IDEALEASE FLEET

# OIL ANALYSIS REPORT

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

Machine Id
**8111493**
Component
**Diesel Engine**
Fluid
**VALVOLINE 15W40 (--- GAL)**

## RECOMMENDATION

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

## WEAR

All component wear rates are normal.

## CONTAMINATION

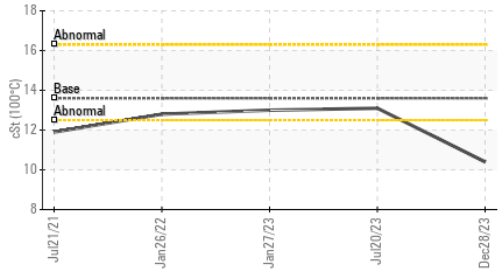
Fuel content negligible. Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components.

## FLUID CONDITION

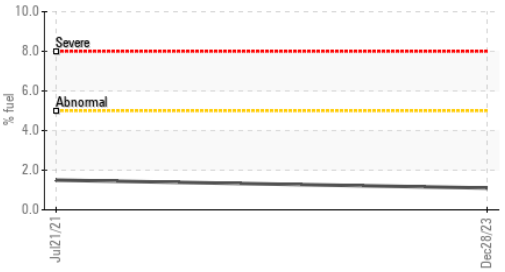
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **IL0034218** | IL05911779 | IL05758662 |
| Sample Date | | Client Info | | **28 Dec 2023** | 20 Jul 2023 | 27 Jan 2023 |
| Machine Age | mls | Client Info | | **241455** | 212133 | 175281 |
| Oil Age | mls | Client Info | | **0** | 0 | 0 |
| Filter Age | mls | Client Info | | **0** | 0 | 0 |
| Oil Changed | | Client Info | | **Changed** | N/A | N/A |
| Filter Changed | | Client Info | | **Changed** | N/A | N/A |
| Sample Status | | | | **ATTENTION** | NORMAL | NORMAL |
| Iron | ppm | ASTM D5185m | >100 | **21** | 19 | 24 |
| Chromium | ppm | ASTM D5185m | >20 | **1** | 2 | 2 |
| Nickel | ppm | ASTM D5185m | >4 | **0** | <1 | <1 |
| Titanium | ppm | ASTM D5185m | | **0** | <1 | <1 |
| Silver | ppm | ASTM D5185m | >3 | **0** | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | >20 | **5** | 6 | 4 |
| Lead | ppm | ASTM D5185m | >40 | **<1** | 3 | 3 |
| Copper | ppm | ASTM D5185m | >330 | **1** | 2 | 2 |
| 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 |
| Silicon | ppm | ASTM D5185m | >25 | **7** | 7 | 7 |
| Potassium | ppm | ASTM D5185m | >20 | **7** | 6 | 6 |
| Fuel | % | ASTM D3524 | >5 | **1.1** | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | **NEG** | NEG | NEG |
| Glycol | | WC Method | | **NEG** | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | **0.5** | 0.5 | 0.7 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | **8.6** | 11.1 | 10.7 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | **20.4** | 24.3 | 24.6 |
| 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 | | **3** | 3 | 3 |
| Boron | ppm | ASTM D5185m | 39 | **83** | 27 | 31 |
| Barium | ppm | ASTM D5185m | 1 | **0** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 49 | **123** | 69 | 71 |
| Manganese | ppm | ASTM D5185m | 1 | **0** | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 616 | **700** | 685 | 566 |
| Calcium | ppm | ASTM D5185m | 1554 | **1587** | 1356 | 1234 |
| Phosphorus | ppm | ASTM D5185m | 899 | **956** | 735 | 691 |
| Zinc | ppm | ASTM D5185m | 1069 | **1163** | 1001 | 888 |
| Sulfur | ppm | ASTM D5185m | 2624 | **3412** | 2664 | 2801 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | **15.2** | 21.8 | 20.8 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 6.9 | **5.5** | 5.2 | 4.8 |
| Visc @ 100°C | cSt | ASTM D445 | 13.6 | ▲ **10.4** | 13.1 | 13.0 |

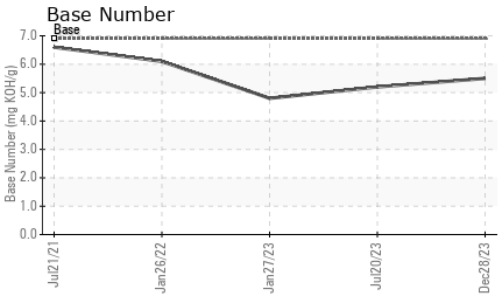
Viscosity @ 100°C



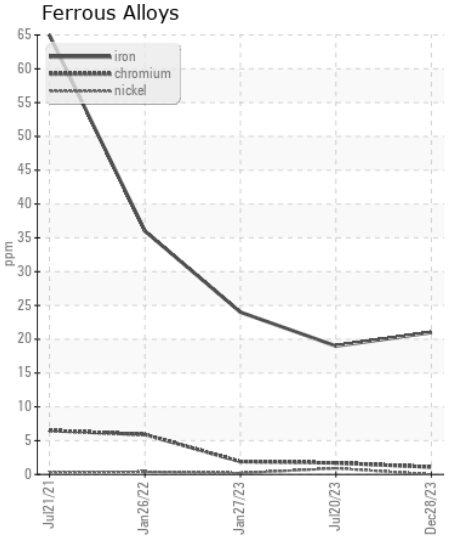

Fuel Dilution



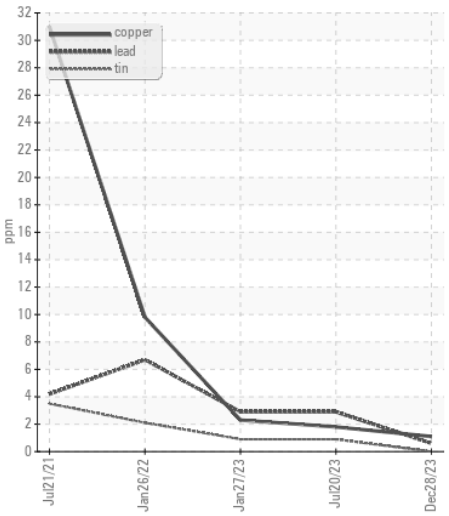

Base Number



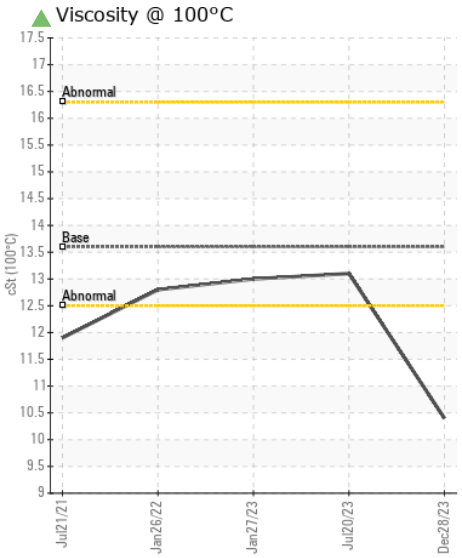

Ferrous Alloys



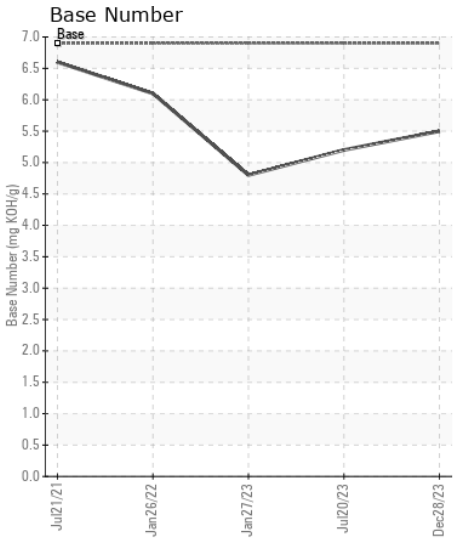

Non-ferrous Metals




Viscosity @ 100°C




Base Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : IL0034218 **Recieved** : 10 Jan 2024
**Lab Number** : 06057267 **Diagnosed** : 14 Jan 2024
**Unique Number** : 10823216 **Diagnostician** : Don Baldridge
**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)*

**TAMPA IDEALEASE**
5951 ORIENT ROAD
TAMPA, FL
US 33610-9565
Contact: Russ Cook
russcook@idealease.com
T: (813)626-9285
F: (844)270-1356