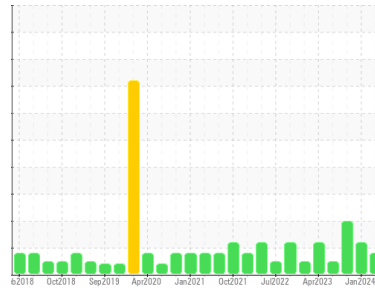


OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area

RXC

Machine Id

RXC AGITATOR A106 (S/N 7600468)

Component

Gearbox

Fluid

SCHAEFFER 209 MOLY UNIVERSAL GEARLUBE ISO 220 (20 GAL)

DIAGNOSIS

Recommendation

Filter the oil if possible through B6=75 quality media. Continue to monitor.

Wear

The wear rate is low and steady.

Contamination

Particulate level is slightly elevated. Moisture is nil.

Fluid Condition

Visc @ 40°C is abnormally high, but is steady over many sample intervals. Other oil health parameters suggest the oil is safe for continued use.

SAMPLE INFORMATION

| | method | limit/base | current | history1 | history2 |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | PLS0000815 | PLS0000812 | PLS0000658 |
| Sample Date | Client Info | | 12 Apr 2024 | 05 Jan 2024 | 09 Oct 2023 |
| Machine Age | yrs | Client Info | 0 | 0 | 0 |
| Oil Age | yrs | Client Info | 2 | 1 | 1 |
| Oil Changed | Client Info | | N/A | N/A | N/A |
| Sample Status | | | ABNORMAL | ABNORMAL | ABNORMAL |

CONTAMINATION

| | method | limit/base | current | history1 | history2 |
|-------|-----------|------------|------------|----------|----------|
| Water | WC Method | >0.2 | NEG | NEG | NEG |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|----------|------------|------------------|--------------|----------|----------|
| PQ | ASTM D8184 | | 17 | 20 | 14 |
| Iron | ppm | ASTM D5185m >200 | 11 | 12 | 12 |
| Chromium | ppm | ASTM D5185m >15 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185m >15 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | <1 | <1 | 0 |
| Silver | ppm | ASTM D5185m | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m >25 | 2 | 2 | 2 |
| Lead | ppm | ASTM D5185m >100 | <1 | <1 | 0 |
| Copper | ppm | ASTM D5185m >200 | 3 | 3 | 9 |
| Tin | ppm | ASTM D5185m >25 | 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 65 | 25 | 27 | 28 |
| Barium | ppm | ASTM D5185m | 1 | <1 | 0 |
| Molybdenum | ppm | ASTM D5185m 325 | 378 | 395 | 436 |
| Manganese | ppm | ASTM D5185m | 0 | <1 | 0 |
| Magnesium | ppm | ASTM D5185m | <1 | 2 | 3 |
| Calcium | ppm | ASTM D5185m | 44 | 43 | 47 |
| Phosphorus | ppm | ASTM D5185m 875 | 1057 | 1119 | 1137 |
| Zinc | ppm | ASTM D5185m | 25 | 17 | 13 |
| Sulfur | ppm | ASTM D5185m 16000 | 22500 | 23293 | 22373 |

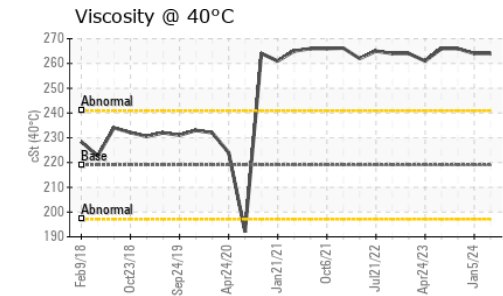
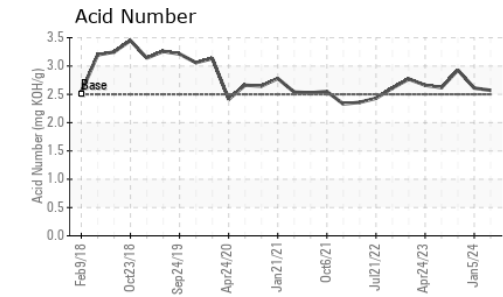
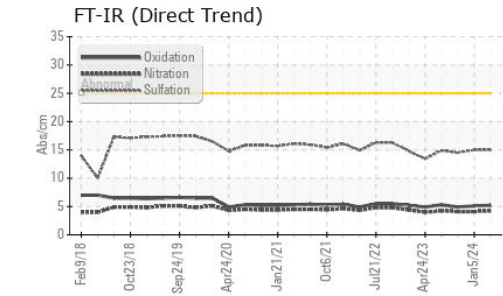
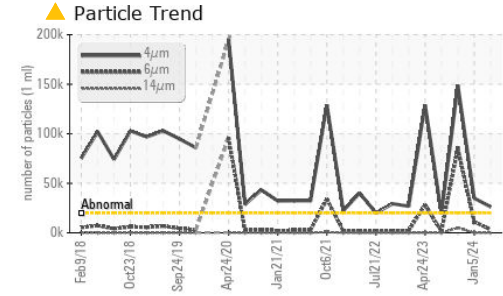
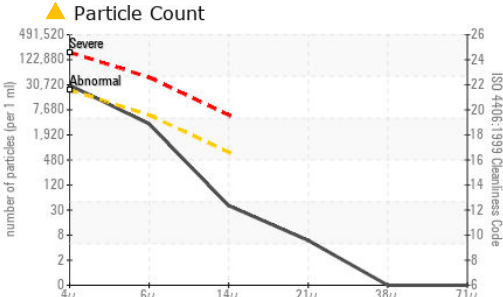
CONTAMINANTS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|-----------------|----------|----------|----------|
| Silicon | ppm | ASTM D5185m >50 | 7 | 12 | 10 |
| Sodium | ppm | ASTM D5185m | 3 | 0 | 2 |
| Potassium | ppm | ASTM D5185m >20 | 2 | 2 | 1 |

