

OIL ANALYSIS REPORT

Sample Rating Trend

WEAR

11SHAFT LOUVERS #22 FAN

Hydraulic System Fluid ESSO NUTO H ISO 32 (--- GAL)

DIAGNOSIS

Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

A Wear

Copper ppm levels are noted. All other component wear rates are normal.

Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Fluid Condition

Additive levels indicate the addition of a different brand, or type of oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

| | | | | Nov2023 | | |
|--|---------------------------------|---|--|---|--|--|
| SAMPLE INFORM | 1ATION | method | limit/base | current | history1 | history2 |
| Sample Number | | Client Info | | WC0300588 | | |
| Sample Date | | Client Info | | 28 Nov 2023 | | |
| Machine Age | hrs | Client Info | | 0 | | |
| Oil Age | hrs | Client Info | | 0 | | |
| Oil Changed | | Client Info | | N/A | | |
| Sample Status | | | | ATTENTION | | |
| CONTAMINATION | ١ | method | limit/base | current | history1 | history2 |
| Water | | WC Method | >0.05 | NEG | | |
| WEAR METALS | | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185(m) | >20 | <1 | | |
| Chromium | ppm | ASTM D5185(m) | >20 | 0 | | |
| Nickel | ppm | ASTM D5185(m) | >20 | <1 | | |
| Titanium | ppm | ASTM D5185(m) | | 0 | | |
| Silver | ppm | ASTM D5185(m) | | 0 | | |
| Aluminum | ppm | ASTM D5185(m) | >20 | <1 | | |
| Lead | ppm | ASTM D5185(m) | >20 | 11 | | |
| Copper | ppm | ASTM D5185(m) | >20 | ▲ 57 | | |
| Tin | ppm | ASTM D5185(m) | >20 | 0 | | |
| | | ASTM D5185(m) | >20 | 0 | | |
| Antimony Vanadium | ppm | () | | | | |
| | ppm | ASTM D5185(m) | | 0 | | |
| Beryllium | ppm | ASTM D5185(m) | | 0 | | |
| Cadmium | ppm | ASTM D5185(m) | | <1 | | |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| Boron | ppm | ASTM D5185(m) | | <1 | | |
| Barium | ppm | ASTM D5185(m) | | 0 | | |
| Molybdenum | ppm | ASTM D5185(m) | | 0 | | |
| Manganese | ppm | ASTM D5185(m) | | 0 | | |
| Magnesium | ppm | ASTM D5185(m) | | 3 | | |
| Calcium | ppm | ASTM D5185(m) | | 30 | | |
| Phosphorus | ppm | ASTM D5185(m) | | 249 | | |
| Zinc | ppm | ASTM D5185(m) | | | | |
| | | | | 282 | | |
| Sulfur | ppm | ASTM D5185(m) | | 282 1718 | | |
| | | () | | | | |
| Sulfur Lithium CONTAMINANTS | ppm ppm | ASTM D5185(m) | limit/base | 1718 <1 | | |
| Lithium CONTAMINANTS | ppm ppm | ASTM D5185(m) ASTM D5185(m) | limit/base | 1718 <1 | | |
| Lithium CONTAMINANTS Silicon | ppm ppm | ASTM D5185(m) ASTM D5185(m) method ASTM D5185(m) | | 1718 <1 current | history1 | history2 |
| Lithium CONTAMINANTS Silicon | ppm ppm | ASTM D5185(m) ASTM D5185(m) method | >15 | 1718 <1 current 0 | history1 | history2 |
| Lithium CONTAMINANTS Silicon Sodium | ppm ppm ppm ppm ppm | ASTM D5185(m) ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m) | >15 | 1718 <1 current 0 0 <1 | history1 | history2 |
| Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN | ppm ppm ppm ppm ppm | ASTM D5185(m) ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) | >15 >20 | 1718 <1 current 0 0 <1 | history1 | history2 |
| Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm | ppm ppm ppm ppm ppm | ASTM D5185(m) ASTM D5185(m) Method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) Method | >15 >20 limit/base >5000 | 1718 <1 current 0 0 <1 <1 | history1 history1 | history2 history2 |
| Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm | ppm ppm ppm ppm ppm | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) method ASTM D7647 | >15 >20 limit/base >5000 | 1718 <1 current 0 0 <1 <1 current 1199 | history1 history1 | history2 history2 |
| Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm | ppm ppm ppm ppm ppm | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D7647 ASTM D7647 | >15 >20 limit/base >5000 >1300 >160 | 1718 <1 current 0 0 <1 current 1199 283 | history1 history1 history1 | history2 history2 history2 |
| Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm | ppm ppm ppm ppm ppm | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 | >15 >20 limit/base >5000 >1300 >160 | 1718 <1 current 0 0 <1 current 1199 283 15 | history1 history1 | history2 history2 history2 |
| Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm | ppm ppm ppm ppm ppm | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 | >15 >20 limit/base >5000 >1300 >160 >40 >10 | 1718 <1 current 0 0 <1 current 1199 283 15 3 0 | history1 history1 | history2 history2 history2 |
| Lithium CONTAMINANTS Silicon Sodium Potassium | ppm ppm ppm ppm ppm | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 | >15 >20 limit/base >5000 >1300 >160 >40 >10 | 1718 <1 current 0 0 <1 current 1199 283 15 3 | history1 history1 | history2 history2 history2 |



