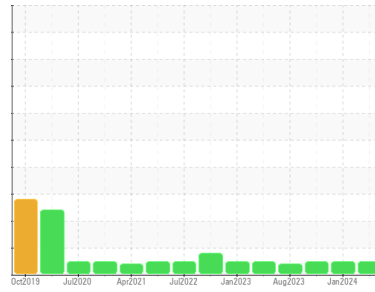


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
BT-F01-P10M (S/N P10M COOLING TOWER PUMP MOTOR)
Component
Bottom Bearing
Fluid
SHELL TURBO T 32 (--- GAL)

DIAGNOSIS

Recommendation

No Corrective actions at this time.

Wear

The wear rate is low and steady.

Contamination

The contaminant load is low and acceptable

Fluid Condition

Fluid health indicators suggest the oil is acceptable for continued use.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|--------------------|-------------|-------------|------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | | PLS0000295 | PLS0000715 | PLS0000787 |
| Sample Date | Client Info | | | 17 Apr 2024 | 31 Jan 2024 | 26 Oct 2023 |
| Machine Age | mths | Client Info | | 3 | 0 | 0 |
| Oil Age | mths | Client Info | | 0 | 3 | 1 |
| Oil Changed | Client Info | | | N/A | N/A | Changed |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---------------|-----------|--------|------------|------------|----------|----------|
| Water | WC Method | | >2 | NEG | NEG | NEG |

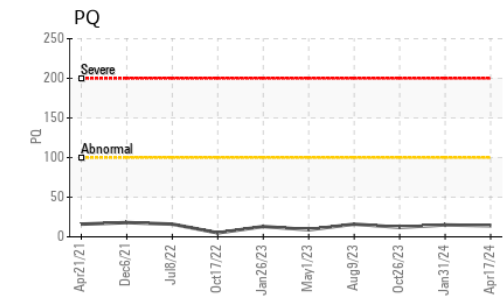
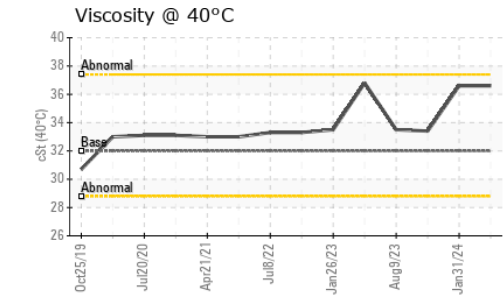
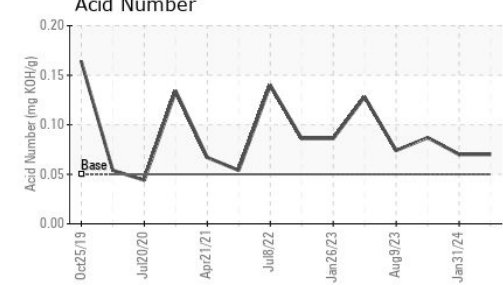
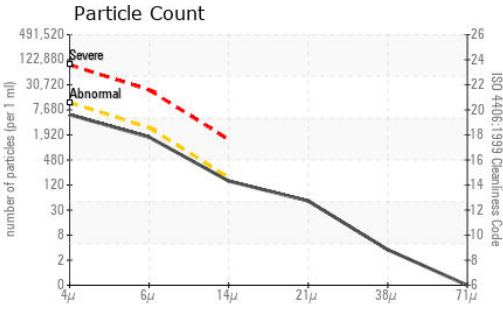
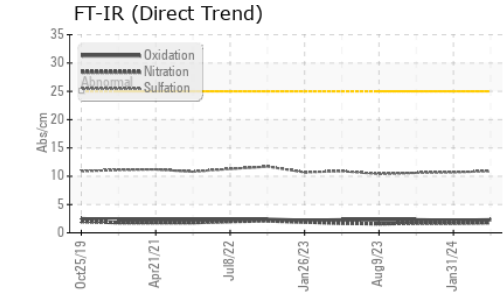
| WEAR METALS | | method | limit/base | current | history1 | history2 |
|-------------|-----|-------------|------------|--------------|----------|----------|
| PQ | | ASTM D8184 | | 14 | 15 | 12 |
| Iron | ppm | ASTM D5185m | >20 | 0 | 0 | 0 |
| Chromium | ppm | ASTM D5185m | >20 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185m | >20 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Silver | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 0 | 0 | 0 |
| Lead | ppm | ASTM D5185m | >20 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >20 | <1 | 0 | 0 |
| Tin | ppm | ASTM D5185m | >20 | <1 | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | 0 | 0 | 0 |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|------------|-----|-------------|------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Barium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | 1 | <1 | 0 |
| Magnesium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Calcium | ppm | ASTM D5185m | | 2 | 2 | 0 |
| Phosphorus | ppm | ASTM D5185m | | 14 | 12 | 0 |
| Zinc | ppm | ASTM D5185m | | 0 | 4 | 0 |
| Sulfur | ppm | ASTM D5185m | | 645 | 517 | 0 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|--------------|-----|-------------|------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185m | >15 | <1 | <1 | 1 |
| Sodium | ppm | ASTM D5185m | | 4 | 1 | 1 |
| Potassium | ppm | ASTM D5185m | >20 | <1 | 0 | 0 |

