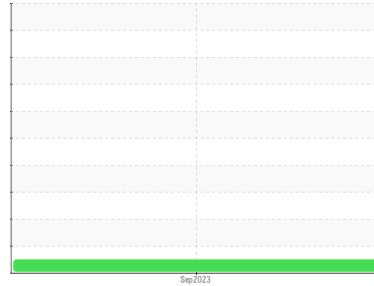




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
HPU HPU 3

Component
Hydraulic System

Fluid
PHILLIPS ARCTIC 24 (120 GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

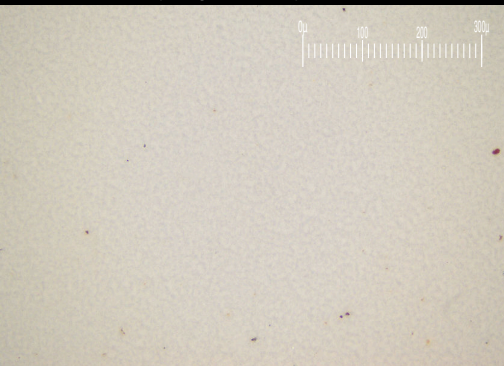
Contamination

There is no indication of any contamination in the oil. 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.

Particle Filter (Magn: 200 x)



SAMPLE INFORMATION

| method | limit/base | current | history1 | history2 |
|---------------|-----------------|--------------------|----------|----------|
| Sample Number | Client Info | PH0000129 | --- | --- |
| Sample Date | Client Info | 20 Sep 2023 | --- | --- |
| Machine Age | hrs Client Info | 2000 | --- | --- |
| Oil Age | hrs Client Info | 2000 | --- | --- |
| Oil Changed | Client Info | Not Chngd | --- | --- |
| Sample Status | | NORMAL | --- | --- |

WEAR METALS

| method | limit/base | current | history1 | history2 |
|--------------|-----------------|--------------|----------|----------|
| Iron ppm | ASTM D5185m >20 | 0 | --- | --- |
| Chromium ppm | ASTM D5185m >20 | 0 | --- | --- |
| Nickel ppm | ASTM D5185m >20 | 1 | --- | --- |
| Titanium ppm | ASTM D5185m | 0 | --- | --- |
| Silver ppm | ASTM D5185m | 0 | --- | --- |
| Aluminum ppm | ASTM D5185m >20 | 0 | --- | --- |
| Lead ppm | ASTM D5185m >20 | <1 | --- | --- |
| Copper ppm | ASTM D5185m >20 | 4 | --- | --- |
| Tin ppm | ASTM D5185m >20 | 0 | --- | --- |
| Vanadium ppm | ASTM D5185m | 0 | --- | --- |
| Cadmium ppm | ASTM D5185m | 0 | --- | --- |

ADDITIVES

| method | limit/base | current | history1 | history2 |
|----------------|-------------|--------------|----------|----------|
| Boron ppm | ASTM D5185m | 0 | --- | --- |
| Barium ppm | ASTM D5185m | 0 | --- | --- |
| Molybdenum ppm | ASTM D5185m | <1 | --- | --- |
| Manganese ppm | ASTM D5185m | 0 | --- | --- |
| Magnesium ppm | ASTM D5185m | 0 | --- | --- |
| Calcium ppm | ASTM D5185m | 51 | --- | --- |
| Phosphorus ppm | ASTM D5185m | 354 | --- | --- |
| Zinc ppm | ASTM D5185m | 481 | --- | --- |
| Sulfur ppm | ASTM D5185m | 1040 | --- | --- |

CONTAMINANTS

| method | limit/base | current | history1 | history2 |
|---------------|-----------------|----------|----------|----------|
| Silicon ppm | ASTM D5185m >15 | 6 | --- | --- |
| Sodium ppm | ASTM D5185m | 0 | --- | --- |
| Potassium ppm | ASTM D5185m >20 | 2 | --- | --- |

