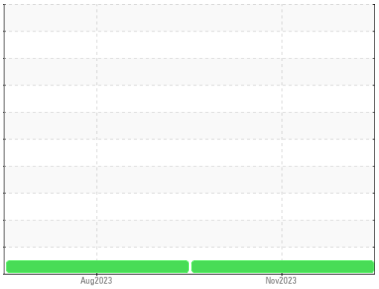
# OIL ANALYSIS REPORT

Sample Rating Trend




NORMAL

Machine Id
## STARLINE SL-5104 6113
Component
**Hydraulic System**
Fluid
**NOT GIVEN (--- GAL)**

## DIAGNOSIS

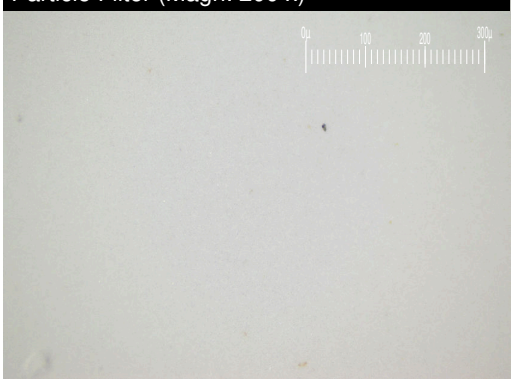
**Recommendation**
Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

**Wear**
All component wear rates are normal.

**Contamination**
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

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

Particle Filter (Magn: 200 x)



| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **PH0002401** | PH0001997 | --- |
| Sample Date | | Client Info | | **14 Nov 2023** | 28 Aug 2023 | --- |
| Machine Age | hrs | Client Info | | **0** | 0 | --- |
| Oil Age | hrs | Client Info | | **0** | 0 | --- |
| Oil Changed | | Client Info | | **N/A** | N/A | --- |
| Sample Status | | | | **NORMAL** | NORMAL | --- |

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

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >20 | **0** | <1 | --- |
| Chromium | ppm | ASTM D5185m | >20 | **0** | 6 | --- |
| Nickel | ppm | ASTM D5185m | >20 | **0** | <1 | --- |
| Titanium | ppm | ASTM D5185m | | **0** | 0 | --- |
| Silver | ppm | ASTM D5185m | | **0** | 0 | --- |
| Aluminum | ppm | ASTM D5185m | >20 | **0** | <1 | --- |
| Lead | ppm | ASTM D5185m | >20 | **0** | <1 | --- |
| Copper | ppm | ASTM D5185m | >20 | **0** | <1 | --- |
| Tin | ppm | ASTM D5185m | >20 | **1** | 0 | --- |
| Vanadium | ppm | ASTM D5185m | | **0** | <1 | --- |
| Cadmium | ppm | ASTM D5185m | | **<1** | <1 | --- |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | | **0** | 0 | --- |
| Barium | ppm | ASTM D5185m | | **0** | 2 | --- |
| Molybdenum | ppm | ASTM D5185m | | **0** | 0 | --- |
| Manganese | ppm | ASTM D5185m | | **<1** | 0 | --- |
| Magnesium | ppm | ASTM D5185m | | **<1** | <1 | --- |
| Calcium | ppm | ASTM D5185m | | **4** | 6 | --- |
| Phosphorus | ppm | ASTM D5185m | | **30304** | 12328 | --- |
| Zinc | ppm | ASTM D5185m | | **0** | 3 | --- |
| Sulfur | ppm | ASTM D5185m | | **1783** | 2100 | --- |

