# OIL ANALYSIS REPORT

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

Machine Id
## INTERNATIONAL 3556
Component
## Diesel Engine
Fluid
## DIESEL ENGINE OIL SAE 5W40 (18 QTS)

## RECOMMENDATION

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

## WEAR

All component wear rates are normal.

## CONTAMINATION

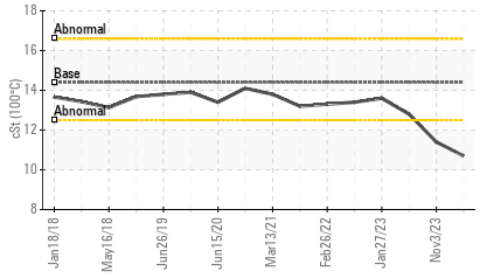
Light fuel dilution occurring.

## FLUID CONDITION

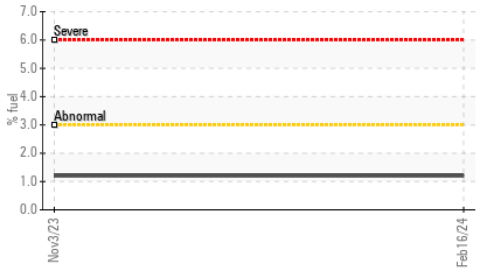
The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The condition of the oil is suitable for further service.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | WC0854007 | WC0854074 | WC0822875 |
| Sample Date | | Client Info | | 16 Feb 2024 | 03 Nov 2023 | 10 Jul 2023 |
| Machine Age | mls | Client Info | | 118199 | 113150 | 107737 |
| Oil Age | mls | Client Info | | 5009 | 5456 | 7796 |
| Filter Age | mls | Client Info | | 5009 | 5456 | 7796 |
| Oil Changed | | Client Info | | N/A | Changed | Changed |
| Filter Changed | | Client Info | | N/A | Changed | Changed |
| Sample Status | | | | ABNORMAL | ATTENTION | NORMAL |
| Iron | ppm | ASTM D5185m | >130 | 9 | 8 | 13 |
| Chromium | ppm | ASTM D5185m | >10 | <1 | 0 | <1 |
| Nickel | ppm | ASTM D5185m | >4 | <1 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | >2 | 0 | 0 | <1 |
| Silver | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 4 | 3 | 4 |
| Lead | ppm | ASTM D5185m | >20 | <1 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >125 | <1 | 0 | <1 |
| Tin | ppm | ASTM D5185m | >4 | <1 | <1 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Silicon | ppm | ASTM D5185m | >25 | 4 | 5 | 4 |
| Potassium | ppm | ASTM D5185m | >20 | 2 | 2 | 2 |
| Fuel | % | ASTM D3524 | >3.0 | ▲ 1.2 | 1.2 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >6 | 0.1 | 0.1 | 0.2 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 6.8 | 7.1 | 7.6 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 18.1 | 18.1 | 19.7 |
| 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 | >44 | 2 | 0 | 1 |
| Boron | ppm | ASTM D5185m | 250 | 5 | 16 | 101 |
| Barium | ppm | ASTM D5185m | 10 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 100 | 63 | 45 | 65 |
| Manganese | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Magnesium | ppm | ASTM D5185m | 450 | 1008 | 686 | 399 |
| Calcium | ppm | ASTM D5185m | 3000 | 1184 | 1455 | 1802 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 1135 | 1043 | 991 |
| Zinc | ppm | ASTM D5185m | 1350 | 1314 | 1279 | 1245 |
| Sulfur | ppm | ASTM D5185m | 4250 | 3549 | 3326 | 3824 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 14.5 | 13.4 | 16.3 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 8.5 | 8.8 | 8.0 | 7.6 |
| Visc @ 100°C | cSt | ASTM D445 | 14.4 | ▲ 10.7 | 11.4 | 12.8 |

