



OIL ANALYSIS REPORT

| | |
|-----------------|----------|
| WEAR | NORMAL |
| CONTAMINATION | ABNORMAL |
| FLUID CONDITION | NORMAL |

Machine Id
INGERSOLL RAND SD-77F 001723 (S/N 175728)

Component
Hydraulic System

Fluid
TDH FLUID SAE 75W80 (22 GAL)

RECOMMENDATION

No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | WC0800511 | WC0664813 | WCMC170550 |
| Sample Date | | Client Info | | 07 Dec 2023 | 10 Jun 2022 | 19 Jul 2018 |
| Machine Age | hrs | Client Info | | 2061 | 2050 | 1676 |
| Oil Age | hrs | Client Info | | 1000 | 374 | 0 |
| Filter Age | hrs | Client Info | | 100 | 374 | 0 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Filter Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | ABNORMAL | ATTENTION | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >20 | 1 | 1 | 1 |
| Chromium | ppm | ASTM D5185m | >10 | <1 | 0 | 0 |
| Nickel | ppm | ASTM D5185m | >10 | 0 | 0 | <1 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | | 0 | <1 | 0 |
| Aluminum | ppm | ASTM D5185m | >10 | 2 | 1 | 0 |
| Lead | ppm | ASTM D5185m | >10 | 0 | <1 | 0 |
| Copper | ppm | ASTM D5185m | >75 | 2 | 2 | 1 |
| Tin | ppm | ASTM D5185m | >10 | 0 | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

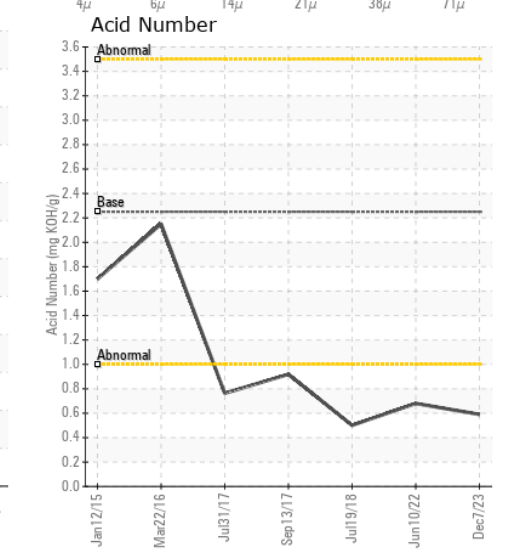
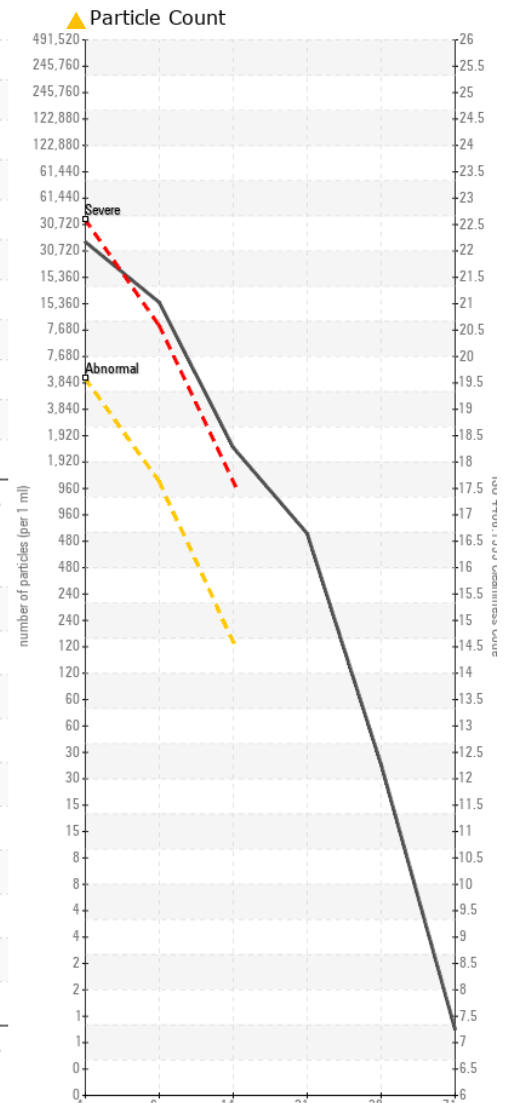
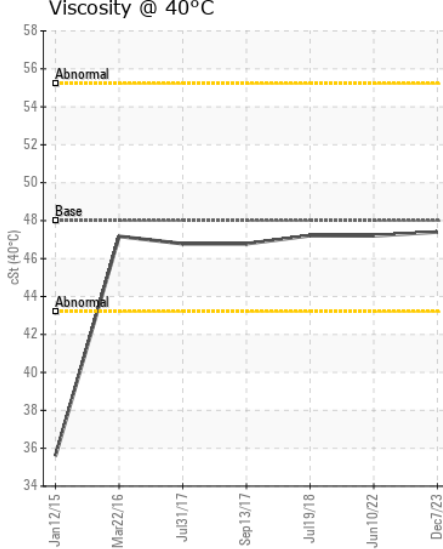
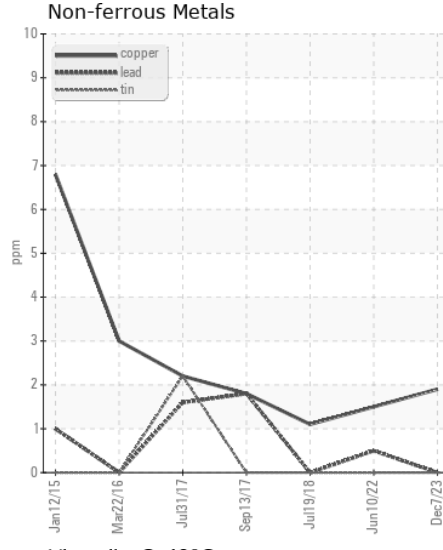
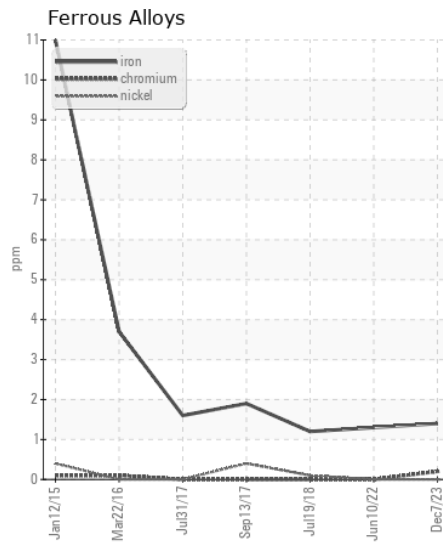
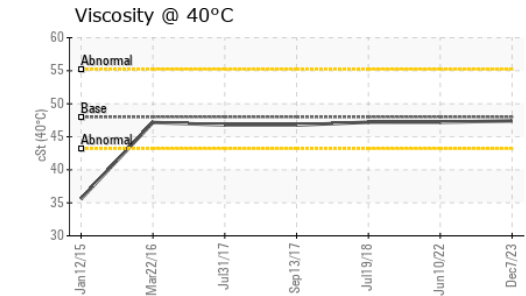
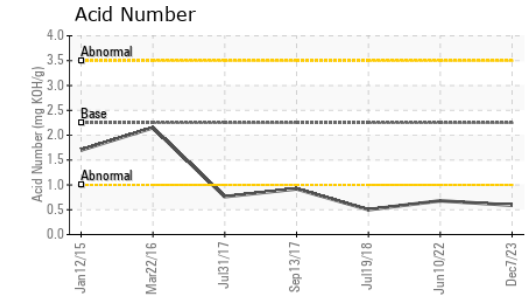
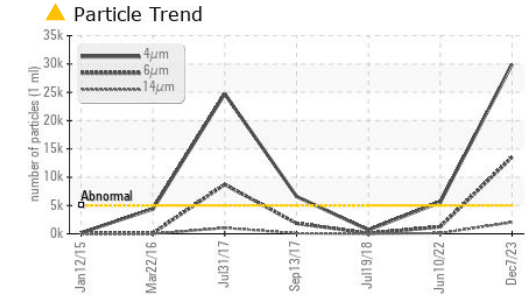
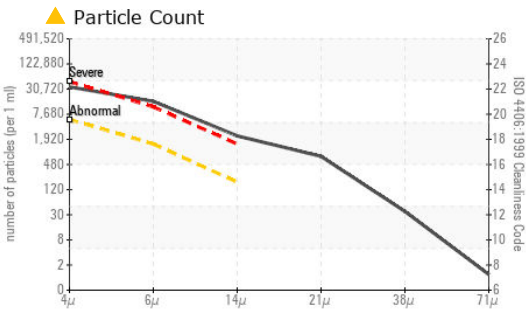
There is a high amount of particulates present in the oil.

