# OIL ANALYSIS REPORT

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

Machine Id
**SZLG530319**
Component
**Diesel Engine**
Fluid
**DIESEL ENGINE OIL SAE 40 (--- GAL)**

## RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

## WEAR

All component wear rates are normal.

## CONTAMINATION

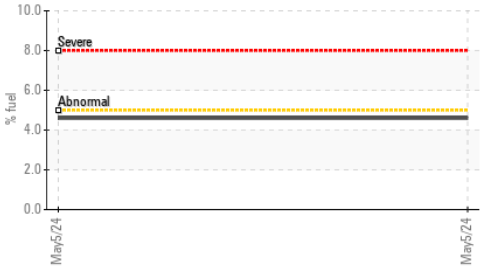
Light fuel dilution occurring. No other contaminants were detected in the oil.

## FLUID CONDITION

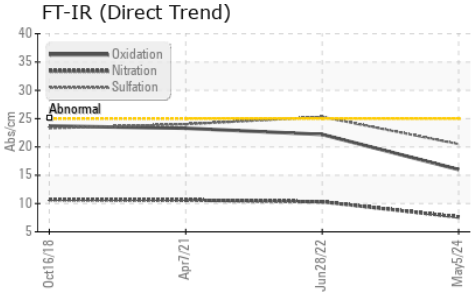
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **WC0910937** | WC0708222 | WC0552992 |
| Sample Date | | Client Info | | **05 May 2024** | 28 Jun 2022 | 07 Apr 2021 |
| Machine Age | hrs | Client Info | | **6063** | 4620 | 3119 |
| Oil Age | hrs | Client Info | | **0** | 0 | 0 |
| Filter Age | hrs | Client Info | | **0** | 0 | 0 |
| Oil Changed | | Client Info | | **N/A** | N/A | Changed |
| Filter Changed | | Client Info | | **N/A** | N/A | Changed |
| Sample Status | | | | **MARGINAL** | NORMAL | NORMAL |
| Iron | ppm | ASTM D5185m | >100 | **45** | 6 | 8 |
| Chromium | ppm | ASTM D5185m | >20 | **<1** | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >4 | **0** | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | **<1** | 0 | 0 |
| Silver | ppm | ASTM D5185m | >3 | **<1** | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | **7** | 3 | 1 |
| Lead | ppm | ASTM D5185m | >40 | **<1** | <1 | <1 |
| Copper | ppm | ASTM D5185m | >330 | **2** | 2 | 4 |
| Tin | ppm | ASTM D5185m | >15 | **<1** | 0 | <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 | **16** | 11 | 11 |
| Potassium | ppm | ASTM D5185m | >20 | **0** | 1 | <1 |
| Fuel | % | ASTM D3524 | >5 | ▲ **4.6** | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | **NEG** | NEG | NEG |
| Glycol | | WC Method | | **NEG** | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | **0.1** | 0.1 | 0.3 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | **7.6** | 10.3 | 10.6 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | **20.5** | 25.3 | 24 |
| 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 | >216 | **22** | 7 | 8 |
| Boron | ppm | ASTM D5185m | 250 | **318** | 266 | 256 |
| Barium | ppm | ASTM D5185m | 10 | **0** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 100 | **84** | 77 | 110 |
| Manganese | ppm | ASTM D5185m | | **<1** | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 450 | **474** | 372 | 463 |
| Calcium | ppm | ASTM D5185m | 3000 | **1517** | 1512 | 1493 |
| Phosphorus | ppm | ASTM D5185m | 1150 | **1035** | 963 | 768 |
| Zinc | ppm | ASTM D5185m | 1350 | **1254** | 1171 | 882 |
| Sulfur | ppm | ASTM D5185m | 4250 | **3703** | 3710 | 2262 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | **16.0** | 22.2 | 23.3 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 8.5 | **8.0** | 7.1 | 7.1 |
| Visc @ 100°C | cSt | ASTM D445 | 14.4 | **12.0** | 13.9 | 13.6 |

