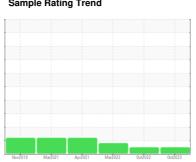


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



INTERNATIONAL 8026777

Component

Diesel Engine

VALVOLINE 15W40 (--- GAL)

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

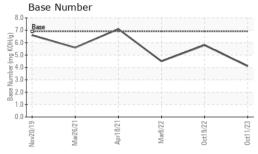
Fluid Condition

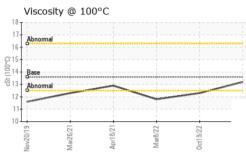
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| | | Nov2019 | Mar2021 Apr2021 | Mar2022 Oct2022 | 0ct2023 | |
|------------------|----------|-------------------|-----------------|-----------------|-------------|-------------|
| SAMPLE INFORM | MATION | method | limit/base | current | history1 | history2 |
| Sample Number | | Client Info | | IL0034272 | IL05679787 | IL05501786 |
| Sample Date | | Client Info | | 11 Oct 2023 | 19 Oct 2022 | 08 Mar 2022 |
| Machine Age | mls | Client Info | | 156978 | 115719 | 96948 |
| Oil Age | mls | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | Changed | N/A | N/A |
| Sample Status | | | | NORMAL | NORMAL | MARGINAL |
| CONTAMINATION | ١ | method | limit/base | current | history1 | history2 |
| Fuel | | WC Method | >5 | <1.0 | <1.0 | <u>2.6</u> |
| Glycol | | WC Method | | NEG | NEG | NEG |
| WEAR METALS | | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185m | >100 | 86 | 25 | 47 |
| Chromium | ppm | ASTM D5185m | >20 | 3 | 2 | 4 |
| Nickel | ppm | ASTM D5185m | >4 | <1 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | <1 | <1 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 16 | 6 | 17 |
| Lead | ppm | ASTM D5185m | >40 | 14 | 8 | 13 |
| Copper | ppm | ASTM D5185m | >330 | 3 | 2 | 3 |
| Tin | ppm | ASTM D5185m | >15 | 2 | 1 | 2 |
| Antimony | ppm | ASTM D5185m | | | | |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| Boron | ppm | ASTM D5185m | 39 | 13 | 21 | 15 |
| Barium | ppm | ASTM D5185m | 1 | <1 | <1 | 0 |
| Molybdenum | ppm | ASTM D5185m | 49 | 73 | 76 | 99 |
| Manganese | ppm | ASTM D5185m | 1 | <1 | <1 | 1 |
| Magnesium | ppm | ASTM D5185m | 616 | 750 | 685 | 711 |
| Calcium | ppm | ASTM D5185m | 1554 | 1275 | 1252 | 1416 |
| Phosphorus | ppm | ASTM D5185m | 899 | 747 | 671 | 782 |
| Zinc | ppm | ASTM D5185m | 1069 | 936 | 880 | 923 |
| Sulfur | ppm | ASTM D5185m | 2624 | 2665 | 2489 | 2097 |
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
| Silicon | ppm | ASTM D5185m | >25 | 8 | 5 | 6 |
| Sodium | ppm | ASTM D5185m | | 0 | <1 | 2 |
| Potassium | ppm | ASTM D5185m | >20 | 43 | 17 | 43 |
| INFRA-RED | | method | limit/base | current | history1 | history2 |
| Soot % | % | *ASTM D7844 | >3 | 1 | 0.5 | 0.7 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 13.7 | 12.7 | 13.3 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 28.4 | 25.3 | 27.8 |
| FLUID DEGRADA | TION | method | limit/base | current | history1 | history2 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 28.9 | 22.9 | 26.3 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 6.9 | 4.1 | 5.8 | 4.5 |



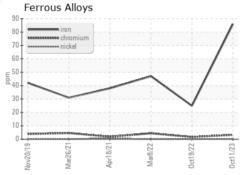
OIL ANALYSIS REPORT

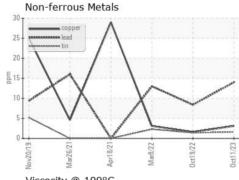


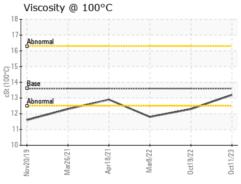


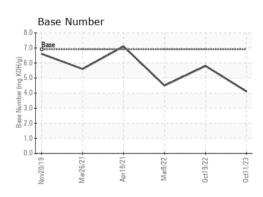
| VISUAL | | method | limit/base | current | history1 | history2 |
|-------------------------|--------|---------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE | NONE |
| 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 |
| Free Water | scalar | *Visual | | NEG | NEG | NEG |

| FLUID PROPER | TIES | method | ilmit/base | current | nistory i | nistory2 |
|--------------|------|-----------|------------|---------|-----------|----------|
| Visc @ 100°C | cSt | ASTM D445 | 13.6 | 13.2 | 12.3 | 11.8 |













Certificate L2367

Laboratory Sample No. Lab Number Unique Number : 10724832 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : IL0034272 : 05996472

Received Diagnosed

: 02 Nov 2023 : 03 Nov 2023

Diagnostician : Sean Felton

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

Contact/Location: Russ Cook - IDETAMFL