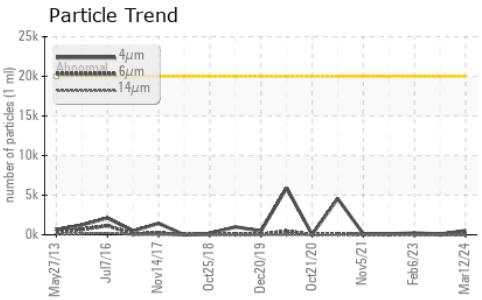
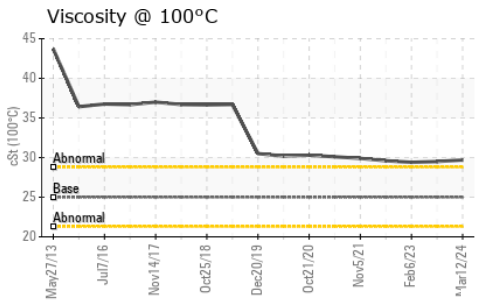
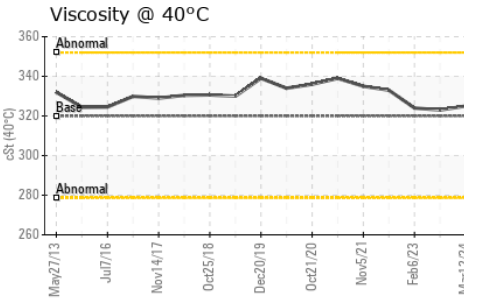
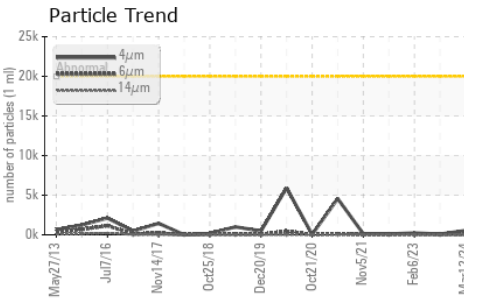


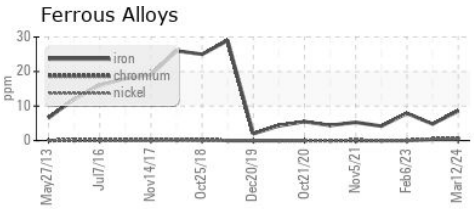



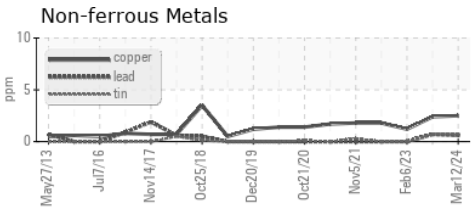

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
|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

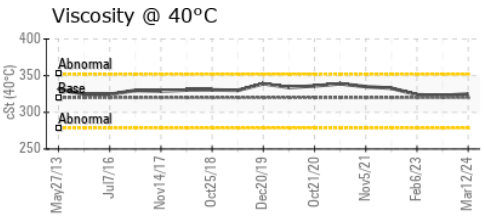
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 320 | **325** | 323 | 324 |
| Visc @ 100°C | cSt | ASTM D445 | 25 | **29.7** | 29.5 | 29.4 |
| Viscosity Index (VI) | Scale | ASTM D2270 | 100 | **125** | 125 | 124 |

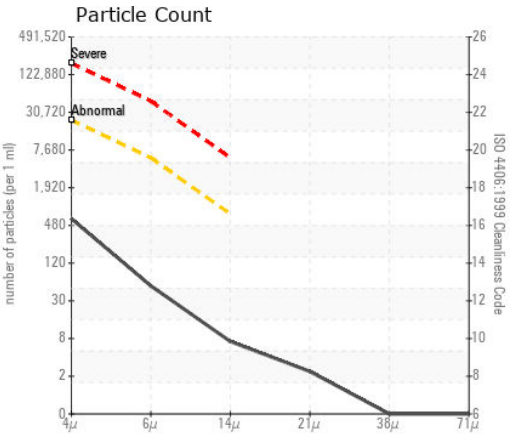
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  | | |
| Bottom | | |  | | |

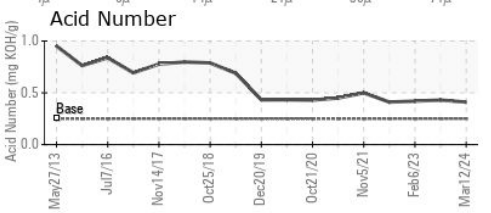
## GRAPHS




**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513 **JPHYTEC**
**Sample No.** : WC0807449 **Received** : 05 Apr 2024
**Lab Number** : 06139798 **Tested** : 08 Apr 2024 ,
**Unique Number** : 10964606 **Diagnosed** : 08 Apr 2024 - Don Baldridge JP
**Test Package** : PLANT ( Additional Tests: KV100, VI ) Contact: Service

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

Certificate L2367