OIL ANALYSIS REPORT

| Particle Trend | FLUID DEGRADA | TION | method | limit/base | current | history1 | history2 |
|--|--|----------------------------------|--------------------------------------|---|-------------------|--------------------|--------------------------|
| | Acid Number (AN) | mg KOH/g | ASTM D974* | .40 | 0.33 | | |
| 14μm | VISUAL | | method | limit/base | current | history1 | history2 |
| | White Metal | scalar | Visual* | NONE | NONE | | |
| | Yellow Metal | scalar | Visual* | NONE | NONE | | |
| | Precipitate | scalar | Visual* | NONE | NONE | | |
| 288 | Silt | scalar | Visual* | NONE | NONE | | |
| | Debris | scalar | Visual* | NONE | NONE | | |
| Additives | Sand/Dirt | scalar scalar | Visual* Visual* | NONE | NONE | | |
| | Appearance Odor | scalar | Visual* | NORML | NORML | | |
| Researcher phosphorus | Emulsified Water | scalar | Visual* | >0.05 | NEG | | |
| | Free Water | scalar | Visual* | | NEG | | |
| | FLUID PROPERT | IES | method | limit/base | current | history1 | history2 |
| | Visc @ 40°C | cSt | ASTM D7279(m) | 32.6 | 34.0 | | |
| | SAMPLE IMAGES | 6 | method | limit/base | current | history1 | history2 |
| Nov2 | | | | | 1 | | |
| id Number | Color | | | | | no image | no image |
| 158 | · - | | | 5 | | | |
| | | | | | | | |
| | Bottom | | | | | no image | no image |
| | Dottom | | | | | no inage | no image |
| | GRAPHS | | | | | | |
| e1 | Ferrous Alloys | | | | Particle Count | | |
| 1 | 0 T | | | 491,520 | | | [²⁶ |
| iscosity @ 40°C | iron sessessesses chromium 5 - nickel | | | 122,880 | Course | | -24 |
| | | | | 30,720 | pevele | | -22 |
| bnormal | | | | \$ € 7,680 | Abnormal | | -20 |
| ase | Nov28/23 | | | Nov28/23 s (per 1 m) | 1 | | -18 |
| lase | ≥ Non-ferrous Metal | s | | Nov28/23 006'1 ml) 1000'1 | 1. | | 16 |
| | Copper] | | | re. jo 120- | | | -20 -18 -16 -14 |
| 4 E | 0 - consection lead | | | aquine 30. | | | -12 |
| ä 2 | 0 | | | | | | 12 10 |
| | | | | - 3 | | 1 | |
| article Trend | Nov28/23 | | | 2. 2/82/00 | | | |
| οποιπια, 4μm | ≥ Viscosity @ 40°C | | | 4 | Acid Number | 4μ 21μ | 38µ 71µ |
| | ⁸ T | | | (^B €0.60 | Acia Number | | |
| | | | | ¥ 0.40 | Base | | |
| (1-0-1) -0-1) -0-1 -0-3 -0-1 -0-1 -0-1 -0-1 -0-1 -0-1 | | | | рен представительно представи представительно представительно представительно представительно | | | |
| 3 | 0 | | | | | | |
| | v28/23 | | | v28/23 | v28/23 | | Nov28/23 |
| | No | | | No | No | | - North |
| 22 22 23 24 25 25 25 25 25 25 25 25 25 25 | WearCheck - C8-11 WC0300588 02607823 5708909 IND 2 ntact Customer Servi | Recieved Diagnose Diagnost | d : 10 . ed : 11 . ician : Kev | Jan 2024 Jan 2024 rin Marson | 7L 5H9 CREIGHT | Contae igor.boz | |

Contact/Location: Igor Bozhyk - INCCRE