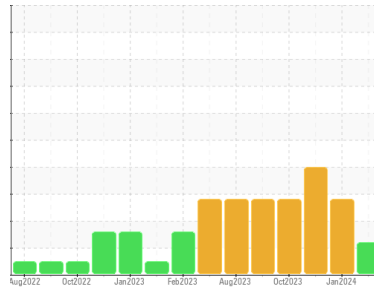


OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area
Thermoforming
 Machine Id
Line 8 C Extruder (S/N 4276)
 Component
Bevel Helical Gearbox
 Fluid
SUMMIT UNIPAR FG-320 (60 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 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 condition of the oil is suitable for further service.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|--------------------|-------------|-------------|------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | | TO50002277 | TO50001539 | TO50001970 |
| Sample Date | Client Info | | | 17 Apr 2024 | 11 Jan 2024 | 15 Nov 2023 |
| Machine Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | Client Info | | | Not Chngd | N/A | Not Chngd |
| Sample Status | | | | ABNORMAL | ABNORMAL | ABNORMAL |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|-------------|-----|-------------|------------|--------------|----------|----------|
| PQ | | ASTM D8184 | | 9 | 20 | 13 |
| Iron | ppm | ASTM D5185m | >150 | 2 | 9 | 2 |
| Chromium | ppm | ASTM D5185m | >10 | 0 | <1 | 0 |
| Nickel | ppm | ASTM D5185m | >10 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Silver | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >25 | <1 | 2 | <1 |
| Lead | ppm | ASTM D5185m | >100 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >50 | <1 | <1 | 0 |
| Tin | ppm | ASTM D5185m | >10 | 0 | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | 0 | 0 | 0 |

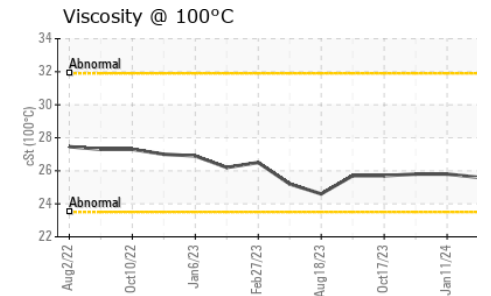
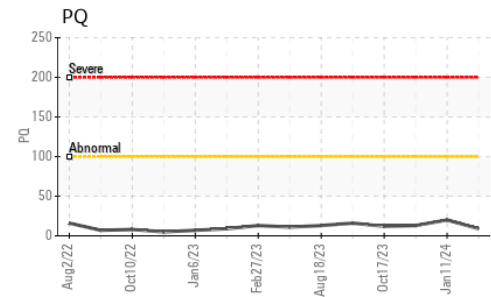
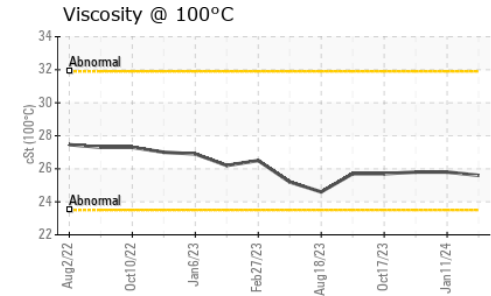
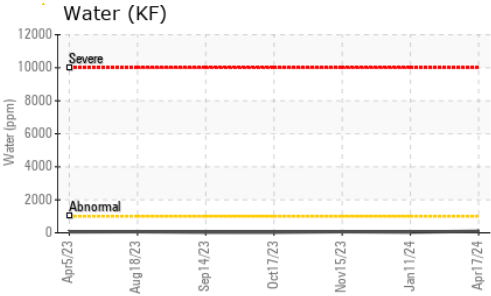
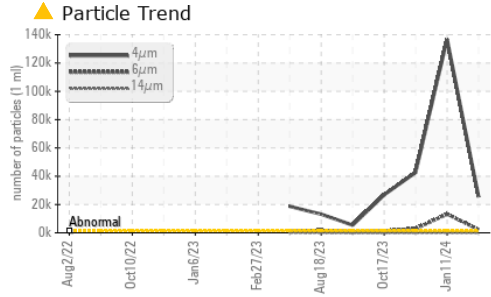
| ADDITIVES | | method | limit/base | current | history1 | history2 |
|------------|-----|-------------|------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185m | | 6 | 0 | 0 |
| Barium | ppm | ASTM D5185m | | 0 | 3 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Magnesium | ppm | ASTM D5185m | | <1 | 0 | <1 |
| Calcium | ppm | ASTM D5185m | | 2 | <1 | 3 |
| Phosphorus | ppm | ASTM D5185m | | 370 | 518 | 513 |
| Zinc | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Sulfur | ppm | ASTM D5185m | | 1647 | 786 | 724 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|--------------|-----|-------------|------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185m | >50 | 43 | ▲ 81 | ▲ 73 |
| Sodium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Potassium | ppm | ASTM D5185m | >20 | 0 | <1 | 0 |
| Water | % | ASTM D6304 | >0.1 | 0.009 | 0.004 | 0.006 |
| ppm Water | ppm | ASTM D6304 | >1000 | 93 | 43 | 69.3 |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|-------------------|--|--------------|------------|-------------------|------------|------------|
| Particles >4µm | | ASTM D7647 | >1300 | ▲ 25380 | ▲ 136788 | ▲ 42664 |
| Particles >6µm | | ASTM D7647 | >320 | ▲ 2278 | ▲ 13243 | ▲ 2954 |
| Particles >14µm | | ASTM D7647 | >80 | 57 | 44 | ▲ 80 |
| Particles >21µm | | ASTM D7647 | >20 | 20 | 5 | ▲ 35 |
| Particles >38µm | | ASTM D7647 | >4 | 3 | 0 | ▲ 6 |
| Particles >71µm | | ASTM D7647 | >3 | 0 | 0 | 2 |
| Oil Cleanliness | | ISO 4406 (c) | >17/15/13 | ▲ 22/18/13 | ▲ 24/21/13 | ▲ 23/19/13 |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|-------------------|----------|------------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | 0.70 | 0.67 | 0.68 |

