

# **PROBLEM SUMMARY**

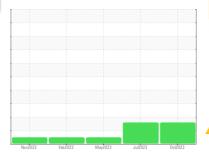
# Sample Rating Trend





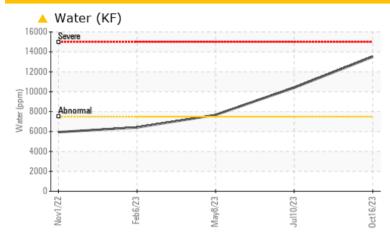
Component **Hydraulic System** 

Skydrol (--- GAL)





# **COMPONENT CONDITION SUMMARY**



## RECOMMENDATION

We advise that you check for the source of water entry. Resample at the next service interval to monitor.

| PROBLEMATIC T | EST RE | SULTS      |        |              |               |        |
|---------------|--------|------------|--------|--------------|---------------|--------|
| Sample Status |        |            |        | ABNORMAL     | ABNORMAL      | NORMAL |
| Water         | %      | ASTM D6304 | >0.750 | <b>1.35</b>  | <u>▲</u> 1.04 | 0.766  |
| ppm Water     | maa    | ASTM D6304 | >7500  | <b>13500</b> | <u></u> 10400 | 7665.6 |

Customer Id: PARDUBGA Sample No.: WC0817692 Lab Number: 05982677 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data: Angela Borella +1 800-237-1369 angela.borella@wearcheckusa.com

To change component or sample information: Customer Service +1 1-800-237-1369 customerservice@wearcheck.com

### **RECOMMENDED ACTIONS**

| Action             | Status | Date | Done By | Description   |
|--------------------|--------|------|---------|---|
| Check Water Access |        |      | ?       | We advise that you check for the source of water entry. |

# HISTORICAL DIAGNOSIS

# 10 Jul 2023 Diag: Jonathan Hester

#### WATER



We advise that you check for the source of water entry. Resample at the next service interval to monitor. All component wear rates are normal. There is a moderate concentration of water present in the oil. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



## 08 May 2023 Diag: Doug Bogart

#### NORMAL



No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. There is a trace of moisture present in the oil. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



#### 06 Feb 2023 Diag: Doug Bogart

#### NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. The water content is negligible. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



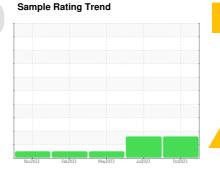


# **OIL ANALYSIS REPORT**

HPU22 **TB05** 

Component **Hydraulic System** 

Skydrol (--- GAL)





# DIAGNOSIS

### Recommendation

We advise that you check for the source of water entry. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

# Contamination

There is a moderate concentration of water present in the oil. The amount and size of particulates present in the system are acceptable.

