

OIL ANALYSIS REPORT

Area EDWARD PLANT C-2162 (S/N XC0600)

Refrigeration Compressor Fluic

TULCO LUBSOIL SYN RL WI 100 (250 GAL)

Recommendation

Resample at the next service interval to monitor.

Wear

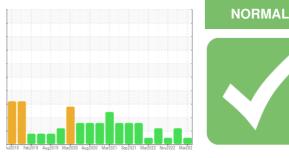
All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

Fluid Condition

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



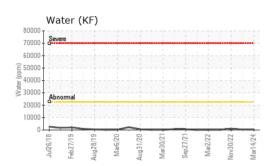
Sample Rating Trend

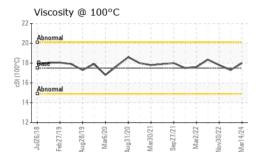
| SAMPLE INFORM | IATION | method | limit/base | current | history1 | history2 |
|------------------|----------|--------------|------------|-------------|-------------|-------------|
| Sample Number | | Client Info | | TO90003247 | TO90002251 | TO90002358 |
| Sample Date | | Client Info | | 14 Mar 2024 | 14 Aug 2023 | 30 Nov 2022 |
| Machine Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | N/A | N/A | N/A |
| Sample Status | | | | NORMAL | ABNORMAL | NORMAL |
| WEAR METALS | | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185m | >8 | 4 | 6 | 2 |
| Chromium | ppm | ASTM D5185m | >2 | 0 | 0 | <1 |
| Nickel | ppm | ASTM D5185m | | <1 | 0 | <1 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Silver | ppm | ASTM D5185m | >2 | 0 | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | >3 | <1 | 0 | 0 |
| Lead | ppm | ASTM D5185m | >2 | <1 | 0 | 2 |
| Copper | ppm | ASTM D5185m | >8 | 2 | 1 | <1 |
| Tin | ppm | ASTM D5185m | >4 | 4 | 3 | 1 |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | <1 |
| Cadmium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| Boron | ppm | ASTM D5185m | | 0 | 0 | 2 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Manganese | ppm | ASTM D5185m | | 1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | | 2 | 1 | 10 |
| Calcium | ppm | ASTM D5185m | | 28 | 44 | 8 |
| Phosphorus | ppm | ASTM D5185m | 1500 | 1072 | 683 | 102 |
| Zinc | ppm | ASTM D5185m | | 0 | 0 | 6 |
| Sulfur | ppm | ASTM D5185m | | 40 | 114 | 0 |
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
| Silicon | ppm | ASTM D5185m | >15 | 2 | 4 | 1 |
| Sodium | ppm | ASTM D5185m | | 2 | 1 | 6 |
| Potassium | ppm | ASTM D5185m | >20 | 3 | <1 | 25 |
| Water | % | ASTM D6304 | >2.26 | 0.032 | 0.033 | 0.103 |
| ppm Water | ppm | ASTM D6304 | >22600 | 325 | 333.6 | 1037.8 |
| FLUID CLEANLIN | IESS | method | limit/base | current | history1 | history2 |
| Particles >4µm | | ASTM D7647 | >10000 | 7742 | ▲ 30352 | 5264 |
| Particles >6µm | | ASTM D7647 | >2500 | 1968 | ▲ 6049 | 1355 |
| Particles >14µm | | ASTM D7647 | >320 | 109 | 219 | 80 |
| Particles >21µm | | ASTM D7647 | >80 | 21 | 42 | 14 |
| Particles >38µm | | ASTM D7647 | >20 | 0 | 1 | 1 |
| Particles >71µm | | ASTM D7647 | >4 | 0 | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >20/18/15 | 20/18/14 | ▲ 22/20/15 | 20/18/13 |
| FLUID DEGRADA | TION | method | limit/base | current | history1 | history2 |
| Acid Number (AN) | mg KOH/g | ASTM D974 | 0.04 | 0.085 | 0.03 | 0.072 |

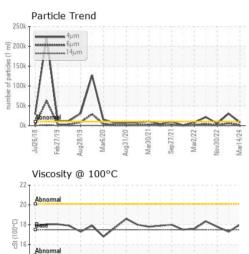
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OIL ANALYSIS REPORT







1/2/

14

12

120 115

110

() 105 SS (40°C) SS 100

90 - Abn

8

95 Base

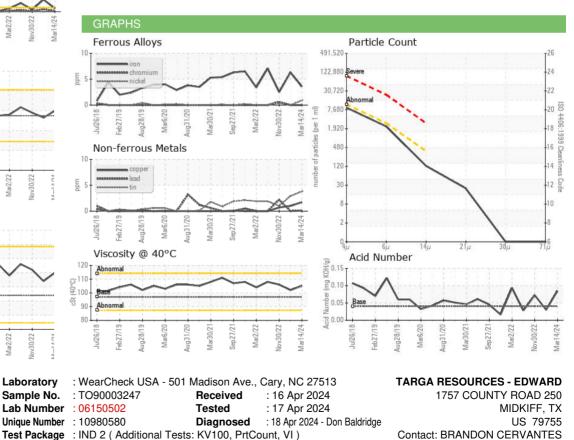
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Viscosity @ 40°C

| 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 | >2.26 | NEG | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG | NEG |
| FLUID PROPERT | IES | method | limit/base | current | history1 | history2 |
| Visc @ 40°C | cSt | ASTM D445 | 97 | 105 | 102 | 106 |
| Visc @ 100°C | cSt | ASTM D445 | 17.5 | 18.0 | 17.3 | 17.8 |
| Viscosity Index (VI) | Scale | ASTM D2270 | 198 | 190 | 186 | 185 |
| SAMPLE IMAGES | | method | limit/base | current | history1 | history2 |
| Color | | | | | | |







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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Certificate 12367

Submitted By: ERIC THORNTON Page 2 of 2

bcervantes@targaresources.com

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