| INFRA-RED | | method | limit/base | current | history1 | history2 |
|-----------|---------|-------------|------------|-------------|----------|----------|
| Soot % | % | *ASTM D7844 | | 0 | 0 | 0 |
| Nitration | Abs/cm | *ASTM D7624 | | 1.8 | 1.7 | 1.7 |
| Sulfation | Abs.1mm | *ASTM D7415 | | 10.9 | 10.7 | 10.6 |

OIL ANALYSIS REPORT



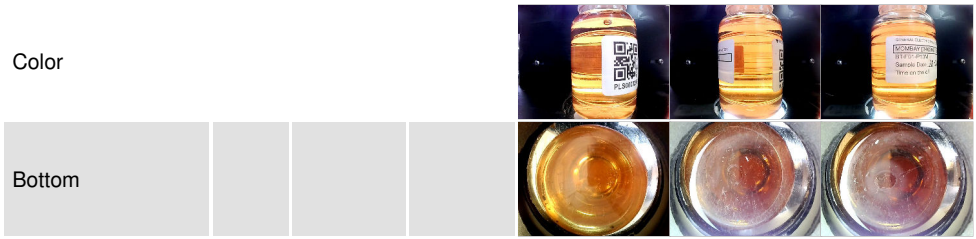
| FLUID CLEANLINESS | method | limit/base | current | history1 | history2 |
|-------------------|--------------|------------|-----------------|----------|----------|
| Particles >4µm | ASTM D7647 | >10000 | 5141 | 5778 | 8558 |
| Particles >6µm | ASTM D7647 | >2500 | 1484 | 1344 | 687 |
| Particles >14µm | ASTM D7647 | >160 | 132 | 111 | 35 |
| Particles >21µm | ASTM D7647 | >40 | 44 | 29 | 11 |
| Particles >38µm | ASTM D7647 | >10 | 3 | 2 | 0 |
| Particles >71µm | ASTM D7647 | >3 | 0 | 1 | 0 |
| Oil Cleanliness | ISO 4406 (c) | >20/18/14 | 20/18/14 | 20/18/14 | 20/17/12 |

| FLUID DEGRADATION | method | limit/base | current | history1 | history2 |
|-------------------|----------------------|------------|-------------|----------|----------|
| Oxidation | Abs/.1mm *ASTM D7414 | | 2.3 | 2.2 | 2.3 |
| Acid Number (AN) | mg KOH/g ASTM D8045 | .05 | 0.07 | 0.07 | 0.087 |

| 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 | LIGHT | LIGHT | 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 | >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 | 32 | 36.6 | 36.6 | 33.4 |

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



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PLS0000295 **Received** : 19 Apr 2024
Lab Number : **06154204** **Tested** : 06 May 2024
Unique Number : 10989627 **Diagnosed** : 07 May 2024 - Mike Johnson
Test Package : IND 2 (Additional Tests: FT-IR, PQ, PrtCount)

HEXION - BAYTOWN PLANT
 8450 WEST BAY RD
 BAYTOWN, TX 77520
 Contact: PAT BELL
 pat.bell@momentive.com

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)