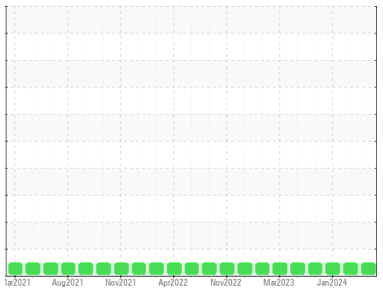
# OIL ANALYSIS REPORT

Sample Rating Trend




NORMAL

Area
**Pillen Family Farms**
Machine Id
**MILTK42**
Component
**Diesel Engine**
Fluid
**MOBIL DELVAC 1300 SUPER15W40 (--- 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.

**Fluid Condition**
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **SBP0006886** | SBP0006838 | SBP0006169 |
| Sample Date | | Client Info | | **30 Apr 2024** | 26 Feb 2024 | 12 Jan 2024 |
| Machine Age | hrs | Client Info | | **350** | 350 | 350 |
| Oil Age | hrs | Client Info | | **0** | 0 | 350 |
| Oil Changed | | Client Info | | **Not Changd** | Not Changd | Not Changd |
| Sample Status | | | | **NORMAL** | NORMAL | NORMAL |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Fuel | | WC Method | >5 | **<1.0** | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | **NEG** | NEG | NEG |
| Glycol | | WC Method | | **NEG** | NEG | NEG |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >100 | **11** | 9 | 6 |
| Chromium | ppm | ASTM D5185m | >20 | **0** | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >4 | **0** | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | **0** | 0 | <1 |
| Silver | ppm | ASTM D5185m | >3 | **0** | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | **<1** | 2 | 2 |
| Lead | ppm | ASTM D5185m | >40 | **<1** | <1 | 2 |
| Copper | ppm | ASTM D5185m | >330 | **0** | <1 | <1 |
| Tin | ppm | ASTM D5185m | >15 | **0** | 0 | <1 |
| 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 | **5** | 2 | 0 |
| Barium | ppm | ASTM D5185m | 0 | **0** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 0 | **55** | 55 | 61 |
| Manganese | ppm | ASTM D5185m | | **0** | 0 | <1 |
| Magnesium | ppm | ASTM D5185m | 0 | **940** | 963 | 918 |
| Calcium | ppm | ASTM D5185m | | **1099** | 1109 | 979 |
| Phosphorus | ppm | ASTM D5185m | | **1001** | 1067 | 985 |
| Zinc | ppm | ASTM D5185m | | **1268** | 1242 | 1173 |
| Sulfur | ppm | ASTM D5185m | | **3643** | 3301 | 2811 |

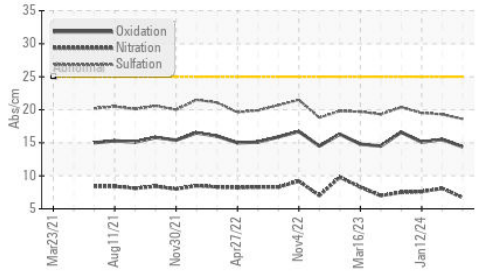
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >25 | **4** | 3 | 4 |
| Sodium | ppm | ASTM D5185m | | **2** | 2 | 3 |
| Potassium | ppm | ASTM D5185m | >20 | **<1** | 0 | 1 |

| INFRA-RED | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Soot % | % | *ASTM D7844 | >3 | **0.2** | 0.3 | 0.3 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | **6.7** | 8.1 | 7.6 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | **18.6** | 19.3 | 19.5 |

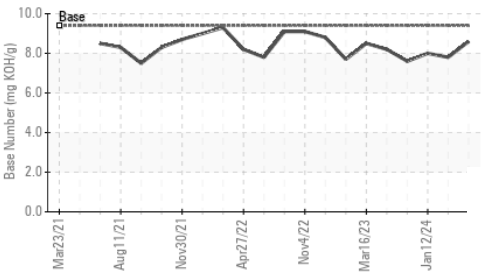
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | **14.4** | 15.5 | 15.1 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.4 | **8.6** | 7.8 | 8.0 |