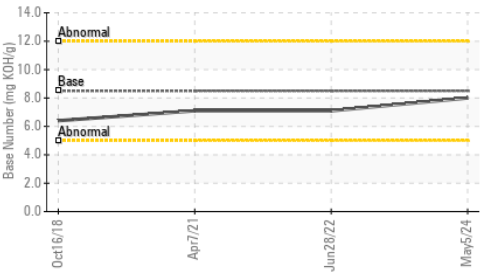
Fuel Dilution



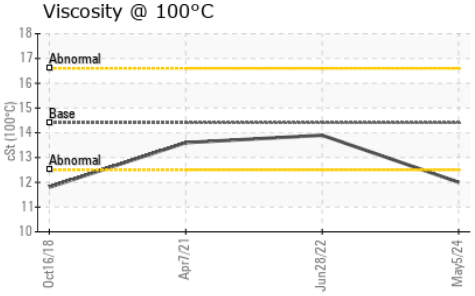

FT-IR (Direct Trend)



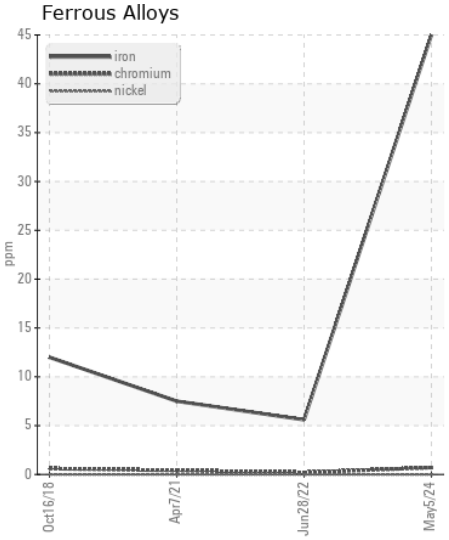

Base Number



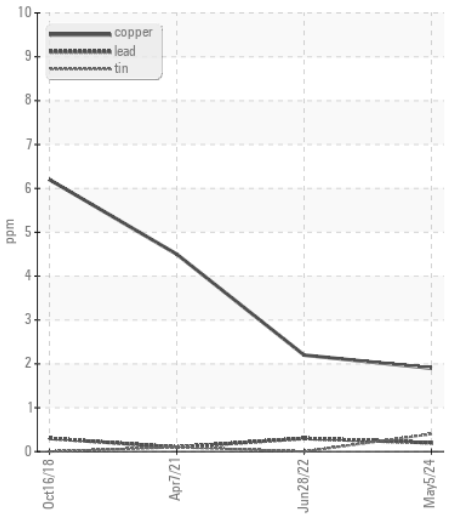

Viscosity @ 100°C



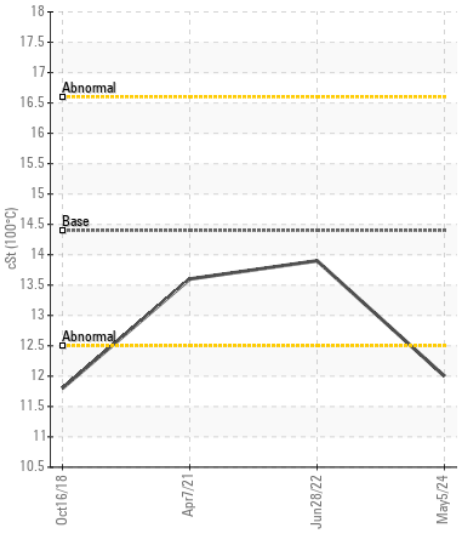

Ferrous Alloys



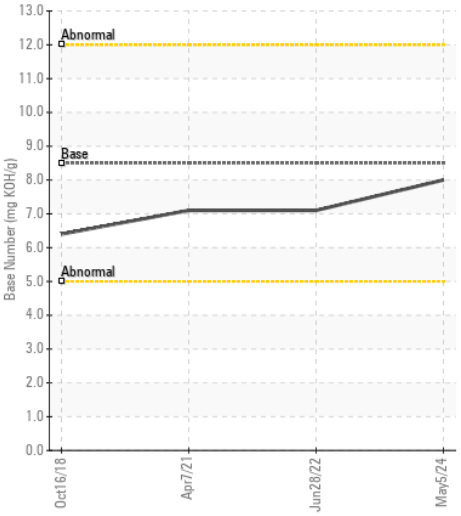

Non-ferrous Metals




Viscosity @ 100°C




Base Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : WC0910937 **Received** : 22 May 2024
**Lab Number** : 06188448 **Tested** : 28 May 2024
**Unique Number** : 11045200 **Diagnosed** : 28 May 2024 - Wes Davis
**Test Package** : FLEET ( Additional Tests: FuelDilution, PercentFuel )

*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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