HUTCHENS RENTZ-EDEN

# OIL ANALYSIS REPORT

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

Machine Id
## PETERBILT 2420
Component
## Diesel Engine
Fluid
## DIESEL ENGINE OIL SAE 5W30 (44 QTS)

## RECOMMENDATION

No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

## WEAR

All component wear rates are normal.

## CONTAMINATION

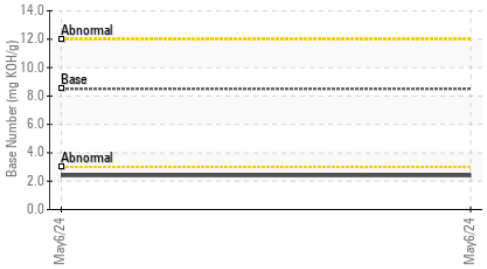
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. Elemental level of silicon (Si) above normal indicating ingress of seal material.

## FLUID CONDITION

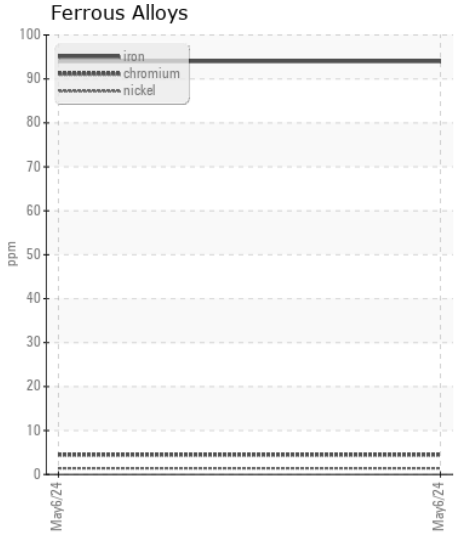
The BN level is low.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | HRE0000238 | --- | --- |
| Sample Date | | Client Info | | 06 May 2024 | --- | --- |
| Machine Age | mls | Client Info | | 112035 | --- | --- |
| Oil Age | mls | Client Info | | 50000 | --- | --- |
| Filter Age | mls | Client Info | | 50000 | --- | --- |
| Oil Changed | | Client Info | | Changed | --- | --- |
| Filter Changed | | Client Info | | Changed | --- | --- |
| Sample Status | | | | ABNORMAL | --- | --- |
| Iron | ppm | ASTM D5185m | >100 | 94 | --- | --- |
| Chromium | ppm | ASTM D5185m | >20 | 4 | --- | --- |
| Nickel | ppm | ASTM D5185m | >2 | 1 | --- | --- |
| Titanium | ppm | ASTM D5185m | >2 | <1 | --- | --- |
| Silver | ppm | ASTM D5185m | >2 | <1 | --- | --- |
| Aluminum | ppm | ASTM D5185m | >25 | 47 | --- | --- |
| Lead | ppm | ASTM D5185m | >40 | 11 | --- | --- |
| Copper | ppm | ASTM D5185m | >330 | 23 | --- | --- |
| Tin | ppm | ASTM D5185m | >15 | 6 | --- | --- |
| Vanadium | ppm | ASTM D5185m | | <1 | --- | --- |
| White Metal | scalar | *Visual | NONE | NONE | --- | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | --- | --- |
| Silicon | ppm | ASTM D5185m | >25 | ▲ 34 | --- | --- |
| Potassium | ppm | ASTM D5185m | >20 | 121 | --- | --- |
| Fuel | | WC Method | >5 | <1.0 | --- | --- |
| Water | | WC Method | >0.2 | NEG | --- | --- |
| Glycol | | WC Method | | NEG | --- | --- |
| Soot % | % | *ASTM D7844 | >3 | 0.6 | --- | --- |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 15.4 | --- | --- |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 30.8 | --- | --- |
| Silt | scalar | *Visual | NONE | NONE | --- | --- |
| Debris | scalar | *Visual | NONE | NONE | --- | --- |
| Sand/Dirt | scalar | *Visual | NONE | NONE | --- | --- |
| Appearance | scalar | *Visual | NORML | NORML | --- | --- |
| Odor | scalar | *Visual | NORML | NORML | --- | --- |
| Emulsified Water | scalar | *Visual | >0.2 | NEG | --- | --- |
| Sodium | ppm | ASTM D5185m | | 4 | --- | --- |
| Boron | ppm | ASTM D5185m | 250 | 24 | --- | --- |
| Barium | ppm | ASTM D5185m | 10 | 5 | --- | --- |
| Molybdenum | ppm | ASTM D5185m | 100 | 66 | --- | --- |
| Manganese | ppm | ASTM D5185m | | 6 | --- | --- |
| Magnesium | ppm | ASTM D5185m | 450 | 578 | --- | --- |
| Calcium | ppm | ASTM D5185m | 3000 | 1618 | --- | --- |
| Phosphorus | ppm | ASTM D5185m | 1150 | 1011 | --- | --- |
| Zinc | ppm | ASTM D5185m | 1350 | 1319 | --- | --- |
| Sulfur | ppm | ASTM D5185m | 4250 | 3046 | --- | --- |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 37.3 | --- | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 8.5 | ▲ 2.4 | --- | --- |
| Visc @ 100°C | cSt | ASTM D445 | 10.9 | 12.7 | --- | --- |

