CONST

WEAR CHECK

OIL ANALYSIS REPORT

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

Machine Id
# KENWORTH T880 T-896 (S/N 1NKZXPEX1PJ225385)
Component
## Diesel Engine
Fluid
## DIESEL ENGINE OIL SAE 15W40 (--- GAL)

## RECOMMENDATION

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

## WEAR

Metal levels are typical for a new component breaking in.

## CONTAMINATION

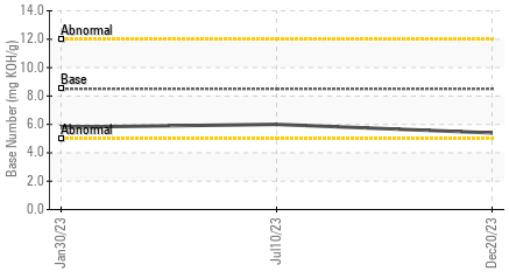
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

## FLUID CONDITION

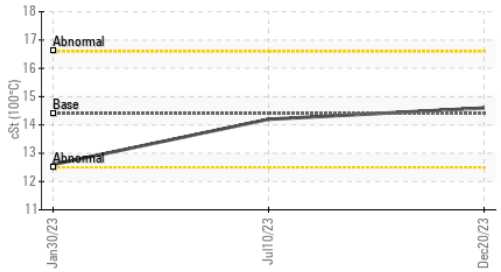
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **WC0804154** | WC0804125 | WC0546621 |
| Sample Date | | Client Info | | **20 Dec 2023** | 10 Jul 2023 | 30 Jan 2023 |
| Machine Age | mls | Client Info | | **74061** | 51360 | 0 |
| Oil Age | mls | Client Info | | **0** | 0 | 0 |
| Filter Age | mls | Client Info | | **0** | 0 | 0 |
| Oil Changed | | Client Info | | **Changed** | Changed | Changed |
| Filter Changed | | Client Info | | **Changed** | N/A | Changed |
| Sample Status | | | | **NORMAL** | NORMAL | NORMAL |
| Iron | ppm | ASTM D5185m | >100 | **34** | 49 | 76 |
| Chromium | ppm | ASTM D5185m | >20 | **<1** | <1 | 1 |
| Nickel | ppm | ASTM D5185m | >4 | **0** | <1 | <1 |
| Titanium | ppm | ASTM D5185m | | **<1** | <1 | <1 |
| Silver | ppm | ASTM D5185m | >3 | **<1** | <1 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | **27** | 28 | 29 |
| Lead | ppm | ASTM D5185m | >40 | **<1** | <1 | 1 |
| Copper | ppm | ASTM D5185m | >330 | **3** | 5 | 12 |
| Tin | ppm | ASTM D5185m | >15 | **1** | <1 | 2 |
| Vanadium | ppm | ASTM D5185m | | **<1** | <1 | <1 |
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Silicon | ppm | ASTM D5185m | >25 | **9** | 9 | 11 |
| Potassium | ppm | ASTM D5185m | >20 | **55** | 67 | 83 |
| 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 | **0.6** | 0.7 | 0.6 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | **9.8** | 10.7 | 11.6 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | **24.3** | 24.9 | 25.1 |
| 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 | >158 | **2** | 3 | 3 |
| Boron | ppm | ASTM D5185m | 250 | **<1** | 2 | 17 |
| Barium | ppm | ASTM D5185m | 10 | **<1** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 100 | **4** | 4 | 4 |
| Manganese | ppm | ASTM D5185m | | **<1** | 1 | 2 |
| Magnesium | ppm | ASTM D5185m | 450 | **62** | 108 | 446 |
| Calcium | ppm | ASTM D5185m | 3000 | **2290** | 2538 | 1715 |
| Phosphorus | ppm | ASTM D5185m | 1150 | **1038** | 985 | 766 |
| Zinc | ppm | ASTM D5185m | 1350 | **1144** | 1177 | 929 |
| Sulfur | ppm | ASTM D5185m | 4250 | **3601** | 4550 | 2977 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | **16.1** | 17.2 | 19.4 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 8.5 | **5.4** | 6.0 | 5.8 |
| Visc @ 100°C | cSt | ASTM D445 | 14.4 | **14.6** | 14.2 | 12.6 |

