# OIL ANALYSIS REPORT

| | |
|---|---|
| WEAR | NORMAL |
| CONTAMINATION | ABNORMAL |
| FLUID CONDITION | NORMAL |

Machine Id
**846-5082**
Component
**Diesel Engine**
Fluid
**MOBIL DELVAC 1300 SUPER 15W40 (--- QTS)**

## RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor. Note that there appears to be a discrepancy in the total time on this component, when compared to the historical data.

## WEAR

All component wear rates are normal.

## CONTAMINATION

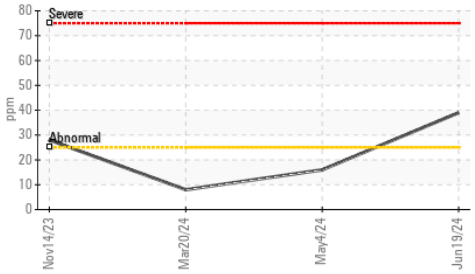
Elemental level of silicon (Si) above normal indicating ingress of dirt/seal material. Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components.

## FLUID CONDITION

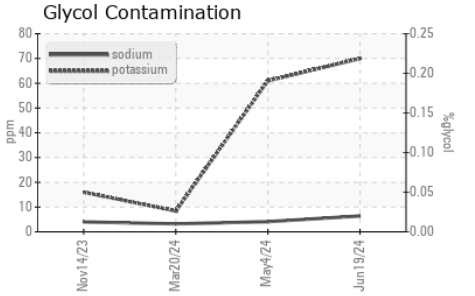
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | RPL0021998 | RPL0017527 | RPL0017514 |
| Sample Date | | Client Info | | 19 Jun 2024 | 04 May 2024 | 20 Mar 2024 |
| Machine Age | mls | Client Info | | 17619 | 54000 | 11860 |
| Oil Age | mls | Client Info | | 17619 | 54000 | 0 |
| Filter Age | mls | Client Info | | 17619 | 5000 | 0 |
| Oil Changed | | Client Info | | Not Changd | Not Changd | Not Changd |
| Filter Changed | | Client Info | | Changed | Not Changd | Not Changd |
| Sample Status | | | | ABNORMAL | ABNORMAL | NORMAL |
| Iron | ppm | ASTM D5185m | >100 | 58 | 39 | 7 |
| Chromium | ppm | ASTM D5185m | >20 | 2 | 4 | <1 |
| Nickel | ppm | ASTM D5185m | >4 | <1 | 3 | <1 |
| Titanium | ppm | ASTM D5185m | | <1 | 2 | <1 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 3 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 26 | 23 | 5 |
| Lead | ppm | ASTM D5185m | >40 | 0 | 16 | 1 |
| Copper | ppm | ASTM D5185m | >330 | 94 | 8 | 2 |
| Tin | ppm | ASTM D5185m | >15 | <1 | 5 | 1 |
| Vanadium | ppm | ASTM D5185m | | <1 | 2 | <1 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Silicon | ppm | ASTM D5185m | >25 | ▲ 39 | 16 | 8 |
| Potassium | ppm | ASTM D5185m | >20 | 70 | 61 | 8 |
| Fuel | | WC Method | >5 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | 0.2 | 0.2 | 0.2 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 11.8 | 12.3 | 7.6 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 27.0 | 27.0 | 22.1 |
| 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 |
| Sodium | ppm | ASTM D5185m | | 6 | 4 | 3 |
| Boron | ppm | ASTM D5185m | 0 | 146 | 31 | 48 |
| Barium | ppm | ASTM D5185m | 0 | 4 | 2 | <1 |
| Molybdenum | ppm | ASTM D5185m | 0 | 142 | 79 | 46 |
| Manganese | ppm | ASTM D5185m | | 6 | 4 | <1 |
| Magnesium | ppm | ASTM D5185m | 0 | 801 | 606 | 493 |
| Calcium | ppm | ASTM D5185m | | 1774 | 1567 | 1531 |
| Phosphorus | ppm | ASTM D5185m | | 747 | 771 | 754 |
| Zinc | ppm | ASTM D5185m | | 971 | 938 | 881 |
| Sulfur | ppm | ASTM D5185m | | 2477 | 2906 | 2710 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 28.1 | 32.7 | 19.9 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.4 | 5.1 | ▲ 3.1 | 8.2 |
| Visc @ 100°C | cSt | ASTM D445 | 14 | 12.8 | 12.9 | 12.8 |

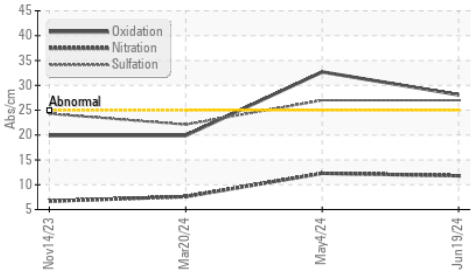
Silicon (ppm)