FLUID CLEANLINESS

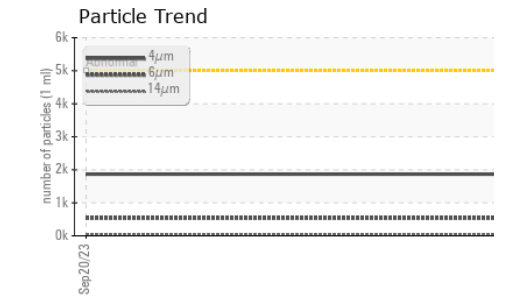
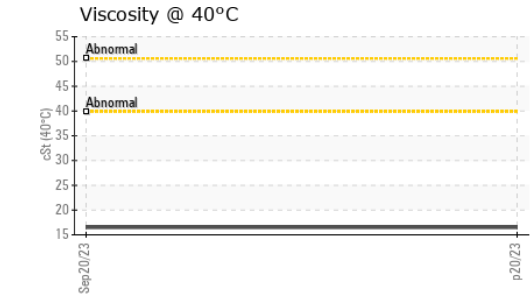
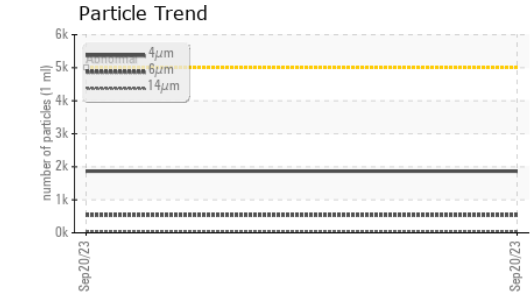
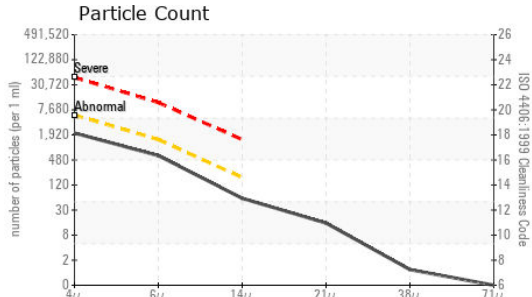
| method | limit/base | current | history1 | history2 |
|-----------------|------------------------|-----------------|----------|----------|
| Particles >4µm | ASTM D7647 >5000 | 1866 | --- | --- |
| Particles >6µm | ASTM D7647 >1300 | 537 | --- | --- |
| Particles >14µm | ASTM D7647 >160 | 51 | --- | --- |
| Particles >21µm | ASTM D7647 >40 | 13 | --- | --- |
| Particles >38µm | ASTM D7647 >10 | 1 | --- | --- |
| Particles >71µm | ASTM D7647 >3 | 0 | --- | --- |
| Oil Cleanliness | ISO 4406 (c) >19/17/14 | 18/16/13 | --- | --- |

FLUID DEGRADATION

| method | limit/base | current | history1 | history2 |
|---------------------------|------------|-------------|----------|----------|
| Acid Number (AN) mg KOH/g | ASTM D8045 | 0.42 | --- | --- |



OIL ANALYSIS REPORT



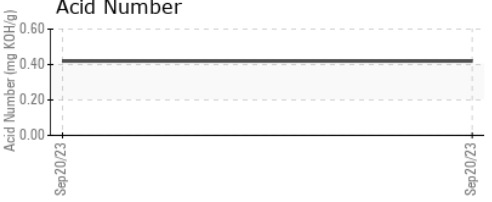
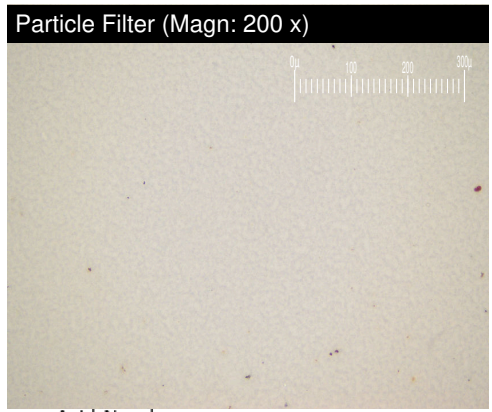
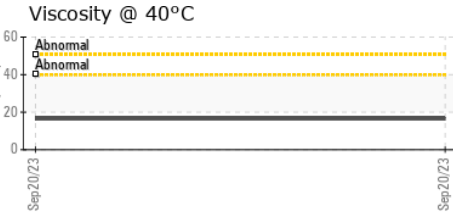
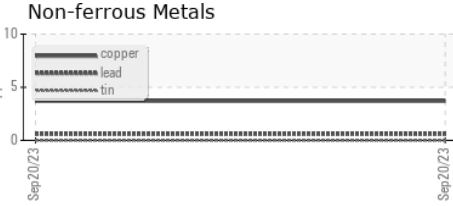
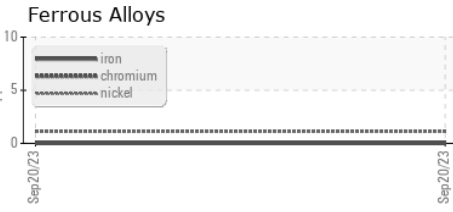
| VISUAL | method | limit/base | current | history1 | history2 | |
|------------------|--------|------------|---------|----------|----------|-----|
| White Metal | scalar | *Visual | NONE | NONE | --- | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | --- | --- |
| Precipitate | scalar | *Visual | NONE | NONE | --- | --- |
| Silt | scalar | *Visual | NONE | NONE | --- | --- |
| Debris | scalar | *Visual | NONE | NONE | --- | --- |
| Sand/Dirt | scalar | *Visual | NONE | NONE | --- | --- |
| Appearance | scalar | *Visual | NORML | NORML | --- | --- |
| Odor | scalar | *Visual | NORML | NORML | --- | --- |
| Emulsified Water | scalar | *Visual | >0.05 | NEG | --- | --- |
| Free Water | scalar | *Visual | | NEG | --- | --- |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 | 16.5 | --- | --- |

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

| | | | | | |
|-----------|--|--|--|----------|----------|
| Color | | | | no image | no image |
| Bottom | | | | no image | no image |
| PrtFilter | | | | no image | no image |

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PH0000129 **Received** : 25 Sep 2023
Lab Number : 05959776 **Diagnosed** : 28 Sep 2023
Unique Number : 10660989 **Diagnostician** : Doug Bogart
Test Package : PLANT (Additional Tests: PrtFilter)

RG GROUP
 13 INSURANCE WAY
 ONA, WV
 US 25545
 Contact: TERRY WITMER

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)