Machine Id

## HPU-002

## Hydraulic System

AW HYid

## DIAGNOSIS

## A Recommendation

Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. The filter change at the time of sampling has been noted. Resample in $30-45$ days to monitor this situation. Please specify the component make and model with your next sample.

## Wear

All component wear rates are normal.

## $\triangle$ Contamination

There is a high amount of silt (particulates < 14 microns in size) present in the oil.

## Fluid Condition

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.


| SAMPLE INFORMATION |  | method | limit/base | current | history1 | history2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sample Number |  | Client Info |  | PTK0004944 | PTK0004948 | --- |
| Sample Date |  | Client Info |  | 11 Jul 2024 | 18 Dec 2023 | --- |
| Machine Age | mths | Client Info |  | 0 | 0 | --- |
| Oil Age | mths | Client Info |  | 0 | 0 | --- |
| Oil Changed |  | Client Info |  | N/A | Changed | --- |
| Sample Status |  |  |  | SEVERE | ATTENTION | --- |
| CONTAMINATION |  | method | limit/base | current | history1 | history2 |
| Water |  | WC Method | >0.1 | NEG | NEG | --- |
| WEAR METALS |  | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185m | >20 | 4 | 3 | --- |
| Chromium | ppm | ASTM D5185m | $>10$ | 0 | 1 | --- |
| Nickel | ppm | ASTM D5185m | >10 | 0 | 0 | --- |
| Titanium | ppm | ASTM D5185m |  | 0 | 0 | --- |
| Silver | ppm | ASTM D5185m |  | 0 | 0 | --- |
| Aluminum | ppm | ASTM D5185m | $>10$ | 0 | 2 | --- |
| Lead | ppm | ASTM D5185m | >10 | 0 | 0 | --- |
| Copper | ppm | ASTM D5185m | >75 | 3 | 22 | --- |
| Tin | ppm | ASTM D5185m | >10 | 0 | 0 | --- |
| Vanadium | ppm | ASTM D5185m |  | 0 | 0 | --- |
| Cadmium | ppm | ASTM D5185m |  | 0 | 0 | --- |


| ADDITIVES |  | method | limitbase | current | history1 | history2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Boron | ppm | ASTM D5185m | 5 | 0 | 0 | --- |
| Barium | ppm | ASTM D5185m | 5 | 3 | 0 | --- |
| Molybdenum | ppm | ASTM D5185m | 5 | <1 | 0 | --- |
| Manganese | ppm | ASTM D5185m |  | 0 | 0 | --- |
| Magnesium | ppm | ASTM D5185m | 25 | 4 | 3 | --- |
| Calcium | ppm | ASTM D5185m | 200 | 49 | 57 | --- |
| Phosphorus | ppm | ASTM D5185m | 300 | 269 | 374 | --- |
| Zinc | ppm | ASTM D5185m | 370 | 336 | 443 | --- |
| Sulfur | ppm | ASTM D5185m | 2500 | 1614 | 1025 | --- |
| CONTAMINANTS |  | method | limit/base | current | history1 | history2 |
| Silicon | ppm | ASTM D5185m | >20 | 7 | 1 | --- |
| Sodium | ppm | ASTM D5185m |  | 1 | $<1$ | --- |
| Potassium | ppm | ASTM D5185m | >20 | 0 | <1 | --- |


| FLUID CLEANLINESS | method | limit/base | current | history1 | history2 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Particles $>4 \mu \mathrm{~m}$ | ASTM D7647 | >5000 | - 84700 | - 5989 | --- |
| Particles $>6 \mu \mathrm{~m}$ | ASTM D7647 | >1300 | $\triangle 17874$ | 330 | --- |
| Particles $>14 \mu \mathrm{~m}$ | ASTM D7647 | >160 | $\triangle 432$ | 12 | --- |
| Particles $>21 \mu \mathrm{~m}$ | ASTM D7647 | $>40$ | 65 | 3 | --- |
| Particles $>38 \mu \mathrm{~m}$ | ASTM D7647 | >10 | 1 | 0 | --- |
| Particles $>71 \mu \mathrm{~m}$ | ASTM D7647 | $>3$ | 0 | 0 | --- |
| Oil Cleanliness | ISO 4406 (c) | >19/17/14 | $\triangle 24 / 21 / 16$ | 20/16/11 | --- |

## OIL ANALYSIS REPORT



| VISUAL |  | method | limitbase | current | history1 | history2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| White Metal | scalar | *Visual | NONE | NONE | NONE | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | --- |
| Precipitate | scalar | *Visual | NONE | NONE | NONE | --- |
| Silt | scalar | *Visual | NONE | NONE | NONE | --- |
| Debris | scalar | *Visual | NONE | NONE | NONE | --- |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | --- |
| Appearance | scalar | *Visual | NORML | NORML | NORML | --- |
| Odor | scalar | *Visual | NORML | NORML | NORML | --- |
| Emulsified Water | scalar | *Visual | >0.1 | NEG | NEG | --- |
| Free Water | scalar | *Visual |  | NEG | NEG | --- |



| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Visc @ $40^{\circ} \mathrm{C}$ | cSt | ASTM D445 | 46 | $\mathbf{4 4 . 5}$ | 44.3 | --- |
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |  |




Viscosity @ $40^{\circ} \mathrm{C}$


Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Received : 17 Jul 2024
Tested : 18 Jul 2024
Diagnosed : 18 Jul 2024 - Wes Davis

| Lab Number $: 06239556$ | Tested | $: 18$ Jul 2024 |
| :--- | :--- | :--- |
| Unique Number $: 11128390$ | Diagnosed | $: 18$ Jul 2024 - Wes Davis |

Test Package : MOB 2

## A NiAB

Certificate 12367
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)
PIRTEK DAYTONA
2841 S NOVA ROAD DAYTONA, FL US 32119 Contact: TONY FOWLER