OIL ANALYSIS REPORT

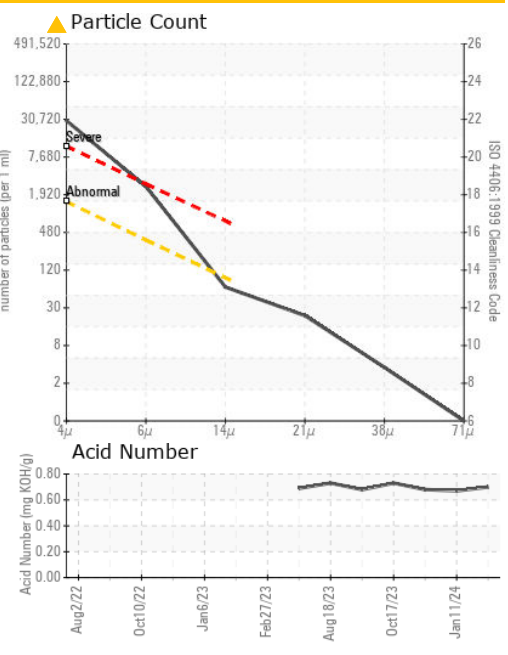
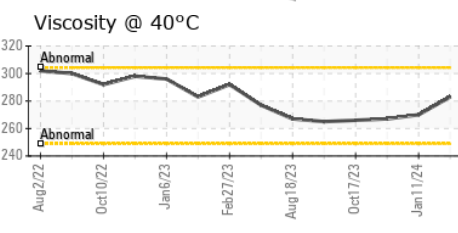
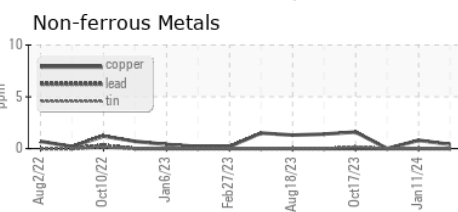
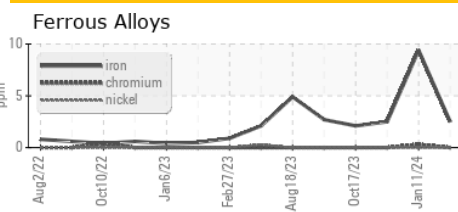


| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE |
| Silt | scalar | *Visual | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | LIGHT |
| 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°C | cSt | ASTM D445 | 283 | 270 | 267 |
| Visc @ 100°C | cSt | ASTM D445 | 25.6 | 25.8 | 25.8 |
| Viscosity Index (VI) | Scale | ASTM D2270 | 116 | 123 | 124 |

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

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO50002277 **Received** : 22 Apr 2024
Lab Number : 06155941 **Tested** : 23 Apr 2024
Unique Number : 10991364 **Diagnosed** : 24 Apr 2024 - Don Baldrige
Test Package : IND 2 (Additional Tests: KF, KV100, PQ, PrtCount, VI)

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 T: (214)775-5673
 F:

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)