



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

Machine Id
441355
 Component
Diesel Engine
 Fluid
MOBIL DELVAC 1300 SUPER 15W40 (19 QTS)

RECOMMENDATION

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. (Customer Sample Comment: Hours=4789)

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | IL0033820 | IL0030463 | IL0026555 |
| Sample Date | | Client Info | | 22 Apr 2024 | 22 Aug 2023 | 20 Apr 2023 |
| Machine Age | mls | Client Info | | 121642 | 102762 | 91103 |
| Oil Age | mls | Client Info | | 91103 | 11659 | 73951 |
| Filter Age | mls | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | Changed | N/A | Changed |
| Filter Changed | | Client Info | | Changed | N/A | Changed |
| Sample Status | | | | ABNORMAL | SEVERE | ATTENTION |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|-------------|-------|------|
| Iron | ppm | ASTM D5185m | >100 | 13 | ▲ 280 | 11 |
| Chromium | ppm | ASTM D5185m | >20 | 1 | 3 | <1 |
| Nickel | ppm | ASTM D5185m | >4 | 0 | <1 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | >20 | 3 | ▲ 23 | 6 |
| Lead | ppm | ASTM D5185m | >40 | 0 | 2 | 0 |
| Copper | ppm | ASTM D5185m | >330 | 9 | 7 | 12 |
| Tin | ppm | ASTM D5185m | >15 | 0 | 1 | <1 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

Light fuel dilution occurring. No other contaminants were detected in the oil.

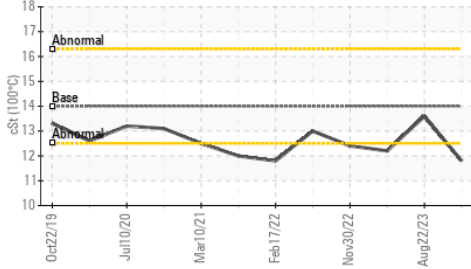
| | | | | | | |
|------------------|----------|-------------|-------|--------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >25 | 5 | 13 | 6 |
| Potassium | ppm | ASTM D5185m | >20 | 7 | 41 | 11 |
| Fuel | % | ASTM D3524 | >5 | ▲ 3.5 | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | 0.0 | NEG |
| Soot % | % | *ASTM D7844 | >3 | 0.3 | 1.6 | 0.3 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 9.4 | 14.1 | 8.3 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 19.7 | 25.1 | 17.8 |
| 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

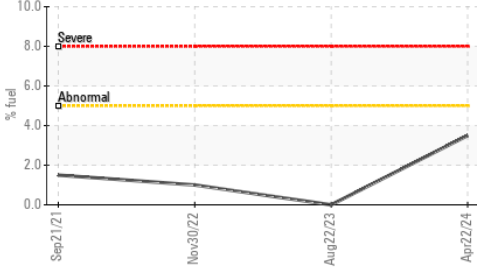
Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

| | | | | | | |
|------------------|----------|-------------|-----|---------------|------|--------|
| Sodium | ppm | ASTM D5185m | | <1 | 24 | 0 |
| Boron | ppm | ASTM D5185m | 0 | 4 | 4 | 7 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 0 | 63 | 66 | 61 |
| Manganese | ppm | ASTM D5185m | | 0 | 2 | <1 |
| Magnesium | ppm | ASTM D5185m | 0 | 931 | 991 | 936 |
| Calcium | ppm | ASTM D5185m | | 1095 | 1149 | 1146 |
| Phosphorus | ppm | ASTM D5185m | | 1060 | 1015 | 1036 |
| Zinc | ppm | ASTM D5185m | | 1255 | 1296 | 1279 |
| Sulfur | ppm | ASTM D5185m | | 3524 | 3244 | 3861 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 17.3 | 20.5 | 15.9 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.4 | 8.8 | 7.9 | 8.2 |
| Visc @ 100°C | cSt | ASTM D445 | 14 | ▲ 11.8 | 13.6 | ● 12.2 |

