

OIL ANALYSIS REPORT

[2076019] Machine Id HS-10 (S/N TDSH233L2025FR)

Component Refrigeration Compressor

CAMCO (150 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

The water content is negligible. There is no indication of any contamination in the oil.

Fluid Condition

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

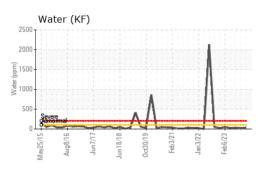
Sample Rating Trend

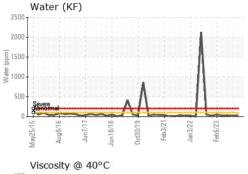
| SAMPLE INFORM | 1ATION | method | limit/base | current | history1 | history2 |
|---|--|--|-----------------------------------|---|--|---|
| Sample Number | | Client Info | | WC0914834 | WC0857534 | WC0831577 |
| Sample Date | | Client Info | | 24 Mar 2024 | 25 Oct 2023 | 10 Jul 2023 |
| Machine Age | hrs | Client Info | | 14060 | 11943 | 10458 |
| Oil Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | N/A | N/A | N/A |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |
| WEAR METALS | | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185m | >8 | 7 | 9 | 7 |
| Chromium | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Titanium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| Silver | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >3 | 0 | 1 | <1 |
| Lead | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >8 | 0 | 0 | <1 |
| Tin | ppm | ASTM D5185m | >4 | 0 | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| | | | | | | |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| ADDITIVES Boron | ppm | method ASTM D5185m | limit/base | current 0 | history1 0 | history2 0 |
| | ppm ppm | | limit/base | | | |
| Boron | | ASTM D5185m | limit/base | 0 | 0 | 0 |
| Boron Barium | ppm | ASTM D5185m ASTM D5185m | limit/base | 0 0 | 0 | 0 2 |
| Boron Barium Molybdenum | ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m | limit/base | 0 0 0 | 0 0 0 | 0 2 0 |
| Boron Barium Molybdenum Manganese | ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | limit/base | 0 0 0 | 0 0 0 0 | 0 2 0 0 |
| Boron Barium Molybdenum Manganese Magnesium | ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | limit/base | 0 0 0 0 0 | 0 0 0 0 0 | 0 2 0 0 0 |
| Boron Barium Molybdenum Manganese Magnesium Calcium | ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | limit/base | 0 0 0 0 0 0 | 0 0 0 0 0 0 | 0 2 0 0 0 0 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus | ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | limit/base | 0 0 0 0 0 0 0 | 0 0 0 0 0 0 1 | 0 2 0 0 0 0 <1 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc | ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | limit/base | 0 0 0 0 0 0 0 0 | 0 0 0 0 0 0 1 1 | 0 2 0 0 0 0 <1 1 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur | ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | | 0 0 0 0 0 0 0 54 current | 0 0 0 0 0 1 1 1 0 history1 <1 | 0 2 0 0 0 0 <1 1 54 54 history2 <1 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS | ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | limit/base | 0 0 0 0 0 0 0 54 Current | 0 0 0 0 0 1 1 1 0 8 1 0 8 1 1 0 | 0 2 0 0 0 0 <1 1 54 54 history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon | ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m | limit/base | 0 0 0 0 0 0 0 54 current | 0 0 0 0 0 1 1 1 0 history1 <1 | 0 2 0 0 0 0 <1 1 54 54 history2 <1 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium | ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m | limit/base | 0 0 0 0 0 0 0 0 54 Current 0 1 | 0 0 0 0 0 1 1 1 0 0 history1 <1 0 | 0 2 0 0 0 0 <1 1 1 54 54 history2 <1 0 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium | ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m | limit/base >15 >20 | 0 0 0 0 0 0 0 0 0 54 Current 0 1 | 0 0 0 0 0 1 1 1 0 history1 <1 0 <1 | 0 2 0 0 0 <1 1 1 54 history2 <1 0 <1 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water | ppm ppm ppm | ASTM D5185m ASTM D5185m | limit/base >15 >20 >0.01 | 0 0 0 0 0 0 0 0 0 54 <i>current</i> 0 1 0 0 1 0 0 0 | 0 0 0 0 0 1 1 1 0 history1 <1 0 <1 0.002 | 0 2 0 0 0 0 <1 1 1 54 history2 <1 0 <1 0 0.003 |

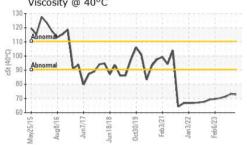
NORMAL



OIL ANALYSIS REPORT

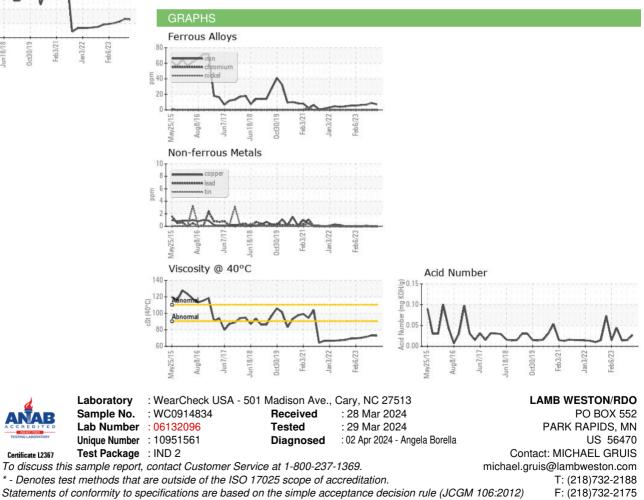






| VISUAL | | method | limit/base | current | history1 | history2 |
|------------------|--------|-----------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE | NONE |
| Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | LIGHT | 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 | >0.01 | 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 | | 72.8 | 73.2 | 71.3 |
| SAMPLE IMAGES | S | method | limit/base | current | history1 | history2 |
| Color | | | | 4. Q. | | 9 |

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Contact/Location: MICHAEL GRUIS - LAMPAR