# OIL ANALYSIS REPORT

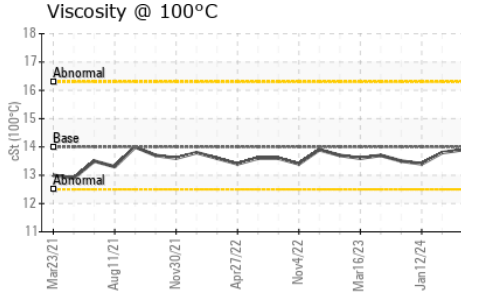
FT-IR (Direct Trend)




Base Number




Viscosity @ 100°C

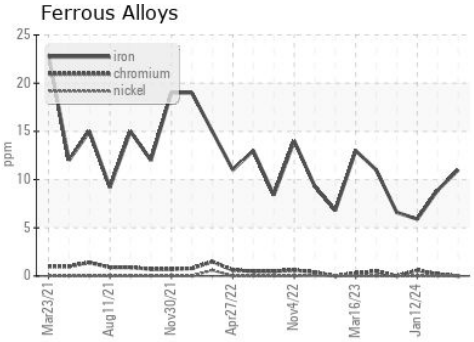



| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| 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 | >0.2 | **NEG** | NEG | NEG |
| Free Water | scalar | *Visual | | **NEG** | NEG | NEG |

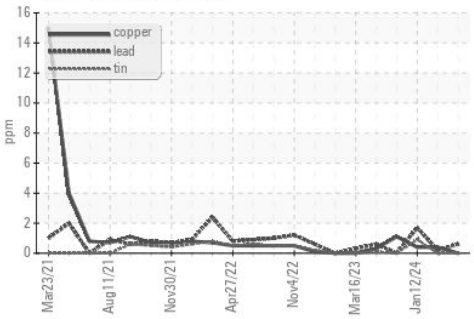
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 100°C | cSt | ASTM D445 | 14 | **13.9** | 13.8 | 13.4 |

## GRAPHS

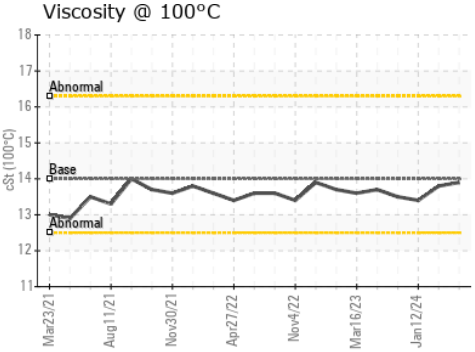
Ferrous Alloys



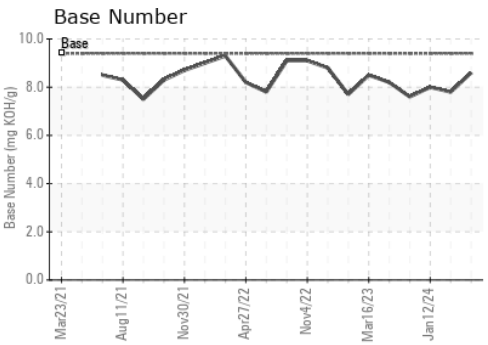

Non-ferrous Metals




Viscosity @ 100°C




Base Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : SBP0006886
**Lab Number** : 06178247
**Unique Number** : 11029573
**Test Package** : FLEET

**Received** : 13 May 2024
**Tested** : 14 May 2024
**Diagnosed** : 15 May 2024 - Sean Felton

*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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Report Id: PILHUM [WUSCAR] 06178247 (Generated: 05/15/2024 16:51:55) Rev: 1

Submitted By: JUSTIN HANSON