# OIL ANALYSIS REPORT

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

Area
**[44583564]**
Machine Id
**PETERBILT 8574889**
Component
**Diesel Engine**
Fluid
**MOBIL DELVAC MX 15W40 (40 QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor.

## WEAR

Metal levels are typical for a new component breaking in.

## CONTAMINATION

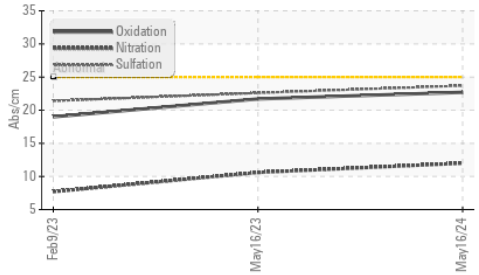
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

## FLUID CONDITION

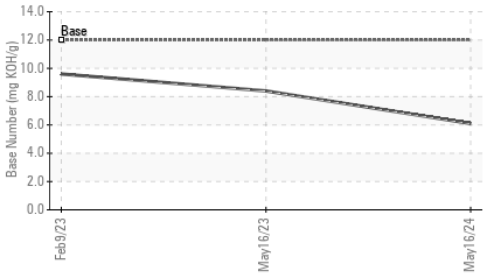
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | RPL0016490 | RPL0012156 | RPL0006717 |
| Sample Date | | Client Info | | 16 May 2024 | 16 May 2023 | 09 Feb 2023 |
| Machine Age | mls | Client Info | | 66517 | 27502 | 18194 |
| Oil Age | mls | Client Info | | 39015 | 27502 | 18194 |
| Filter Age | mls | Client Info | | 39015 | 27502 | 18194 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Filter Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |
| Iron | ppm | ASTM D5185m | >100 | 56 | 48 | 24 |
| Chromium | ppm | ASTM D5185m | >20 | 1 | <1 | 0 |
| Nickel | ppm | ASTM D5185m | >4 | <1 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >3 | 1 | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | >20 | 44 | 78 | 36 |
| Lead | ppm | ASTM D5185m | >40 | <1 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >330 | 5 | 6 | 3 |
| Tin | ppm | ASTM D5185m | >15 | 2 | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Silicon | ppm | ASTM D5185m | >25 | 13 | 10 | 8 |
| Potassium | ppm | ASTM D5185m | >20 | 107 | 167 | 79 |
| 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 | 0.3 | 0.2 | 0.1 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 12.0 | 10.6 | 7.7 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 23.7 | 22.6 | 21.4 |
| 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 | | 3 | 4 | <1 |
| Boron | ppm | ASTM D5185m | | 6 | 27 | 47 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 59 | 39 | 37 |
| Manganese | ppm | ASTM D5185m | | 1 | 1 | 1 |
| Magnesium | ppm | ASTM D5185m | | 708 | 593 | 559 |
| Calcium | ppm | ASTM D5185m | | 1622 | 1706 | 1589 |
| Phosphorus | ppm | ASTM D5185m | | 830 | 791 | 727 |
| Zinc | ppm | ASTM D5185m | | 1185 | 973 | 879 |
| Sulfur | ppm | ASTM D5185m | | 2844 | 3130 | 2712 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 22.7 | 21.7 | 19.0 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 12 | 6.1 | 8.4 | 9.6 |
| Visc @ 100°C | cSt | ASTM D445 | 14.4 | 13.9 | 13.2 | 13.0 |

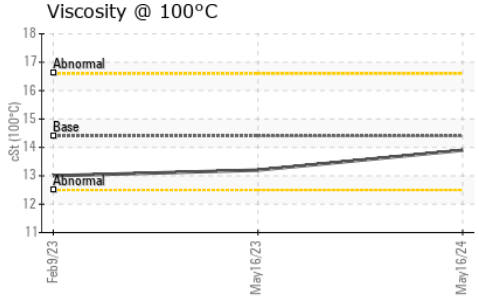
FT-IR (Direct Trend)



