



OIL ANALYSIS REPORT

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

Machine Id
KENWORTH 3889
Component
Diesel Engine
Fluid
CHEVRON DELO 400 XLE 10W30 (--- QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | WC0882086 | WC0625647 | WC0515276 |
| Sample Date | | Client Info | | 02 Jan 2024 | 01 Mar 2023 | 09 Aug 2021 |
| Machine Age | mls | Client Info | | 380000 | 9500 | 243357 |
| Oil Age | mls | Client Info | | 89980 | 9500 | 47793 |
| Filter Age | mls | Client Info | | 89980 | 9500 | 47793 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Filter Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >100 | 24 | 14 | 16 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >4 | 2 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 6 | 6 | 8 |
| Lead | ppm | ASTM D5185m | >40 | 1 | 0 | 1 |
| Copper | ppm | ASTM D5185m | >330 | 21 | 8 | 10 |
| Tin | ppm | ASTM D5185m | >15 | 2 | <1 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| White Metal | scalar | *Visual | NONE | LIGHT | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

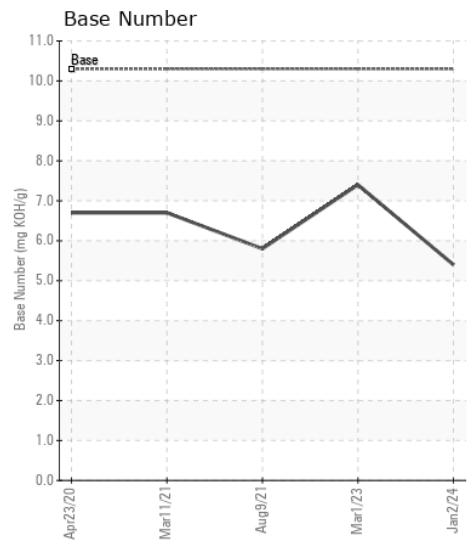
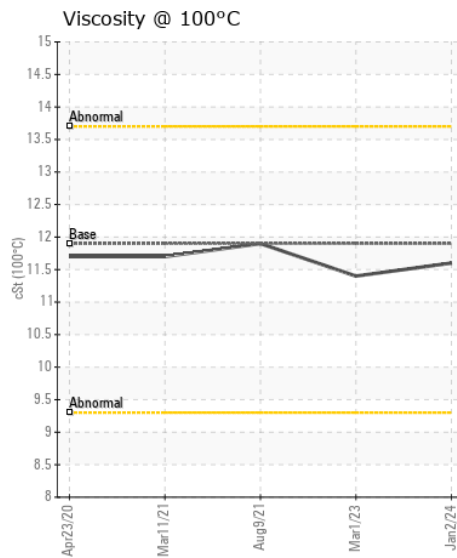
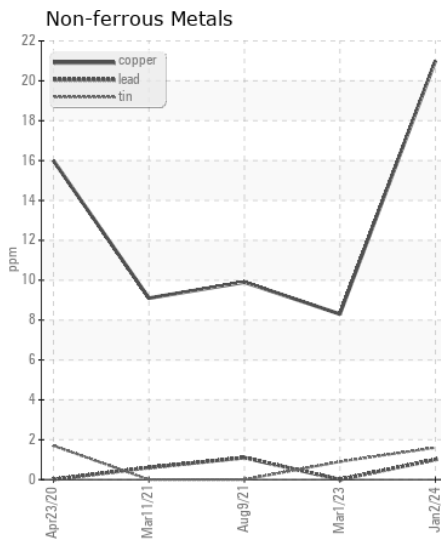
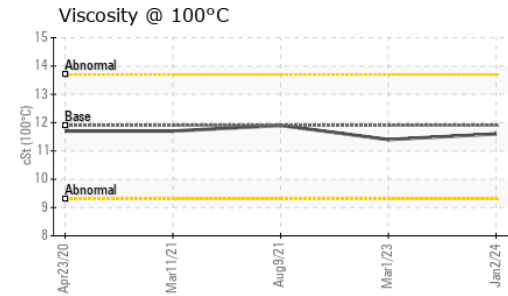
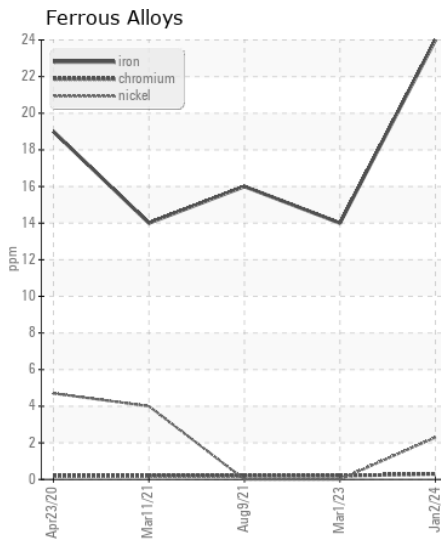
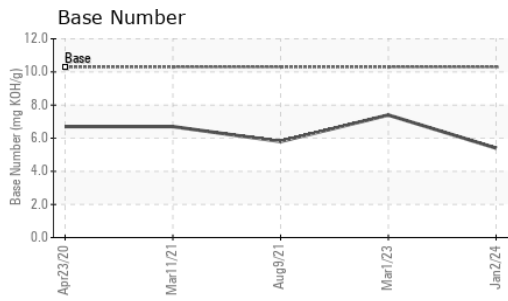
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >25 | 10 | 11 | 7 |
| Potassium | ppm | ASTM D5185m | >20 | 16 | 7 | 11 |
| 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 | 0.4 | 0.2 | 0.6 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 10.2 | 8.8 | 10.8 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 23.8 | 18.6 | 24.3 |
| 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 |

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.

| | | | | | | |
|------------------|----------|-------------|------|--------------|------|------|
| Sodium | ppm | ASTM D5185m | | 4 | 7 | 3 |
| Boron | ppm | ASTM D5185m | | 26 | 75 | 31 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 4 | 12 | 6 |
| Manganese | ppm | ASTM D5185m | | <1 | 1 | <1 |
| Magnesium | ppm | ASTM D5185m | | 726 | 723 | 754 |
| Calcium | ppm | ASTM D5185m | 2900 | 1297 | 1343 | 1577 |
| Phosphorus | ppm | ASTM D5185m | 1100 | 731 | 675 | 758 |
| Zinc | ppm | ASTM D5185m | 1200 | 838 | 806 | 863 |
| Sulfur | ppm | ASTM D5185m | 4000 | 2840 | 3430 | 2631 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 19.7 | 13.7 | 19.4 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 10.3 | 5.4 | 7.4 | 5.8 |
| Visc @ 100°C | cSt | ASTM D445 | 11.9 | 11.6 | 11.4 | 11.9 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0882086 **Received** : 11 Jan 2024
Lab Number : 06058653 **Diagnosed** : 14 Jan 2024
Unique Number : 10830035 **Diagnostician** : Don Baldrige
Test Package : FLEET

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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)