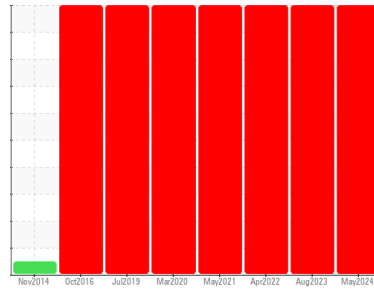




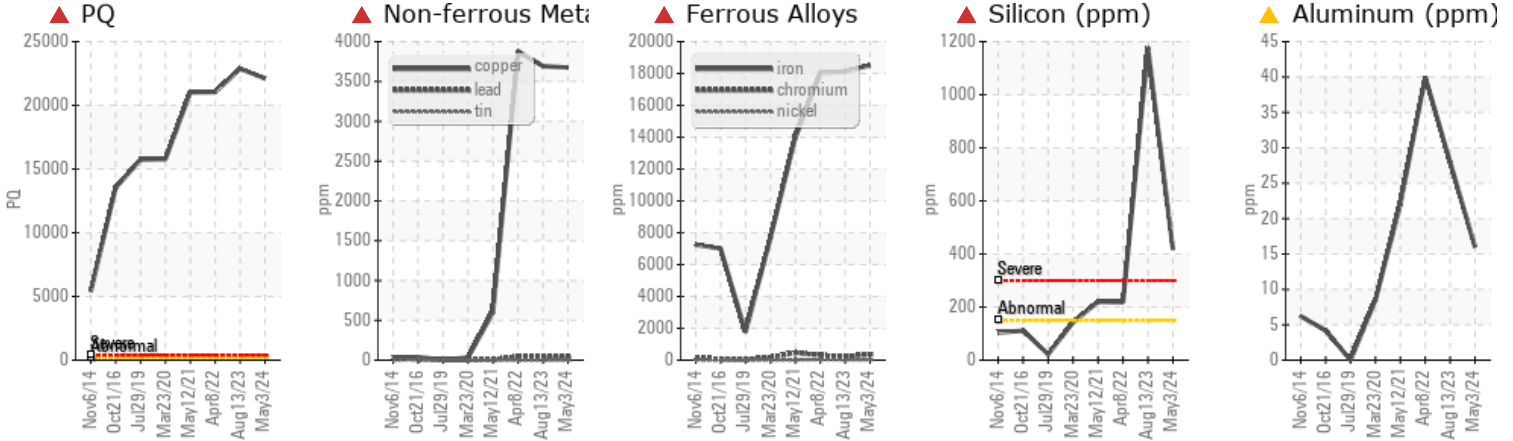
PROBLEM SUMMARY

Sample Rating Trend



Machine Id
TURBINA 11 - FRONT BEARING
 Component
Grease
 Fluid
KLUBER KLUBERPLEX BEM 41-141 (--- LTR)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

Recommend purge grease if not already done and flush before refilling with grease. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

| Sample Status | | | | SEVERE | SEVERE | SEVERE |
|---------------|-----|-------------|------|---------|---------|---------|
| PQ | | ASTM D8184 | >200 | ▲ 22116 | ▲ 22870 | ▲ 21047 |
| Iron | ppm | ASTM D5185m | >250 | ▲ 18515 | ▲ 18128 | ▲ 18024 |
| Chromium | ppm | ASTM D5185m | >10 | ▲ 360 | ▲ 227 | ▲ 317 |
| Nickel | ppm | ASTM D5185m | >5 | ▲ 23 | ▲ 23 | ▲ 28 |
| Lead | ppm | ASTM D5185m | >25 | ▲ 42 | ▲ 40 | ▲ 46 |
| Copper | ppm | ASTM D5185m | >75 | ▲ 3674 | ▲ 3692 | ▲ 3878 |
| Aluminum | ppm | ASTM D5185m | | ▲ 16 | ▲ 28 | ▲ 40 |
| Silicon | ppm | ASTM D5185m | >150 | ▲ 419 | ▲ 1177 | ▲ 218 |

Customer Id: EOLOMAN
 Sample No.: WC0881149
 Lab Number: 06194936
 Test Package: GRS 1