| | | | | | | |
|------------------|--------|--------------|-----------|-------------------|------------|----------|
| Silicon | ppm | ASTM D5185m | >20 | 1 | 1 | 1 |
| Potassium | ppm | ASTM D5185m | >20 | 1 | <1 | 0 |
| Water | | WC Method | >0.1 | NEG | NEG | NEG |
| Particles >4µm | | ASTM D7647 | >5000 | ▲ 29955 | ▲ 5586 | 657 |
| Particles >6µm | | ASTM D7647 | >1300 | ▲ 13563 | 1234 | 86 |
| Particles >14µm | | ASTM D7647 | >160 | ▲ 2031 | 113 | 8 |
| Particles >21µm | | ASTM D7647 | >40 | ▲ 659 | 37 | 3 |
| Particles >38µm | | ASTM D7647 | >10 | ▲ 32 | 2 | 0 |
| Particles >71µm | | ASTM D7647 | >3 | 1 | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >19/17/14 | ▲ 22/21/18 | ▲ 20/17/14 | 17/14/10 |
| Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | LIGHT | 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 | >0.1 | NEG | NEG | NEG |

FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

| | | | | | | |
|------------------|----------|-------------|------|-------------|------|-------|
| Sodium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Boron | ppm | ASTM D5185m | 10 | 13 | 6 | 3 |
| Barium | ppm | ASTM D5185m | 10 | 0 | 2 | 0 |
| Molybdenum | ppm | ASTM D5185m | 10 | 8 | 3 | 1 |
| Manganese | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Magnesium | ppm | ASTM D5185m | 100 | 104 | 33 | 8 |
| Calcium | ppm | ASTM D5185m | 3500 | 502 | 399 | 450 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 442 | 373 | 448 |
| Zinc | ppm | ASTM D5185m | 1150 | 487 | 463 | 560 |
| Sulfur | ppm | ASTM D5185m | 5000 | 1340 | 1448 | 1651 |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 2.25 | 0.59 | 0.68 | 0.501 |
| Visc @ 40°C | cSt | ASTM D445 | 48 | 47.4 | 47.2 | 47.21 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0800511 **Received** : 12 Jan 2024
Lab Number : 06060157 **Diagnosed** : 16 Jan 2024
Unique Number : 10831539 **Diagnostician** : Don Baldrige
Test Package : CONST

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)

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