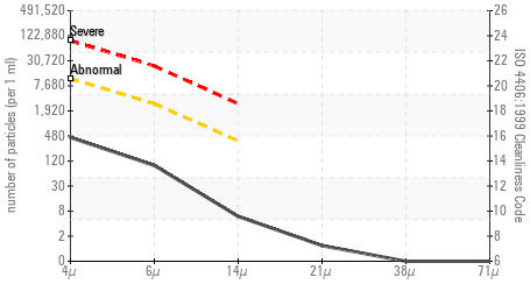
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >15 | **<1** | 2 | --- |
| Sodium | ppm | ASTM D5185m | | **2** | 4 | --- |
| Potassium | ppm | ASTM D5185m | >20 | **13** | 20 | --- |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >10000 | **389** | 378 | --- |
| Particles >6µm | | ASTM D7647 | >2500 | **83** | 125 | --- |
| Particles >14µm | | ASTM D7647 | >320 | **5** | 32 | --- |
| Particles >21µm | | ASTM D7647 | >80 | **1** | 12 | --- |
| Particles >38µm | | ASTM D7647 | >20 | **0** | 1 | --- |
| Particles >71µm | | ASTM D7647 | >4 | **0** | 0 | --- |
| Oil Cleanliness | | ISO 4406 (c) | >20/18/15 | **16/14/10** | 16/14/12 | --- |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | **0.038** | 0.041 | --- |

# OIL ANALYSIS REPORT

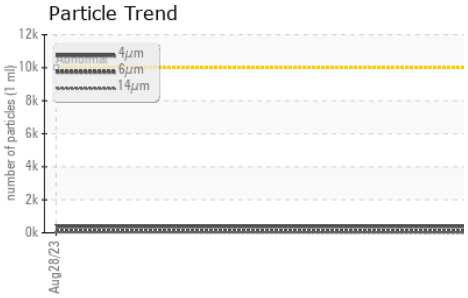
Particle Count




Particle Trend

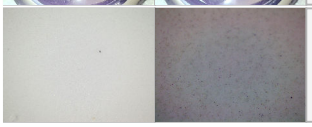

Viscosity @ 40°C


Particle Trend



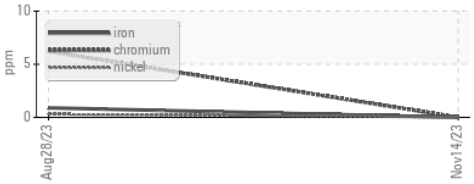

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Silt | 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 | >0.05 | **NEG** | NEG | --- |
| Free Water | scalar | *Visual | | **NEG** | NEG | --- |

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | | **10.9** | 10.8 | --- |

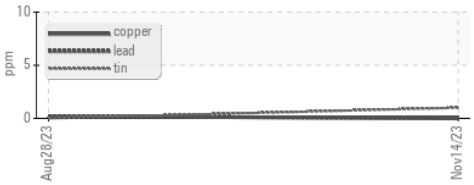
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  | | *no image* |
| Bottom | | |  | | *no image* |
| PrtFilter | | |  | | *no image* |

GRAPHS

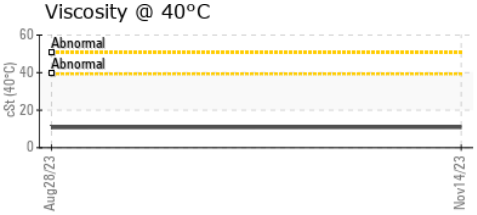
Ferrous Alloys




Non-ferrous Metals

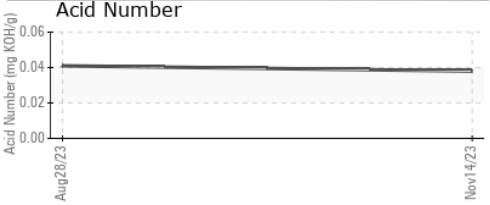



Viscosity @ 40°C




Particle Filter (Magn: 200 x)

Acid Number




**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : PH0002401 **Received** : 14 Nov 2023
**Lab Number** : 06007971 **Diagnosed** : 06 Dec 2023
**Unique Number** : 10741733 **Diagnostician** : Doug Bogart
**Test Package** : PLANT ( Additional Tests: PrtFilter )

Certificate L2367

*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)*

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