

OIL ANALYSIS REPORT

Sample Rating Trend



HS-9 (S/N TDSH233L1731F)

Refrigeration Compressor

CHEVRON REFRIGERATION OIL WF 68 (150 GAL)

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the component.

Fluid Condition

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

| 30 GAL) s2014 May2015 Aug2016 Dec2017 Nov2018 Feb2020 May2021 Aug2022 | | | | | | |
|--|--------|-------------|------------|-------------|-------------|-------------|
| SAMPLE INFORM | MATION | method | limit/base | current | history1 | history2 |
| Sample Number | | Client Info | | WC0831594 | WC0779558 | WC0772733 |
| Sample Date | | Client Info | | 11 Aug 2023 | 23 May 2023 | 18 Feb 2023 |
| Machine Age | hrs | Client Info | | 185981 | 175151 | 0 |
| 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 | 15 | 14 | 13 |
| Chromium | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >3 | 0 | 0 | <1 |
| Lead | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >8 | <1 | <1 | 0 |
| Tin | ppm | ASTM D5185m | >4 | 0 | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| Boron | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | | <1 | 0 | 3 |
| Calcium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Phosphorus | ppm | ASTM D5185m | | 1 | 3 | 0 |
| Zinc | ppm | ASTM D5185m | | 41 | 30 | 48 |
| Sulfur | ppm | ASTM D5185m | | 162 | 262 | 64 |
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
| Silicon | ppm | ASTM D5185m | >15 | <1 | <1 | <1 |
| Sodium | ppm | ASTM D5185m | | 2 | 1 | 0 |
| Potassium | ppm | ASTM D5185m | >20 | 1 | 0 | 0 |
| Water | % | ASTM D6304 | >0.01 | 0.003 | 0.005 | 0.006 |
| ppm Water | ppm | ASTM D6304 | >100 | 39.7 | 52.4 | 63.8 |
| FLUID DEGRADA | | | | | | |

0.015

Acid Number (AN)

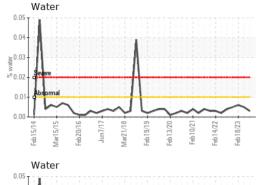
mg KOH/g ASTM D974

0.060

0.08



OIL ANALYSIS REPORT



| VISUAL | | method | | | | 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 | >0.01 | NEG | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG | NEG |
| | | | | | | |

| 0.05 | |
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| Feb 15/14 Mar15/15 Feb 20/16 Jun//17 Jun//17 Feb 13/20 Feb 10/21 Feb 10/21 | |
| Fe Fe Fe Fe Fe Fe | |

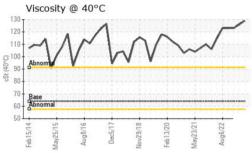
| FLUID PROPER | RTIES | method | | | | history |
|--------------|-------|-----------|------|-----|-----|---------|
| Visc @ 40°C | cSt | ASTM D445 | 64.0 | 129 | 126 | 123 |

SAMPLE IMAGES

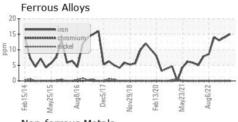
Color

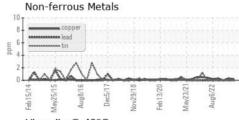


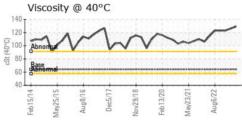


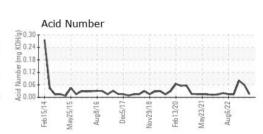


GRAPHS













Certificate L2367

Laboratory Sample No. Lab Number **Unique Number** Test Package : IND 2

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : WC0831594 : 05926768 : 10606715

Received Diagnosed Diagnostician : Doug Bogart

: 16 Aug 2023 : 17 Aug 2023

LAMB WESTON/RDO PO BOX 552 PARK RAPIDS, MN US 56470 Contact: MICHAEL GRUIS

michael.gruis@lambweston.com

T: (218)732-2188 F: (218)732-2175

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)