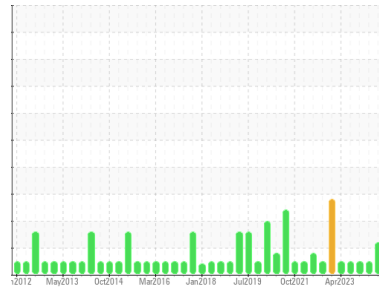




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id
TYSHOUP RC-12
 Component
Refrigeration Compressor
 Fluid
USPI ALT-68 SC (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

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.

SAMPLE INFORMATION

| | method | limit/base | current | history1 | history2 |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | USP0013126 | USP0007751 | USP0003103 |
| Sample Date | Client Info | | 20 Jun 2024 | 21 Feb 2024 | 02 Nov 2023 |
| 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 | | | ATTENTION | NORMAL | NORMAL |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|----------|--------|----------------|---------|----------|----------|
| Iron | ppm | ASTM D5185m >8 | <1 | 0 | 0 |
| Chromium | ppm | ASTM D5185m >2 | <1 | 0 | 0 |
| Nickel | ppm | ASTM D5185m | <1 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | <1 | 0 | 0 |
| Silver | ppm | ASTM D5185m >2 | <1 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m >3 | 0 | <1 | 0 |
| Lead | ppm | ASTM D5185m >2 | <1 | 0 | 0 |
| Copper | ppm | ASTM D5185m >8 | <1 | 0 | 0 |
| Tin | ppm | ASTM D5185m >4 | <1 | <1 | 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 | 1 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | <1 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | <1 | <1 | 0 |
| Magnesium | ppm | ASTM D5185m | <1 | <1 | 0 |
| Calcium | ppm | ASTM D5185m | 0 | 1 | 0 |
| Phosphorus | ppm | ASTM D5185m | 0 | <1 | 0 |
| Zinc | ppm | ASTM D5185m | <1 | 0 | 0 |
| Sulfur | ppm | ASTM D5185m 50 | 0 | 0 | 0 |

CONTAMINANTS

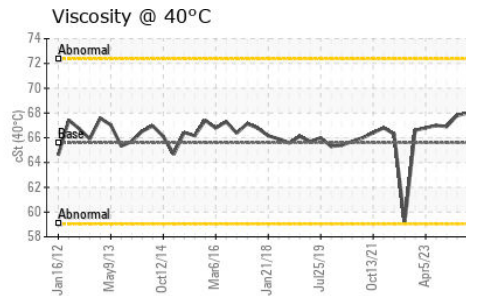
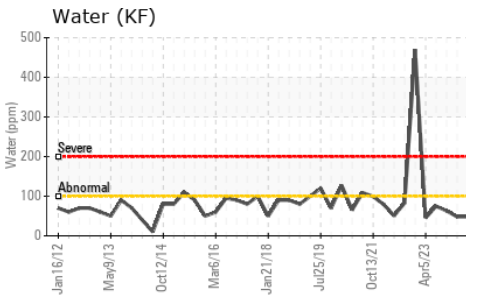
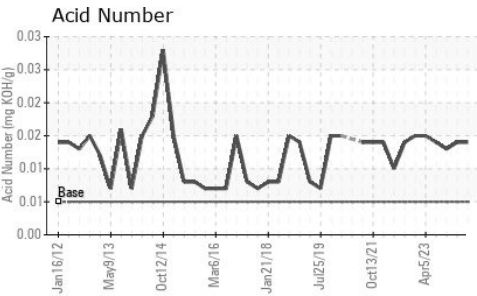
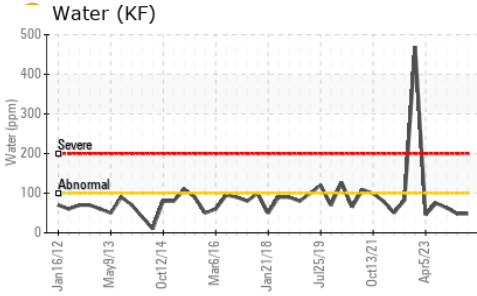
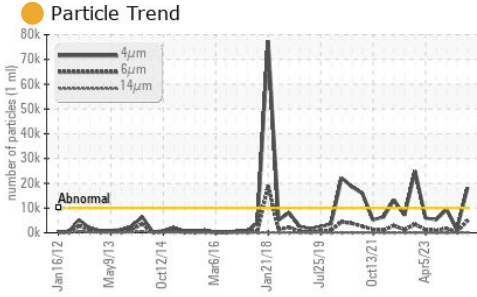
| | method | limit/base | current | history1 | history2 |
|-----------|--------|------------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185m >15 | <1 | <1 | 0 |
| Sodium | ppm | ASTM D5185m | 0 | <1 | 0 |
| Potassium | ppm | ASTM D5185m >20 | 1 | <1 | 0 |
| Water | % | ASTM D6304 >0.01 | 0.004 | 0.004 | 0.006 |
| ppm Water | ppm | ASTM D6304 >100 | 48 | 48 | 62.8 |

