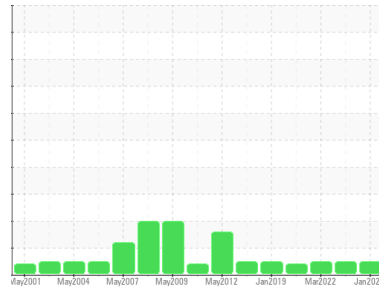




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
NISSEI PRESS 27 (S/N S28T107)

Component
Hydraulic System

Fluid
AW HYDRAULIC OIL ISO 46 (214 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

All component wear rates are normal.

Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

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 | | | WC0884790 | WC0768431 | WC0534557 |
| Sample Date | Client Info | | | 19 Jan 2024 | 05 Jan 2023 | 21 Mar 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 | NORMAL | NORMAL |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---------------|-----------|--------|------------|------------|----------|----------|
| Water | WC Method | | >0.05 | NEG | NEG | NEG |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|-------------|-----|-------------|------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185m | >20 | 5 | 7 | 7 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | <1 | 0 |
| Nickel | ppm | ASTM D5185m | >20 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Silver | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | >20 | <1 | 0 | 0 |
| Lead | ppm | ASTM D5185m | >20 | 2 | <1 | 2 |
| Copper | ppm | ASTM D5185m | >20 | 15 | 14 | 14 |
| Tin | ppm | ASTM D5185m | >20 | <1 | 0 | <1 |
| Antimony | ppm | ASTM D5185m | | --- | --- | --- |
| 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 | 5 | 0 | 0 | <1 |
| Barium | ppm | ASTM D5185m | 5 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 5 | 0 | <1 | 0 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 25 | 4 | 2 | 3 |
| Calcium | ppm | ASTM D5185m | 200 | 9 | 67 | 72 |
| Phosphorus | ppm | ASTM D5185m | 300 | 286 | 376 | 403 |
| Zinc | ppm | ASTM D5185m | 370 | 352 | 405 | 459 |
| Sulfur | ppm | ASTM D5185m | 2500 | 1287 | 1626 | 1231 |

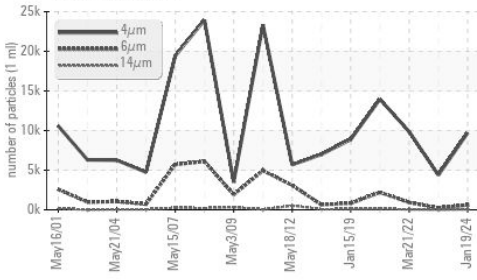
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|--------------|-----|-------------|------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185m | >15 | 0 | <1 | <1 |
| Sodium | ppm | ASTM D5185m | | 0 | 1 | 0 |
| Potassium | ppm | ASTM D5185m | >20 | <1 | 0 | 2 |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|-------------------|--|--------------|------------|-----------------|----------|----------|
| Particles >4µm | | ASTM D7647 | | 9695 | 4375 | 9868 |
| Particles >6µm | | ASTM D7647 | >1300 | 607 | 239 | 926 |
| Particles >14µm | | ASTM D7647 | >160 | 50 | 15 | 43 |
| Particles >21µm | | ASTM D7647 | >40 | 16 | 3 | 6 |
| Particles >38µm | | ASTM D7647 | >10 | 0 | 0 | 0 |
| Particles >71µm | | ASTM D7647 | >3 | 0 | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >--/17/14 | 20/16/13 | 19/15/11 | 20/17/13 |