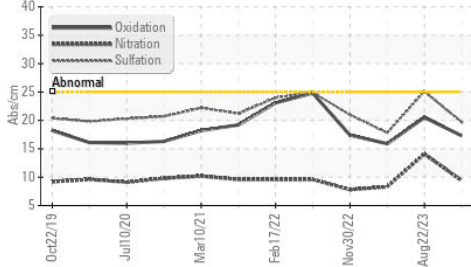
▲ Viscosity @ 100°C



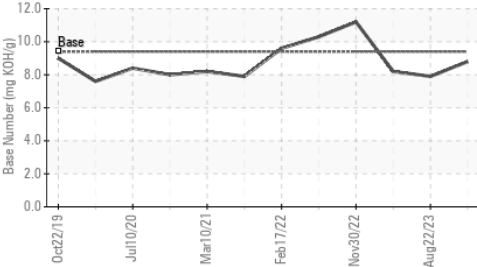
▲ Fuel Dilution



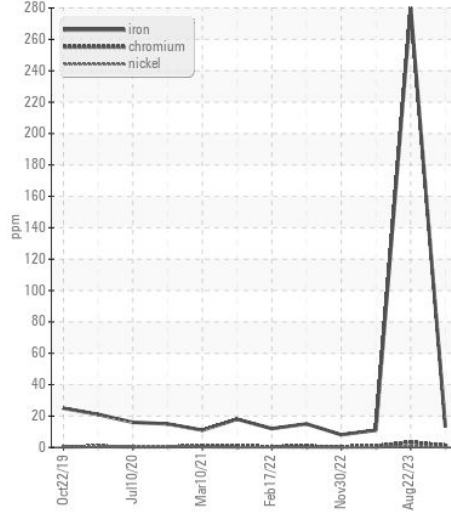
FT-IR (Direct Trend)



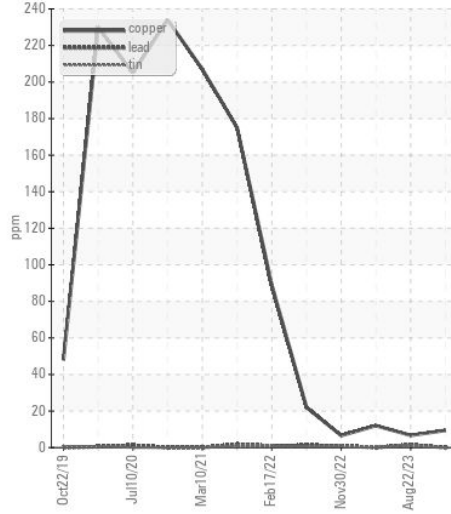
Base Number



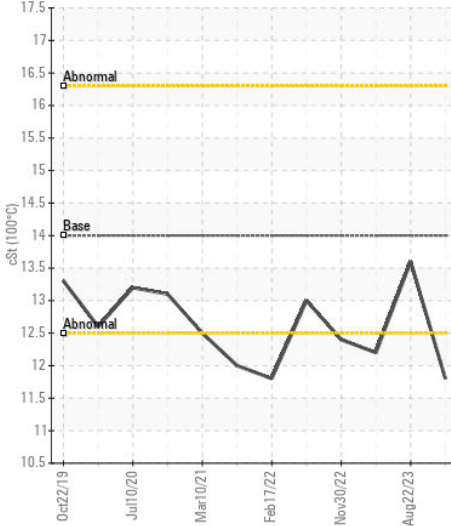
Ferrous Alloys



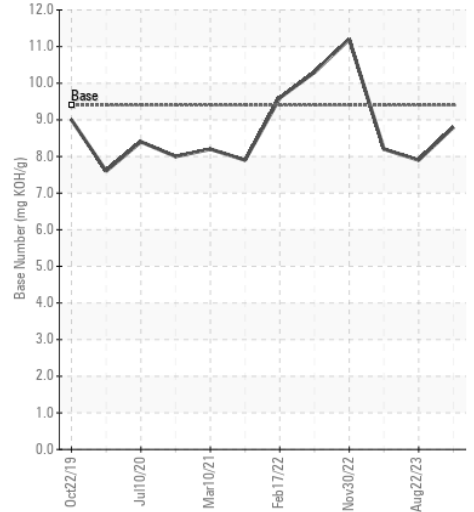
Non-ferrous Metals



▲ Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : IL0033820

Lab Number : 06235408

Unique Number : 11124242

Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

Received : 15 Jul 2024

Tested : 16 Jul 2024

Diagnosed : 16 Jul 2024 - Don Baldrige

RUSH TRUCK LEASING - CHARLOTTE IDEALEASE

1333 AMERON DR

CHARLOTTE, NC

US 28206

Contact: JERRY DIXON

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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)