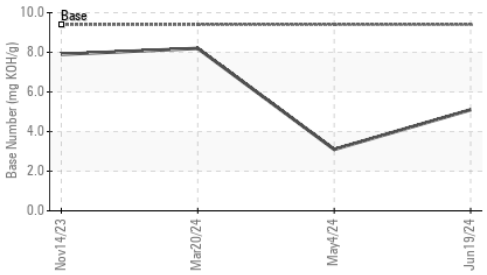

Glycol Contamination



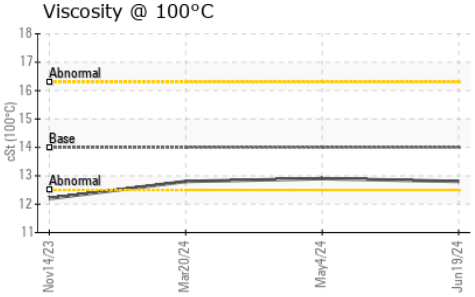

FT-IR (Direct Trend)



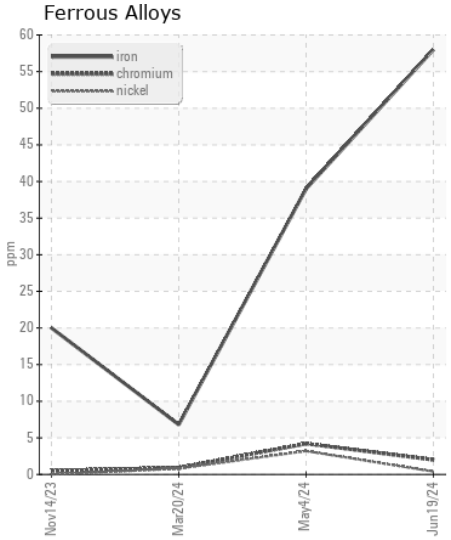

Base Number



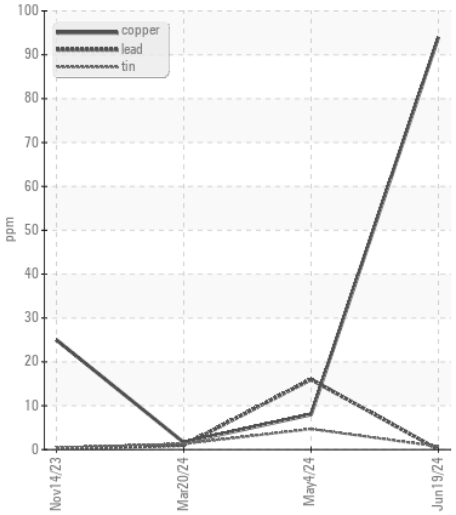

Viscosity @ 100°C



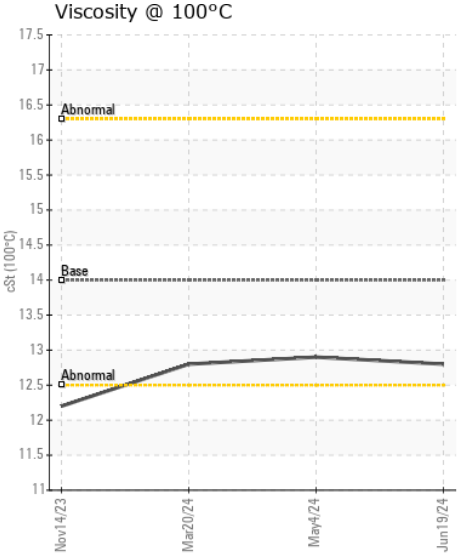

Ferrous Alloys



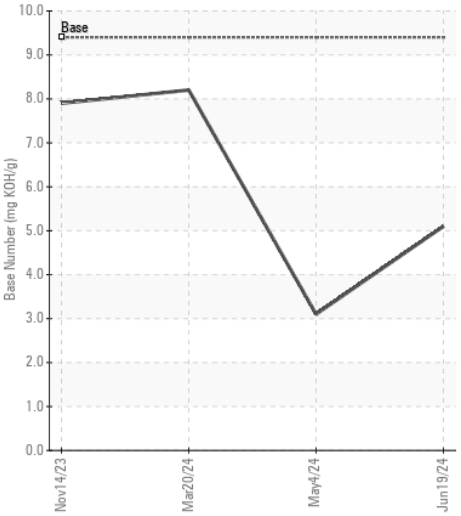

Non-ferrous Metals




Viscosity @ 100°C




Base Number




Certificate L2367

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|---|---|---|---|
| **Laboratory** | : WearCheck USA - 501 Madison Ave., Cary, NC 27513 | | |
| **Sample No.** | : RPL0021998 | **Received** | : 12 Jul 2024 |
| **Lab Number** | : 06234512 | **Tested** | : 12 Jul 2024 |
| **Unique Number** | : 11123346 | **Diagnosed** | : 15 Jul 2024 - Don Baldridge |
| **Test Package** | : FLEET | | |

*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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