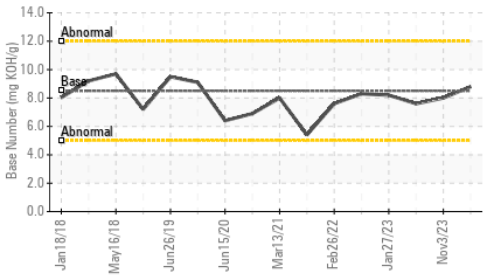
Viscosity @ 100°C



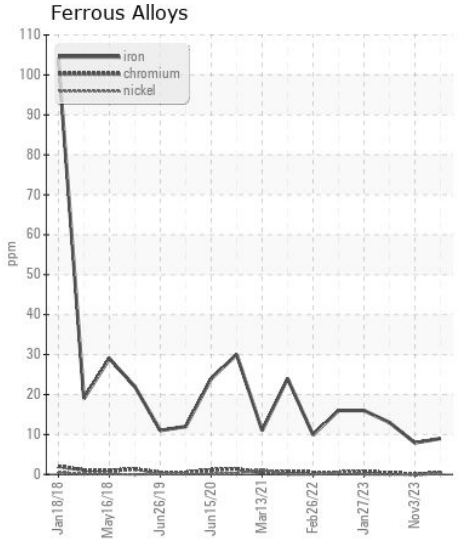

Fuel Dilution



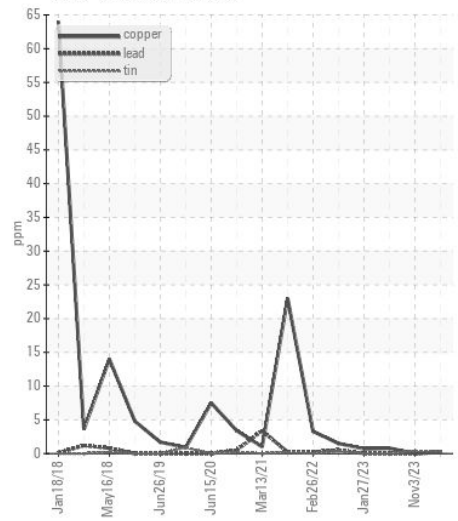

Base Number



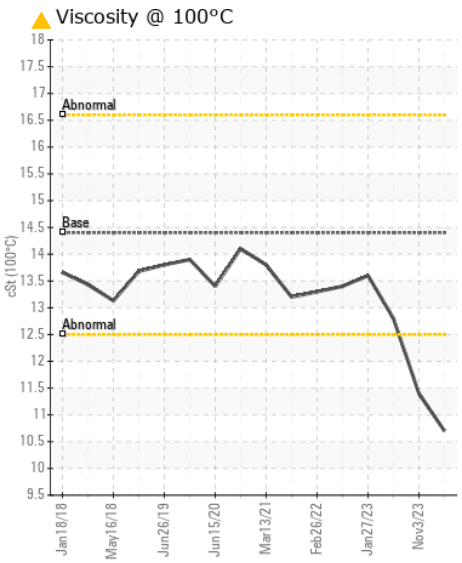

Ferrous Alloys




Non-ferrous Metals




Viscosity @ 100°C

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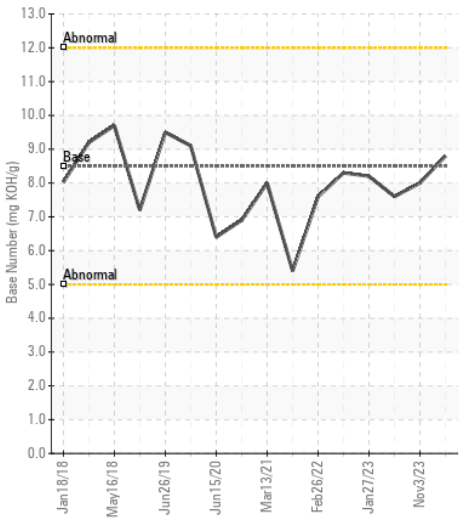


Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : WC0854007
**Lab Number** : 06121479
**Unique Number** : 10930312
**Test Package** : FLEET ( Additional Tests: FuelDilution, PercentFuel )

**Received** : 18 Mar 2024
**Tested** : 21 Mar 2024
**Diagnosed** : 21 Mar 2024 - Wes Davis

*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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