INFRA-RED

| | method | limit/base | current | history1 | history2 |
|-----------|----------|-------------|-------------|----------|----------|
| Soot % | % | *ASTM D7844 | 0.1 | 0 | 0 |
| Nitration | Abs/cm | *ASTM D7624 | 4.2 | 4.1 | 4.1 |
| Sulfation | Abs/.1mm | *ASTM D7415 | 15.0 | 15.0 | 14.5 |

OIL ANALYSIS REPORT



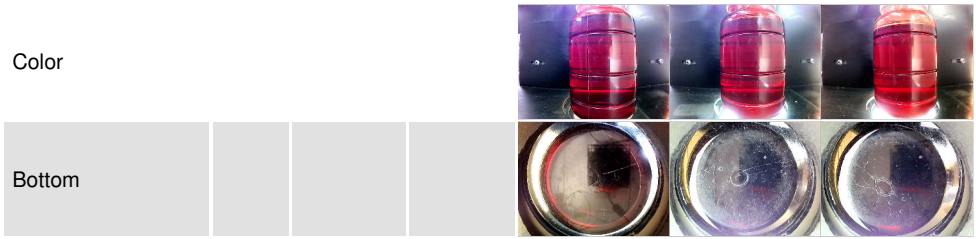
| FLUID CLEANLINESS | method | limit/base | current | history1 | history2 |
|-------------------|--------------|------------|-------------------|------------|------------|
| Particles >4µm | ASTM D7647 | >20000 | ▲ 26148 | ▲ 34921 | ▲ 148784 |
| Particles >6µm | ASTM D7647 | >5000 | 3083 | ▲ 11325 | ▲ 85006 |
| Particles >14µm | ASTM D7647 | >640 | 34 | 87 | ▲ 4985 |
| Particles >21µm | ASTM D7647 | >160 | 5 | 9 | ▲ 206 |
| Particles >38µm | ASTM D7647 | >40 | 0 | 0 | 0 |
| Particles >71µm | ASTM D7647 | >10 | 0 | 0 | 0 |
| Oil Cleanliness | ISO 4406 (c) | >21/19/16 | ▲ 22/19/12 | ▲ 22/21/14 | ▲ 24/24/19 |

| FLUID DEGRADATION | method | limit/base | current | history1 | history2 |
|-------------------|----------------------|------------|-------------|----------|----------|
| Oxidation | Abs/.1mm *ASTM D7414 | | 5.2 | 5.1 | 4.9 |
| Acid Number (AN) | mg KOH/g ASTM D8045 | 2.5 | 2.57 | 2.61 | 2.928 |

| 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 | NONE | NONE | 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 | >0.2 | NEG | NEG | NEG |
| Free Water | scalar *Visual | | NEG | NEG | NEG |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|---------------|------------|------------|----------|----------|
| Visc @ 40°C | cSt ASTM D445 | 219 | 264 | 264 | 266 |

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



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PLS0000815 **Received** : 17 Apr 2024
Lab Number : **06151866** **Tested** : 18 Apr 2024
Unique Number : 10981944 **Diagnosed** : 30 May 2024 - Mike Johnson
Test Package : IND 2 (Additional Tests: FT-IR, PQ, PrtCount)

HEXION - DIBOLL PLANT
 100 W BORDEN DR
 DIBOLL, TX
 US 75941

Contact: DENISE ROBERTSON
 denise.robertson@hexion.com; mike.johnson@amrri.com
 T: (936)829-8029
 F: (936)829-8003