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Doug Bogart +1 (800)237-1369 x4016
dougb@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 |
|--------------|--------|------|---------|---|
| Change Fluid | --- | --- | ? | Recommend drain grease if not already done and flush with cleaner before refilling with grease. |
| Flush System | --- | --- | ? | Recommend drain grease if not already done and flush with cleaner before refilling with grease. |
| Resample | --- | --- | ? | We recommend an early resample to monitor this condition. |

HISTORICAL DIAGNOSIS

WEAR



13 Aug 2023 Diag: Doug Bogart

Recommend drain grease if not already done and flush before refilling with grease. We recommend an early resample to monitor this condition. Bearing and/or bushing wear is indicated. The very high ferrous density (PQ) index indicates that severe wear is occurring. Elemental level of silicon (Si) above normal. The grease is no longer serviceable as a result of the abnormal and/or severe wear.

view report



WEAR



08 Apr 2022 Diag: Doug Bogart

Recommend drain grease if not already done and flush before refilling with grease. We recommend an early resample to monitor this condition. Bearing and/or bushing wear is indicated. The very high ferrous density (PQ) index indicates that severe wear is occurring. Elemental level of silicon (Si) above normal indicating ingress of seal material. The AN level is acceptable for this fluid. The grease is no longer serviceable as a result of the abnormal and/or severe wear.

view report



WEAR



12 May 2021 Diag: Doug Bogart

Recommend drain grease if not already done and flush before refilling with grease. We recommend an early resample to monitor this condition. Bearing and/or bushing wear is indicated. The very high ferrous density (PQ) index indicates that severe wear is occurring. Elemental level of silicon (Si) above normal indicating ingress of seal material. The AN level is acceptable for this fluid. The grease is no longer serviceable as a result of the abnormal and/or severe wear.

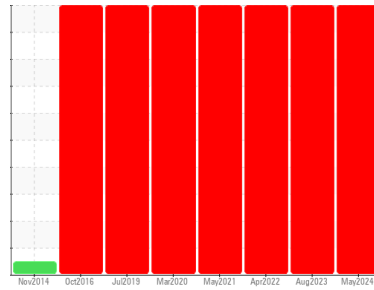
view report





GREASE ANALYSIS

Sample Rating Trend



WEAR



Machine Id
TURBINA 11 - FRONT BEARING

Component
Grease
Fluid
KLUBER KLUBERPLEX BEM 41-141 (--- LTR)

DIAGNOSIS

▲ Recommendation

Recommend purge grease if not already done and flush before refilling with grease. We recommend an early resample to monitor this condition.

▲ Wear

Bearing and/or bushing wear is indicated. The very high ferrous density (PQ) index indicates that severe wear is occurring.

Grease Condition

The grease is no longer serviceable as a result of the abnormal and/or severe wear.

▲ Contaminants

Elemental level of silicon (Si) above normal.

SAMPLE INFORMATION

| | method | limit/base | current | history1 | history2 |
|-----------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | WC0881149 | WC0831528 | WC05582754 |
| Sample Date | Client Info | | 03 May 2024 | 13 Aug 2023 | 08 Apr 2022 |
| Machine Age | yrs | Client Info | 12 | 11 | 6 |
| Grease Age | yrs | Client Info | 1 | 1 | 0 |
| Grease Serviced | Client Info | | N/A | N/A | N/A |
| Sample Status | | | SEVERE | SEVERE | SEVERE |

CONTAMINATION

| | method | limit/base | current | history1 | history2 |
|-------|-----------|------------|------------|----------|----------|
| Water | WC Method | >0.1 | NEG | NEG | NEG |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|----------|------------|-------------|----------------|----------------|----------|
| PQ | ASTM D8184 | >200 | ▲ 22116 | ▲ 22870 | ▲ 21047 |
| Iron | ppm | ASTM D5185m | >250 | ▲ 18515 | ▲ 18128 |
| Chromium | ppm | ASTM D5185m | >10 | ▲ 360 | ▲ 227 |
| Nickel | ppm | ASTM D5185m | >5 | ▲ 23 | ▲ 23 |
| Cadmium | ppm | ASTM D5185m | | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | 4 | 3 |
| Vanadium | ppm | ASTM D5185m | | 6 | 6 |
| Lead | ppm | ASTM D5185m | >25 | ▲ 42 | ▲ 40 |
| Copper | ppm | ASTM D5185m | >75 | ▲ 3674 | ▲ 3692 |
| Tin | ppm | ASTM D5185m | >5 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >5 | 0 | 2 |