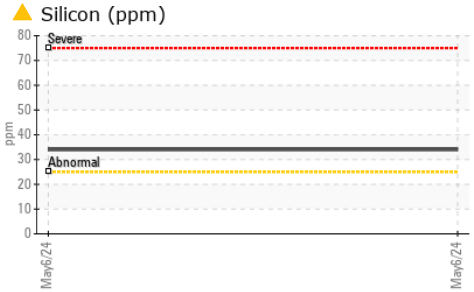
Base Number



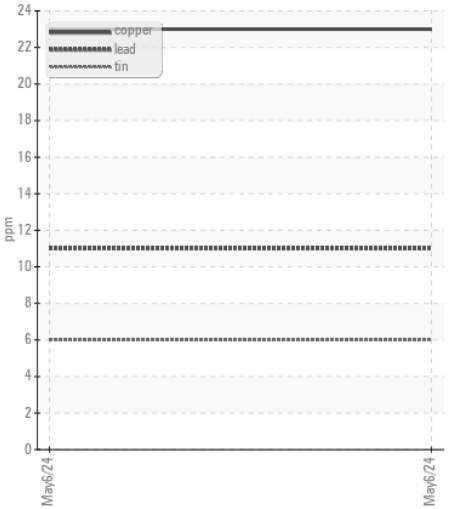

Ferrous Alloys



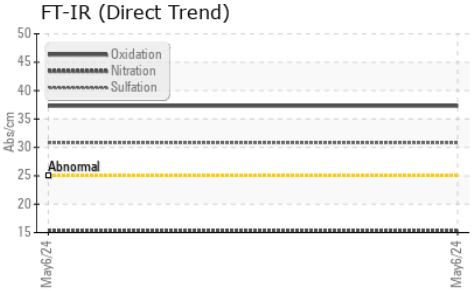

Silicon (ppm)



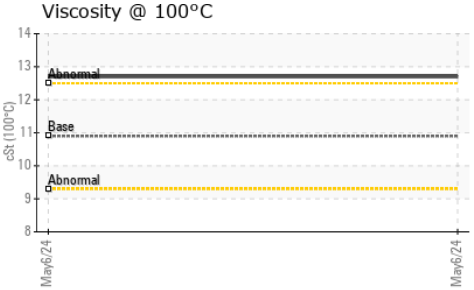

Non-ferrous Metals



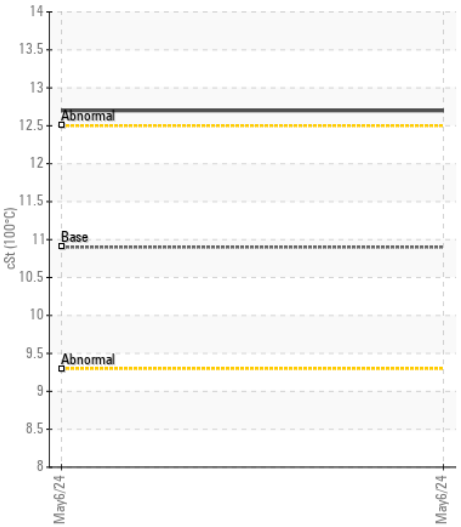

FT-IR (Direct Trend)



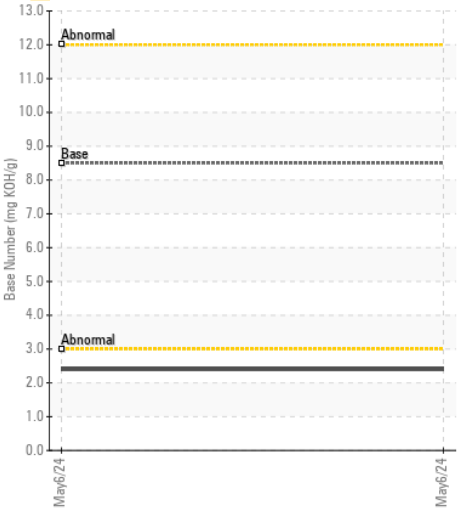

Viscosity @ 100°C



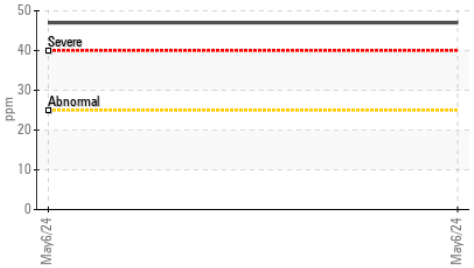

Viscosity @ 100°C




Base Number




Aluminum (ppm)





**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : HRE0000238
**Lab Number** : 06178146
**Unique Number** : 11029472
**Test Package** : FLEET
**Received** : 13 May 2024
**Tested** : 14 May 2024
**Diagnosed** : 15 May 2024 - Sean Felton

Certificate L2367


*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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