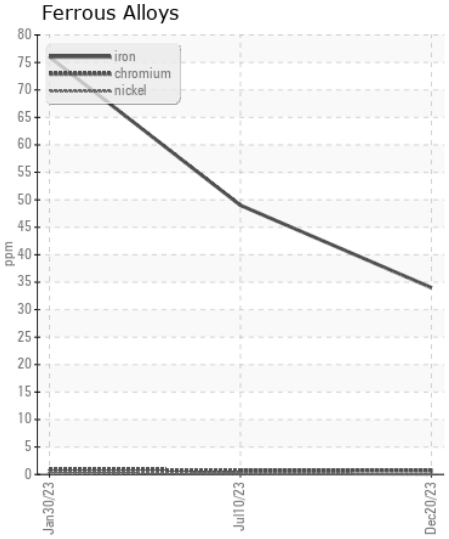
Base Number



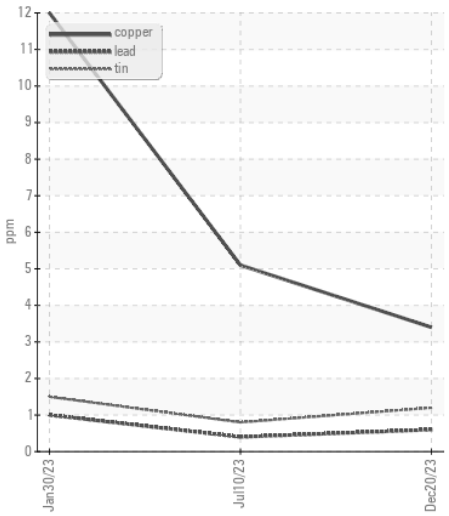

Viscosity @ 100°C



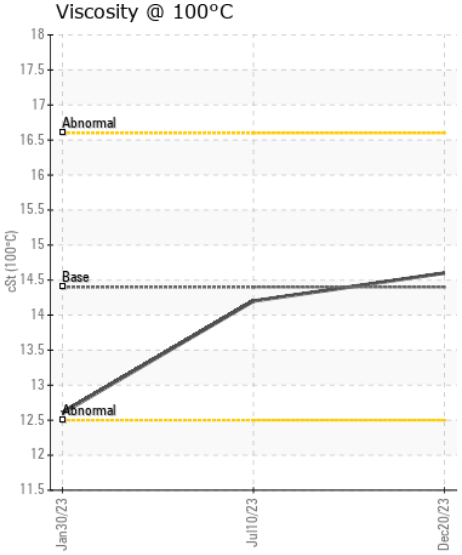

Ferrous Alloys



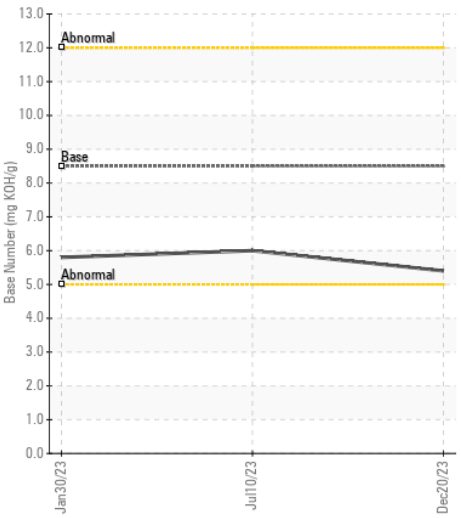

Non-ferrous Metals




Viscosity @ 100°C




Base Number




Certificate L2367

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|---|---|---|---|
| **Laboratory** | : WearCheck USA - 501 Madison Ave., Cary, NC 27513 | | |
| **Sample No.** | : WC0804154 | **Recieved** | : 16 Jan 2024 |
| **Lab Number** | : 06060571 | **Diagnosed** | : 16 Jan 2024 |
| **Unique Number** | : 10831953 | **Diagnostician** | : Wes Davis |
| **Test Package** | : CONST ( Additional Tests: TBN ) | | |

*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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