ADDITIVES

| | method | limit/base | current | history1 | history2 |
|------------|--------|-------------|---------|-------------|----------|
| Boron | ppm | ASTM D5185m | | 174 | 166 |
| Magnesium | ppm | ASTM D5185m | | 5 | 0 |
| Manganese | ppm | ASTM D5185m | | 335 | 319 |
| Molybdenum | ppm | ASTM D5185m | | 3604 | 3046 |
| Phosphorus | ppm | ASTM D5185m | | 880 | 648 |
| Zinc | ppm | ASTM D5185m | | 2712 | 2356 |
| Antimony | ppm | ASTM D5185m | | --- | --- |

THICKENER/SOAP

| | method | limit/base | current | history1 | history2 |
|----------|--------|-------------|---------|-------------|----------|
| Aluminum | ppm | ASTM D5185m | | ▲ 16 | ▲ 28 |
| Barium | ppm | ASTM D5185m | | 0 | 0 |
| Calcium | ppm | ASTM D5185m | | 59 | 59 |
| Sodium | ppm | ASTM D5185m | | 26 | 14 |
| Lithium | ppm | ASTM D5185m | | 2609 | 2449 |
| Sulfur | ppm | ASTM D5185m | | 5087 | 4914 |

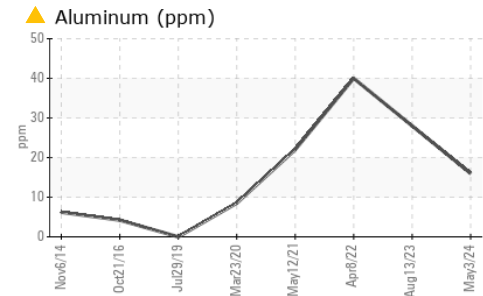
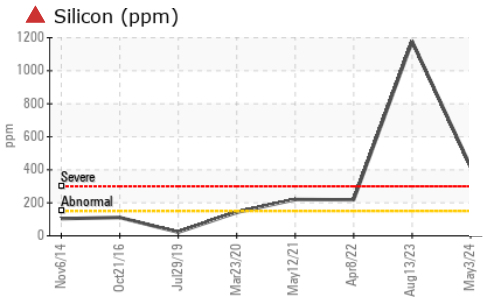
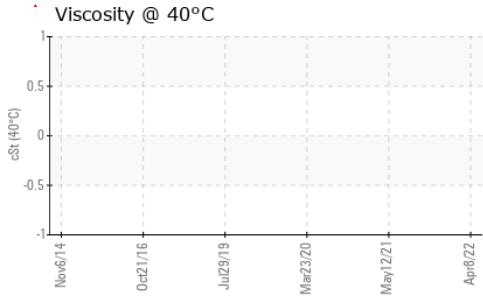
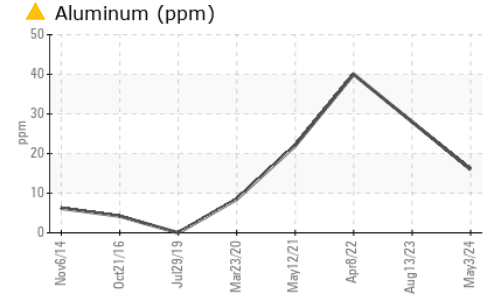
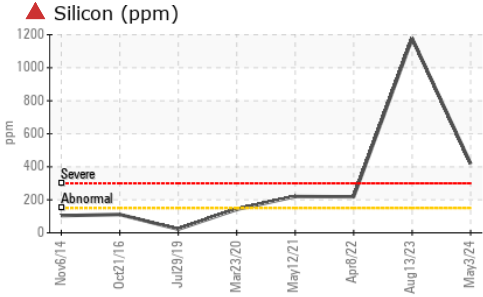
CONTAMINANTS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|-------------|---------|--------------|----------|
| Silicon | ppm | ASTM D5185m | >150 | ▲ 419 | ▲ 1177 |
| Potassium | ppm | ASTM D5185m | | 10 | 5 |

