

PROBLEM SUMMARY

Sample Rating Trend



PROCESS

SULLAIR TYSAMAP PR-1 SUL (S/N 006-97002189)

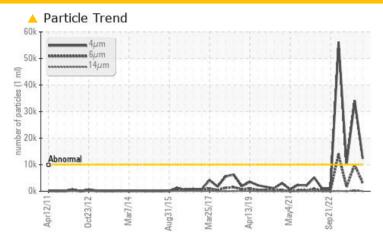
Refrigeration Compressor

USPI 1009-68 SC (90 GAL)





COMPONENT CONDITION SUMMARY



RECOMMENDATION

Resample at the next service interval to monitor.

| PROBLEMATIC TEST RESULTS | | | | | | | | | |
|--------------------------|--------------|-----------|-------------------|-------------------|-------------------|--|--|--|--|
| Sample Status | | | ATTENTION | ABNORMAL | ATTENTION | | | | |
| Particles >4µm | ASTM D7647 | >10000 | <u> </u> | <u>▲</u> 34104 | <u></u> 10183 | | | | |
| Particles >6µm | ASTM D7647 | >2500 | 103 | <u> </u> | 1628 | | | | |
| Oil Cleanliness | ISO 4406 (c) | >20/18/15 | <u>^</u> 21/19/13 | <u>^</u> 22/21/15 | <u>^</u> 21/18/11 | | | | |

Customer Id: TYSAMA Sample No.: USP0003553 Lab Number: 06015146 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data: Doug Bogart +1 (800)237-1369 x4016 dougb@wearcheckusa.com

To change component or sample information: Customer Service +1 1-800-237-1369 customerservice@wearcheck.com

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

21 Jul 2023 Diag: Doug Bogart

ISO



Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



13 Apr 2023 Diag: Doug Bogart

ISO



Resample at the next service interval to monitor. All component wear rates are normal. There is a moderate amount of silt (particulates < 6 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



27 Dec 2022 Diag: Doug Bogart

ISO



Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



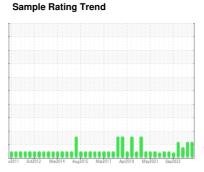


OIL ANALYSIS REPORT

PROCESS **SULLAIR TYSAMAP PR-1 SUL (S/N 006-97002189)**

Refrigeration Compressor

USPI 1009-68 SC (90 GAL)





DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

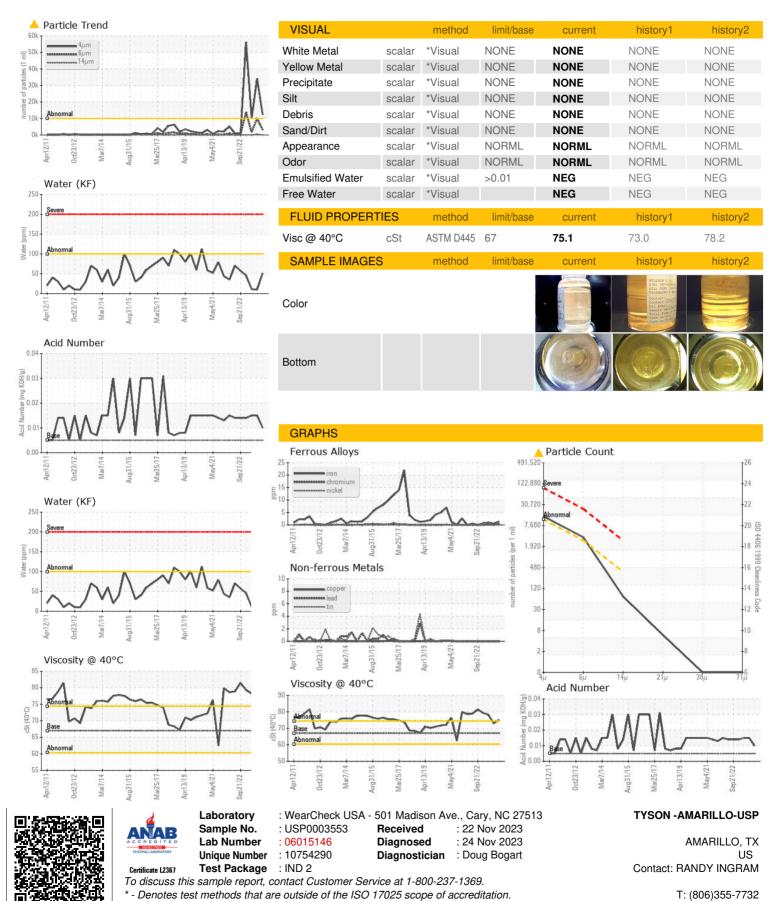
Fluid Condition

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

| | | ir2011 Oct20 | 12 Mar2014 Aug2015 | MarŽ017 AprŽ019 MayŽ021 S | Sep 2022 | |
|------------------|----------|--------------|--------------------|---------------------------|-----------------|-------------------------------|
| SAMPLE INFORM | MATION | method | limit/base | current | history1 | history2 |
| Sample Number | | Client Info | | USP0003553 | USP0001039 | USP245683 |
| Sample Date | | Client Info | | 14 Nov 2023 | 21 Jul 2023 | 13 Apr 2023 |
| Machine Age | hrs | Client Info | | 3437 | 718 | 88903 |
| Oil Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | N/A | N/A | N/A |
| Sample Status | | | | ATTENTION | ABNORMAL | ATTENTION |
| WEAR METALS | | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185m | >8 | 1 | <1 | 1 |
| Chromium | ppm | ASTM D5185m | >2 | <1 | 0 | <1 |
| Nickel | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >3 | 1 | 0 | 0 |
| Lead | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >8 | 0 | 0 | 0 |
| Tin | ppm | ASTM D5185m | >4 | 0 | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| Boron | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Barium | ppm | ASTM D5185m | | 0 | 1 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Magnesium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Calcium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Phosphorus | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Zinc | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Sulfur | ppm | ASTM D5185m | 50 | 0 | 9 | 0 |
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
| Silicon | ppm | ASTM D5185m | >15 | 0 | 0 | 0 |
| Sodium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Potassium | ppm | ASTM D5185m | >20 | 1 | 1 | 1 |
| Water | % | ASTM D6304 | >0.01 | 0.005 | 0.001 | 0.001 |
| ppm Water | ppm | ASTM D6304 | >100 | 51 | 9.9 | 11.1 |
| FLUID CLEANLIN | IESS | method | limit/base | current | history1 | history2 |
| Particles >4µm | | ASTM D7647 | >10000 | 12319 | <u>▲</u> 34104 | <u>▲</u> 10183 |
| Particles >6µm | | ASTM D7647 | >2500 | <u>▲</u> 3103 | <u>▲</u> 10013 | 1628 |
| Particles >14μm | | ASTM D7647 | >320 | 63 | 309 | 16 |
| Particles >21µm | | ASTM D7647 | >80 | 5 | 33 | 2 |
| Particles >38μm | | ASTM D7647 | >20 | 0 | 0 | 0 |
| Particles >71μm | | ASTM D7647 | >4 | 0 | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >20/18/15 | <u>21/19/13</u> | <u>22/21/15</u> | <u>\$\lambda\$\$ 21/18/11</u> |
| FLUID DEGRADA | TION | method | limit/base | current | history1 | history2 |
| Acid Number (AN) | mg KOH/g | ASTM D974 | 0.005 | 0.01 | 0.015 | 0.015 |



OIL ANALYSIS REPORT



Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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