FLUID CLEANLINESS

| | method | limit/base | current | history1 | history2 |
|-----------------|--------------|------------|-------------------|----------|----------|
| Particles >4µm | ASTM D7647 | >10000 | ● 18218 | 1531 | 9336 |
| Particles >6µm | ASTM D7647 | >2500 | ● 4873 | 225 | 1728 |
| Particles >14µm | ASTM D7647 | >320 | 125 | 11 | 41 |
| Particles >21µm | ASTM D7647 | >80 | 16 | 5 | 7 |
| Particles >38µm | ASTM D7647 | >20 | 0 | 2 | 0 |
| Particles >71µm | ASTM D7647 | >4 | 0 | 0 | 0 |
| Oil Cleanliness | ISO 4406 (c) | >20/18/15 | ● 21/19/14 | 18/15/11 | 20/18/13 |

FLUID DEGRADATION

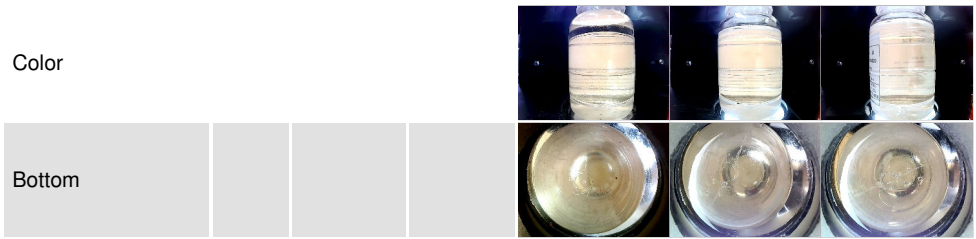
| | method | limit/base | current | history1 | history2 |
|------------------|----------|-----------------|--------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D974 0.005 | 0.014 | 0.014 | 0.013 |



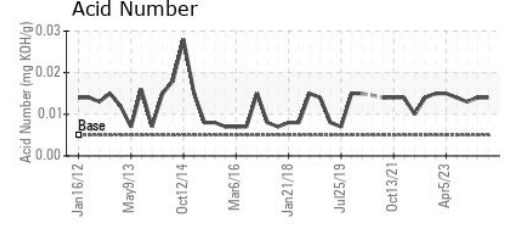
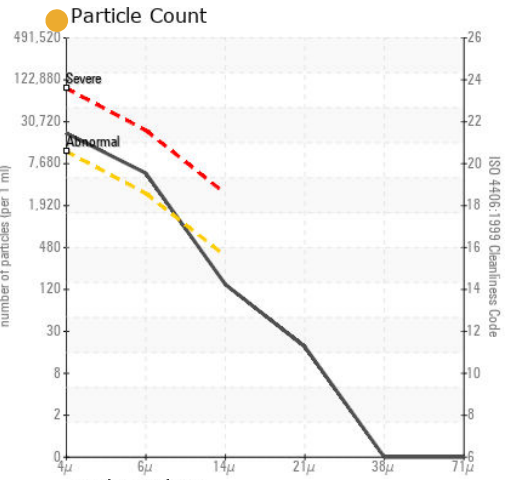
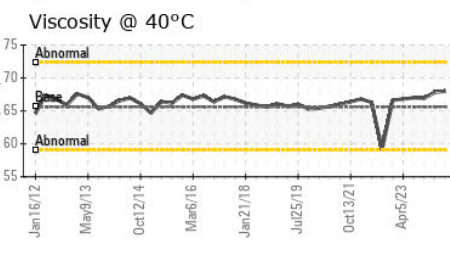
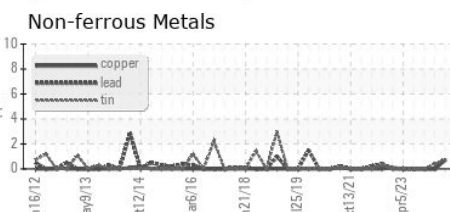
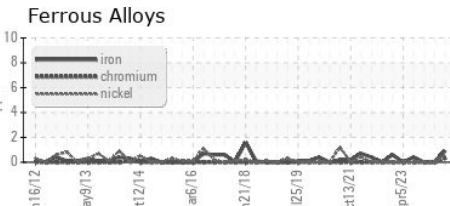
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE |
| Silt | scalar | *Visual | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | NONE |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE |
| Appearance | scalar | *Visual | NORML | NORML | NORML |
| Odor | scalar | *Visual | NORML | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.01 | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 | 65.6 | 68.0 | 67.8 |

| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---------------|--------|------------|---------|----------|----------|
|---------------|--------|------------|---------|----------|----------|



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : USP0013126
Lab Number : 06217342
Unique Number : 11090206
Test Package : IND 2
Received : 21 Jun 2024
Tested : 25 Jun 2024
Diagnosed : 25 Jun 2024 - Doug Bogart

TYSON-HOUSTON-USP-TYSHOUPOR
 300 PORTWELL RD.
 HOUSTON, TX
 US 77029
 Contact: SERVICE MANAGER

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)