GREASE CONDITION

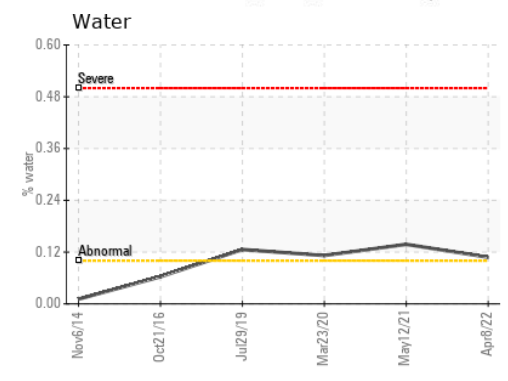
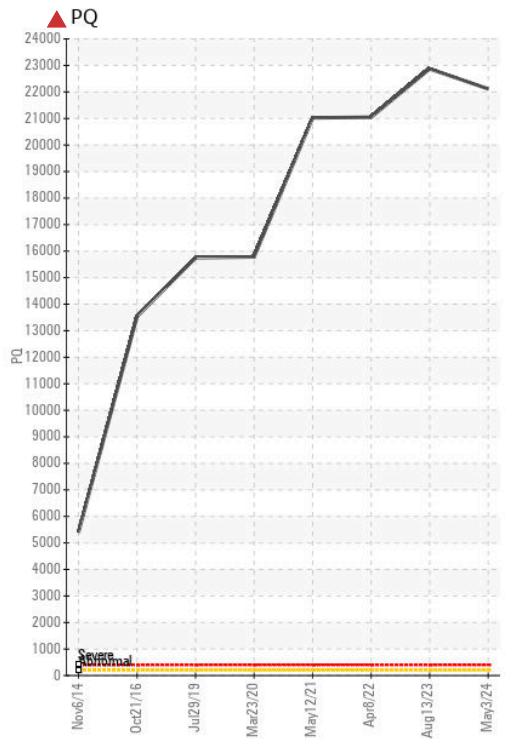
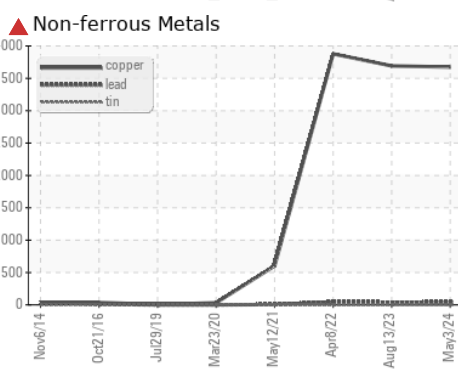
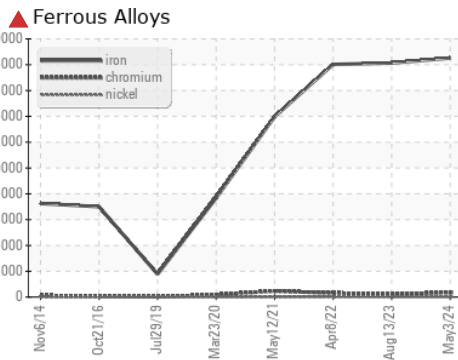
| | method | limit/base | current | history1 | history2 |
|------------------|------------------------|------------|----------------|----------|----------|
| Grease Color | *Visual | yellow | Brown | --- | --- |
| Texture | *In-house | | Buttery | --- | --- |
| NLGI Consistency | NLGI Scale *SKF Method | 1 | 1-2 | --- | --- |

GREASE ANALYSIS



| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---------------|--------|------------|----------|----------|----------|
| Color | | | | | |
| Bottom | | | | | |
| PrtFilter | | | no image | no image | no image |

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0881149 **Received** : 29 May 2024
Lab Number : 06194936 **Tested** : 13 Jun 2024
Unique Number : 11057059 **Diagnosed** : 13 Jun 2024 - Doug Bogart
Test Package : GRS 1 (Additional Tests: KV40, SCREEN)

EOLO DE NICARAGUA S.A.
 DEL SEMAFORO DEL CLUB TERRAZA, 1 CUADRA AL SUR
 MANAGUA, ZZ
 NI
 Contact: Rafael Bermudez

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)