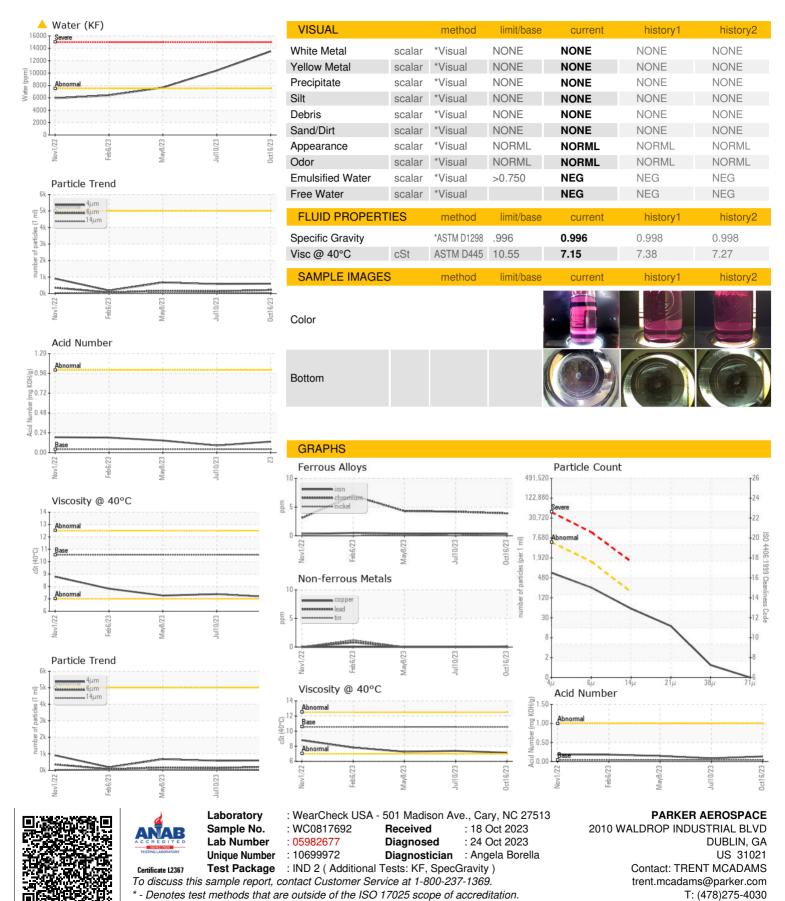
## **Fluid Condition**

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

|                  |          | Nov2022      | Feb2023    | May2023 Jul2023 | Oct2023        |             |
|------------------|----------|--------------|------------|-----------------|----------------|-------------|
| SAMPLE INFORM    | MATION   | method       | limit/base | current         | history1       | history2    |
| Sample Number    |          | Client Info  |            | WC0817692       | WC0817680      | WC0778658   |
| Sample Date      |          | Client Info  |            | 16 Oct 2023     | 10 Jul 2023    | 08 May 2023 |
| Machine Age      | mths     | Client Info  |            | 0               | 0              | 0           |
| Oil Age          | mths     | Client Info  |            | 0               | 0              | 0           |
| Oil Changed      |          | Client Info  |            | N/A             | N/A            | N/A         |
| Sample Status    |          |              |            | ABNORMAL        | ABNORMAL       | NORMAL      |
| WEAR METALS      |          | method       | limit/base | current         | history1       | history2    |
| Iron             | ppm      | ASTM D5185m  | >20        | <1              | <1             | <1          |
| Chromium         | ppm      | ASTM D5185m  | >20        | 4               | 4              | 4           |
| Nickel           | ppm      | ASTM D5185m  | >20        | <1              | 0              | <1          |
| Titanium         | ppm      | ASTM D5185m  |            | 0               | 0              | <1          |
| Silver           | ppm      | ASTM D5185m  |            | 0               | 0              | 0           |
| Aluminum         | ppm      | ASTM D5185m  | >20        | 2               | 2              | 0           |
| Lead             | ppm      | ASTM D5185m  | >20        | 0               | 0              | 0           |
| Copper           | ppm      | ASTM D5185m  | >20        | <1              | 0              | 0           |
| Tin              | ppm      | ASTM D5185m  | >20        | 0               | 0              | 0           |
| Vanadium         | ppm      | ASTM D5185m  |            | 0               | 0              | <1          |
| Cadmium          | ppm      | ASTM D5185m  |            | 0               | <1             | <1          |
| ADDITIVES        |          | method       | limit/base | current         | history1       | history2    |
| Boron            | ppm      | ASTM D5185m  |            | 4               | 7              | 0           |
| Barium           | ppm      | ASTM D5185m  |            | 0               | 0              | 0           |
| Molybdenum       | ppm      | ASTM D5185m  |            | 0               | 0              | 0           |
| Manganese        | ppm      | ASTM D5185m  |            | 0               | <1             | 0           |
| Magnesium        | ppm      | ASTM D5185m  |            | 2               | 2              | 1           |
| Calcium          | ppm      | ASTM D5185m  | 110        | 101             | 103            | 118         |
| Phosphorus       | ppm      | ASTM D5185m  | 37         | 41836           | 98247          | 10446       |
| Zinc             | ppm      | ASTM D5185m  |            | 0               | 4              | 3           |
| Sulfur           | ppm      | ASTM D5185m  | 220        | 269             | 314            | 296         |
| CONTAMINANTS     |          | method       | limit/base | current         | history1       | history2    |
| Silicon          | ppm      | ASTM D5185m  | >15        | 2               | 1              | 2           |
| Sodium           | ppm      | ASTM D5185m  |            | 5               | 2              | 5           |
| Potassium        | ppm      | ASTM D5185m  | >20        | 38              | 32             | 35          |
| Water            | %        | ASTM D6304   | >0.750     | <b>1.35</b>     | <b>▲</b> 1.04  | 0.766       |
| ppm Water        | ppm      | ASTM D6304   | >7500      | <b>13500</b>    | <b>△</b> 10400 | 7665.6      |
| FLUID CLEANLIN   | IESS     | method       | limit/base | current         | history1       | history2    |
| Particles >4µm   |          | ASTM D7647   | >5000      | 599             | 578            | 673         |
| Particles >6µm   |          | ASTM D7647   | >1300      | 216             | 141            | 174         |
| Particles >14μm  |          | ASTM D7647   | >160       | 50              | 31             | 20          |
| Particles >21µm  |          | ASTM D7647   | >40        | 15              | 5              | 6           |
| Particles >38μm  |          | ASTM D7647   | >10        | 1               | 0              | 0           |
| Particles >71μm  |          | ASTM D7647   | >3         | 0               | 0              | 0           |
| Oil Cleanliness  |          | ISO 4406 (c) | >19/17/14  | 16/15/13        | 16/14/12       | 17/15/11    |
| FLUID DEGRADA    | TION     | method       | limit/base | current         | history1       | history2    |
| Acid Number (AN) | mg KOH/g | ASTM D8045   | 0.04       | 0.134           | 0.086          | 0.147       |



# **OIL ANALYSIS REPORT**



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

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