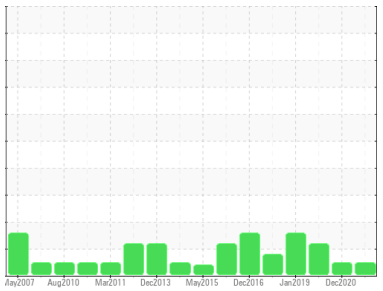
STAUFF FILTRATION TECHNOLOGY

# OIL ANALYSIS REPORT

Sample Rating Trend




NORMAL

Area
**Molding**
Machine Id
**PRESS 13 (S/N 61002716)**
Component
**Hydraulic System**
Fluid
**SHELL TELLUS S3 M 46 (91 GAL)**

## DIAGNOSIS

**Recommendation**
Resample at the next service interval to monitor.

**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.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **ST44363** | ST40916 | ST39979 |
| Sample Date | | Client Info | | **01 Dec 2022** | 09 Dec 2020 | 13 Feb 2020 |
| 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 | ABNORMAL |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >40 | **3** | 3 | 2 |
| Chromium | ppm | ASTM D5185m | >4 | **0** | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >20 | **0** | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Silver | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >4 | **0** | 0 | 0 |
| Lead | ppm | ASTM D5185m | >10 | **0** | 0 | 0 |
| Copper | ppm | ASTM D5185m | >60 | **<1** | <1 | <1 |
| Tin | ppm | ASTM D5185m | >4 | **<1** | 0 | 0 |
| Antimony | ppm | ASTM D5185m | | **---** | 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 | 0 |
| Barium | ppm | ASTM D5185m | 3 | **0** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 0 | **0** | 0 | <1 |
| Manganese | ppm | ASTM D5185m | | **<1** | 0 | 0 |
| Magnesium | ppm | ASTM D5185m | 0 | **0** | 0 | 0 |
| Calcium | ppm | ASTM D5185m | 0 | **33** | 33 | 37 |
| Phosphorus | ppm | ASTM D5185m | 106 | **69** | 69 | 73 |
| Zinc | ppm | ASTM D5185m | 0 | **10** | 0 | 0 |
| Sulfur | ppm | ASTM D5185m | | **603** | 462 | 467 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >20 | **0** | <1 | <1 |
| Sodium | ppm | ASTM D5185m | | **<1** | 0 | 0 |
| Potassium | ppm | ASTM D5185m | >20 | **0** | 0 | 0 |
| Water | % | ASTM D6304 | >0.05 | **0.003** | 0.003 | 0.002 |
| ppm Water | ppm | ASTM D6304 | >500 | **28.6** | 35.6 | 21.1 |

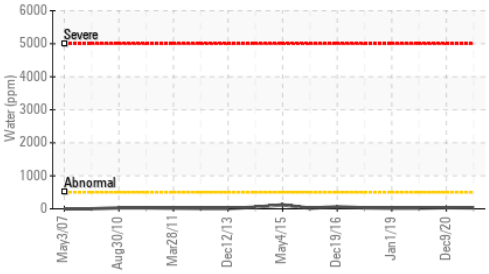
| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >640 | **331** | 108 | 325 |
| Particles >6µm | | ASTM D7647 | >80 | **53** | 39 | ▲ 177 |
| Particles >14µm | | ASTM D7647 | >10 | **7** | 5 | ▲ 51 |
| Particles >21µm | | ASTM D7647 | >3 | **2** | 2 | ▲ 7 |
| Particles >38µm | | ASTM D7647 | >3 | **1** | 0 | 0 |
| Particles >71µm | | ASTM D7647 | >3 | **0** | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >16/13/10 | **16/13/10** | 14/12/10 | ▲ 16/15/13 |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | **0.19** | 0.159 | 0.160 |

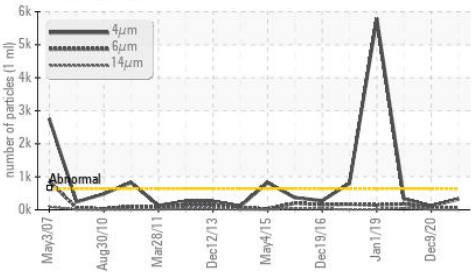
# OIL ANALYSIS REPORT

STAUFF FILTRATION TECHNOLOGY

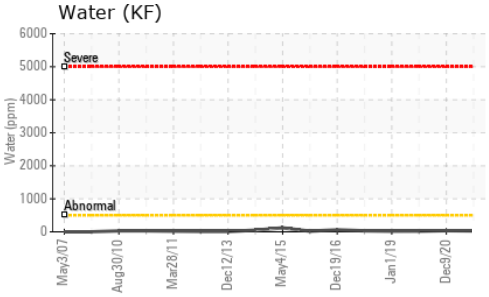
Water (KF)