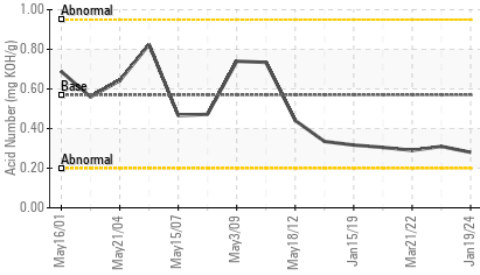


OIL ANALYSIS REPORT

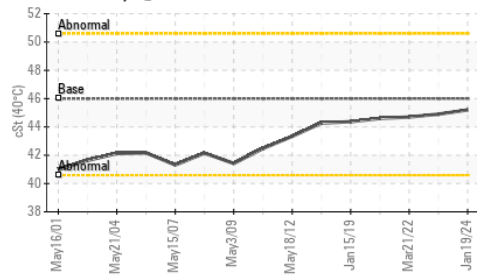
Particle Trend



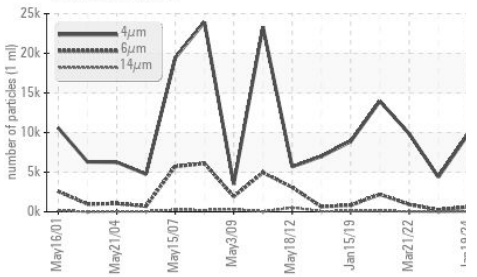
Acid Number



Viscosity @ 40°C



Particle Trend

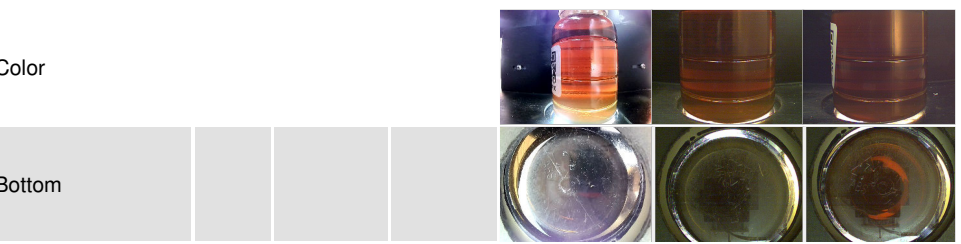


| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|-------------------|----------|------------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.57 | 0.28 | 0.31 | 0.29 |

| 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 | >0.05 | NEG | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG | NEG |

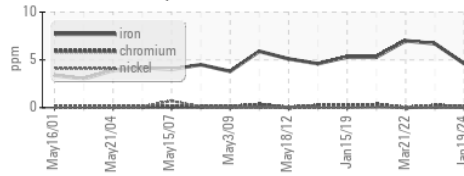
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|------------------|-----|-----------|------------|-------------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 | 46 | 45.2 | 44.9 | 44.7 |

SAMPLE IMAGES

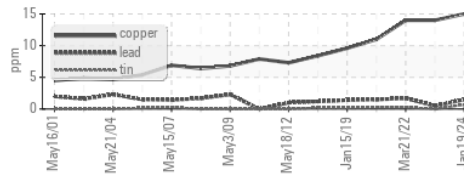


GRAPHS

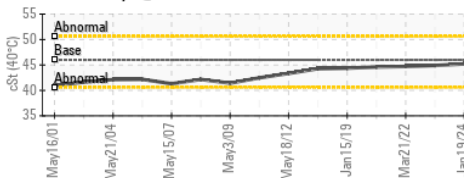
Ferrous Alloys



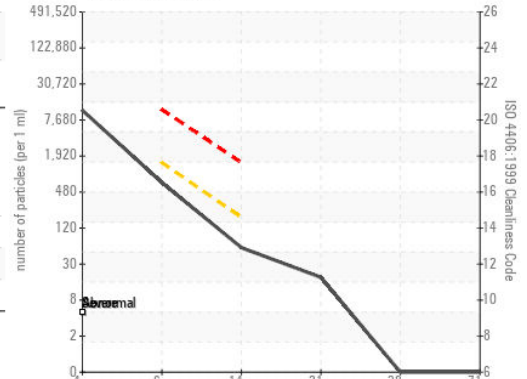
Non-ferrous Metals



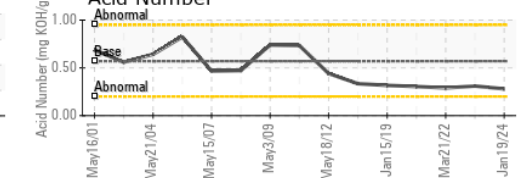
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : WC0884790
 Lab Number : 06139873
 Unique Number : 10964681
 Test Package : IND 2

Received : 05 Apr 2024
 Tested : 08 Apr 2024
 Diagnosed : 08 Apr 2024 - Wes Davis

VIKING PLASTICS

1 VIKING ST
 CORRY, PA
 US 16407

Contact: JOHN TRIKUR
 jtrikur@vikingplastics.com

T: (814)664-8671
 F: (814)664-7797

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)