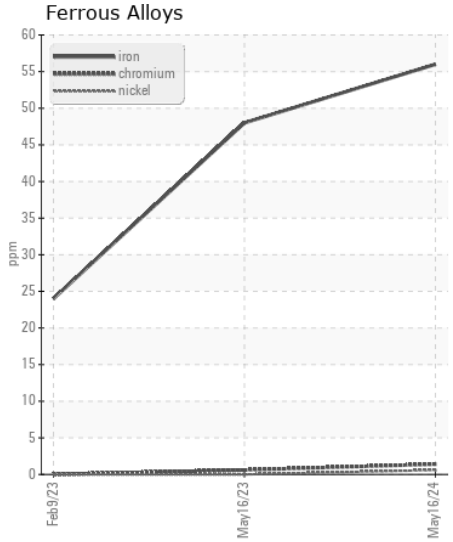

Base Number



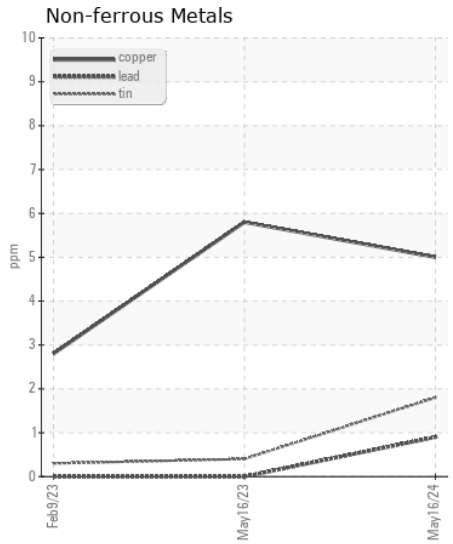

Viscosity @ 100°C



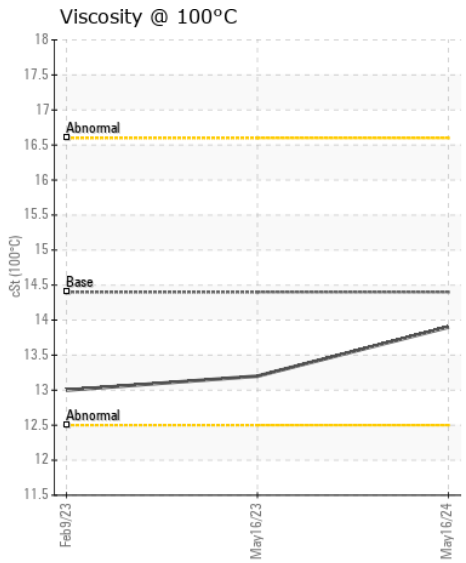

Ferrous Alloys



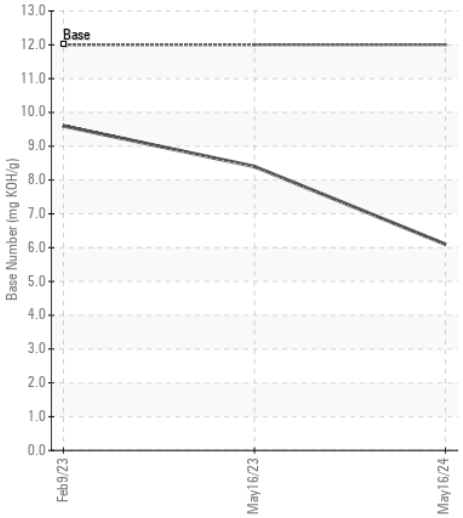

Non-ferrous Metals




Viscosity @ 100°C




Base Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : RPL0016490
**Lab Number** : 06190265
**Unique Number** : 11047017
**Test Package** : FLEET

**Received** : 24 May 2024
**Tested** : 25 May 2024
**Diagnosed** : 25 May 2024 - Wes Davis

*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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