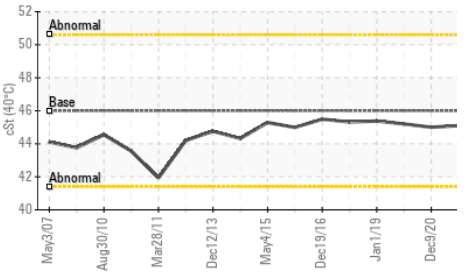

Particle Trend



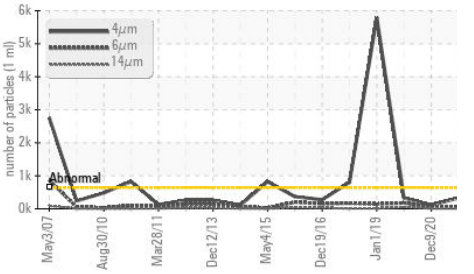

Water (KF)




Viscosity @ 40°C

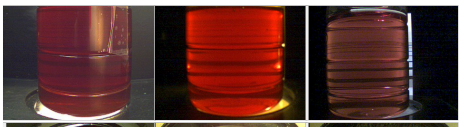
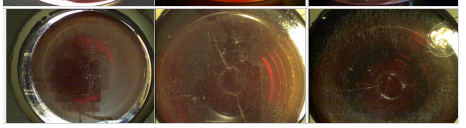



Particle Trend



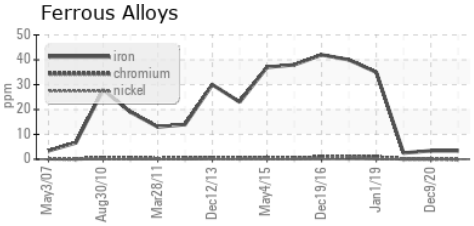

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| 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 | 46.0 | **45.1** | 45.0 | 45.2 |

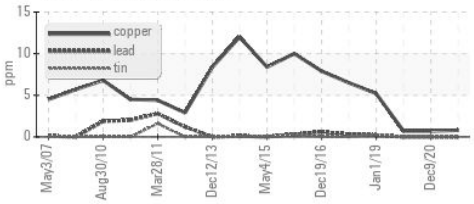
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  | | |
| Bottom | | |  | | |

## GRAPHS

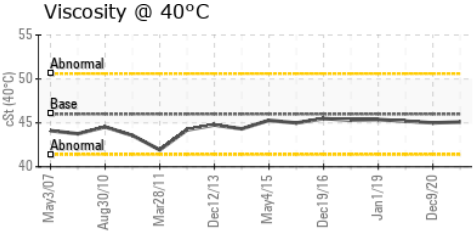
Ferrous Alloys



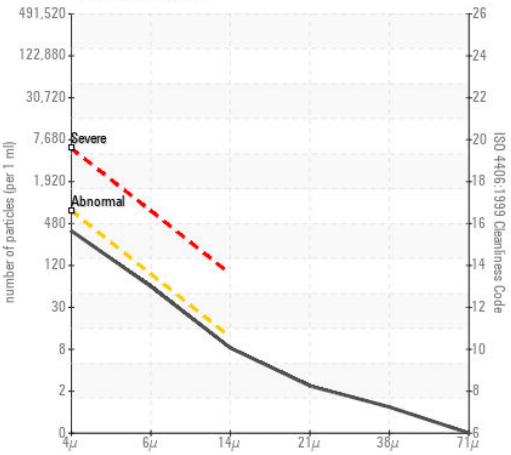

Non-ferrous Metals



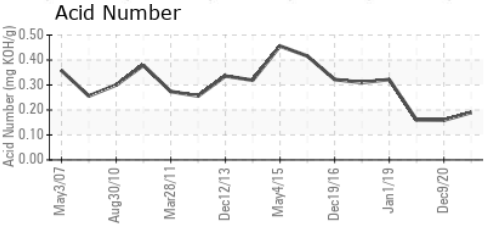

Viscosity @ 40°C




Particle Count




Acid Number




**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : ST44363
**Lab Number** : 05707093
**Unique Number** : 10241668
**Test Package** : IND 2 ( Additional Tests: KF )

**Received** : 02 Dec 2022
**Tested** : 05 Dec 2022
**Diagnosed** : 05 Dec 2022 - Doug Bogart

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)*

**MENSHEN PACKAGING USA INC.**
21 INDUSTRIAL PARK
WALDWICK, NJ
US 07463
Contact: Jonathan Vanbeekum
jonathan.vanbeekum@menshen.com
T:
F: