



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

Machine Id
INTERNATIONAL 5015855
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.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | IL0028404 | IL0033206 | IL05934654 |
| Sample Date | | Client Info | | 30 Jan 2024 | 30 Oct 2023 | 02 Aug 2023 |
| Machine Age | mls | Client Info | | 289865 | 266465 | 244105 |
| 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 | ATTENTION | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >100 | 28 | 29 | 20 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | <1 | 0 |
| Nickel | ppm | ASTM D5185m | >4 | 0 | <1 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 4 | 4 | 8 |
| Lead | ppm | ASTM D5185m | >40 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >330 | <1 | 2 | 1 |
| Tin | ppm | ASTM D5185m | >15 | 0 | 0 | <1 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

There is no indication of any contamination in the oil.

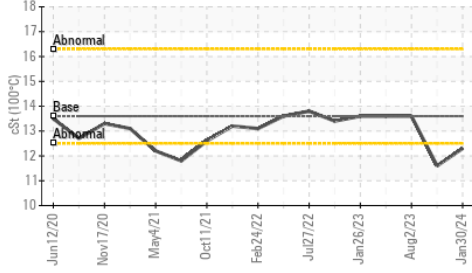
| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >25 | 5 | 6 | 5 |
| Potassium | ppm | ASTM D5185m | >20 | 5 | 5 | 8 |
| Fuel | % | ASTM D3524 | >5 | <1.0 | 0.6 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | 0.5 | 0.5 | 0.5 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 12.6 | 11.8 | 11.7 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 25.9 | 24.6 | 23.8 |
| 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

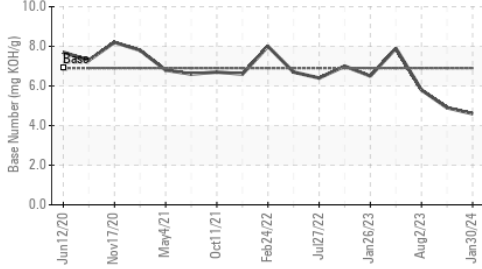
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

| | | | | | | |
|------------------|----------|-------------|------|---------------|--------|------|
| Sodium | ppm | ASTM D5185m | | <1 | 0 | 3 |
| Boron | ppm | ASTM D5185m | 39 | 35 | 26 | 46 |
| Barium | ppm | ASTM D5185m | 1 | 0 | <1 | 0 |
| Molybdenum | ppm | ASTM D5185m | 49 | 74 | 101 | 75 |
| Manganese | ppm | ASTM D5185m | 1 | 0 | 0 | <1 |
| Magnesium | ppm | ASTM D5185m | 616 | 623 | 637 | 694 |
| Calcium | ppm | ASTM D5185m | 1554 | 1397 | 1409 | 1520 |
| Phosphorus | ppm | ASTM D5185m | 899 | 837 | 792 | 900 |
| Zinc | ppm | ASTM D5185m | 1069 | 1059 | 1005 | 1155 |
| Sulfur | ppm | ASTM D5185m | 2624 | 2716 | 2843 | 3383 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 23.8 | 22.0 | 20.9 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 6.9 | 4.6 | 4.9 | 5.8 |
| Visc @ 100°C | cSt | ASTM D445 | 13.6 | ▲ 12.3 | ▲ 11.6 | 13.6 |

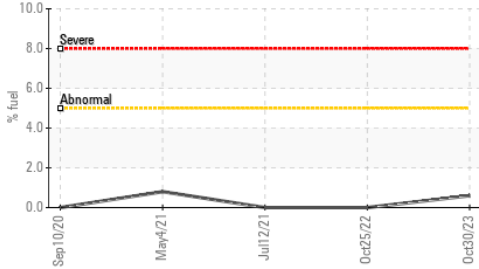
▲ Viscosity @ 100°C



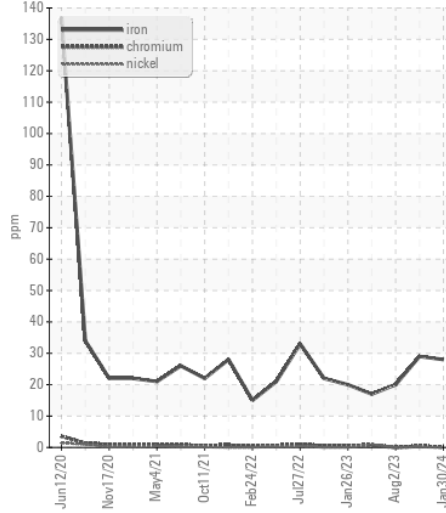
Base Number



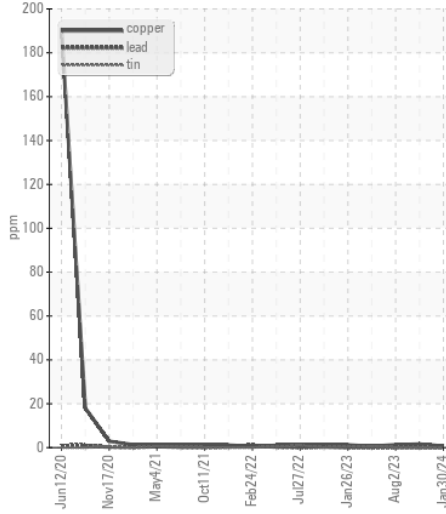
Fuel Dilution



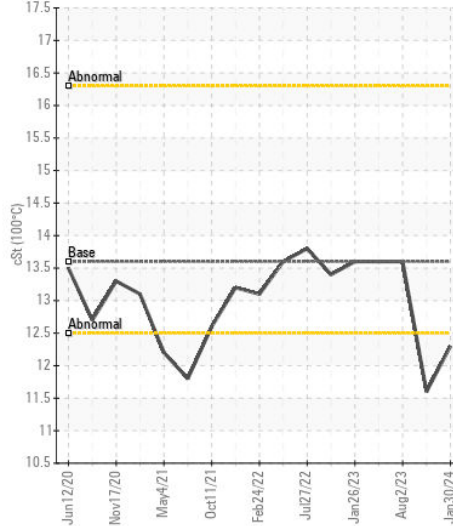
Ferrous Alloys



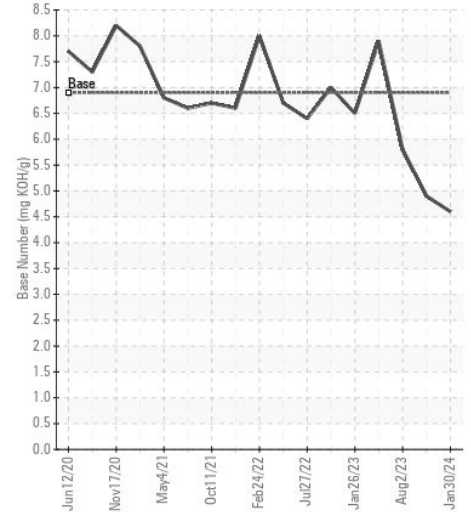
Non-ferrous Metals



▲ Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : IL0028404

Lab Number : 06084612

Unique Number : 10872057

Test Package : FLEET (Additional Tests: FuelDilution)

Received : 09 Feb 2024

Tested : 12 Feb 2024

Diagnosed : 12 Feb 2024 - Sean Felton

TAMPA IDEALEASE

5951 ORIENT ROAD

TAMPA, FL

US 33610-9565

Contact: Russ Cook

russcook@idealease.com

T: (813)626-9285

F: (844)270-1356

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)