



WEAR CHECK

OIL ANALYSIS REPORT

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

Machine Id
58963
Component
Diesel Engine
Fluid
EXXON 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | WC0933293 | WC0903504 | WC0858301 |
| Sample Date | | Client Info | | 15 May 2024 | 12 Feb 2024 | 18 Nov 2023 |
| Machine Age | mls | Client Info | | 479190 | 465509 | 460617 |
| Oil Age | mls | Client Info | | 18573 | 4892 | 12179 |
| Filter Age | mls | Client Info | | 18573 | 4892 | 12179 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Filter Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >100 | 14 | 10 | 18 |
| 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 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 4 | 2 | 2 |
| Lead | ppm | ASTM D5185m | >40 | 0 | <1 | 6 |
| Copper | ppm | ASTM D5185m | >330 | <1 | <1 | <1 |
| Tin | ppm | ASTM D5185m | >15 | 0 | <1 | 0 |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| 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.

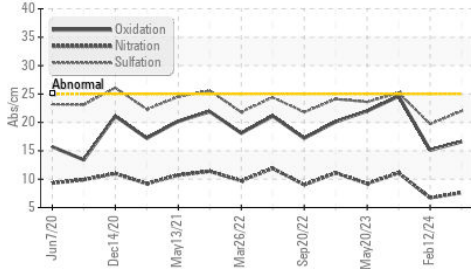
| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >25 | 4 | 4 | 5 |
| Potassium | ppm | ASTM D5185m | >20 | 3 | 1 | 3 |
| Fuel | | WC Method | >5 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | 0.4 | 0.2 | 0.5 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 7.6 | 6.7 | 11.1 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 22.0 | 19.7 | 25.2 |
| 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

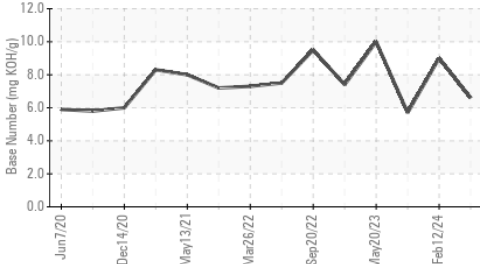
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| | | | | | | |
|------------------|----------|-------------|------|--------------|------|------|
| Sodium | ppm | ASTM D5185m | | 2 | 1 | 0 |
| Boron | ppm | ASTM D5185m | | 266 | 66 | 4 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 2 |
| Molybdenum | ppm | ASTM D5185m | | 85 | 70 | 63 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | 0 |
| Magnesium | ppm | ASTM D5185m | | 416 | 923 | 867 |
| Calcium | ppm | ASTM D5185m | | 1436 | 1171 | 1107 |
| Phosphorus | ppm | ASTM D5185m | | 1023 | 1156 | 922 |
| Zinc | ppm | ASTM D5185m | | 1245 | 1342 | 1162 |
| Sulfur | ppm | ASTM D5185m | | 3610 | 3489 | 3252 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 16.6 | 15.1 | 24.6 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | 6.6 | 9.0 | 5.7 |
| Visc @ 100°C | cSt | ASTM D445 | 14.4 | 13.2 | 13.4 | 12.6 |

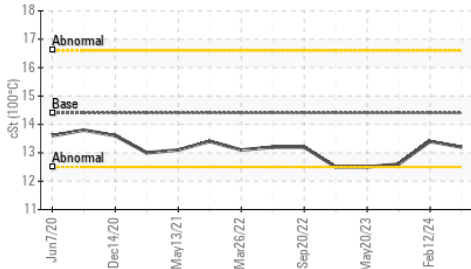
FT-IR (Direct Trend)



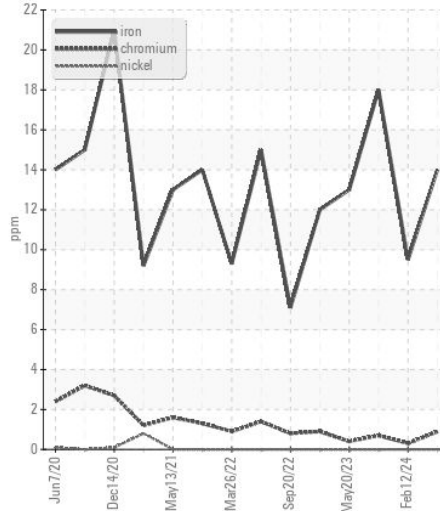
Base Number



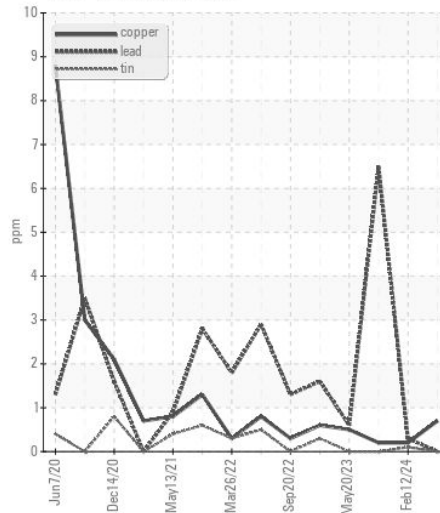
Viscosity @ 100°C



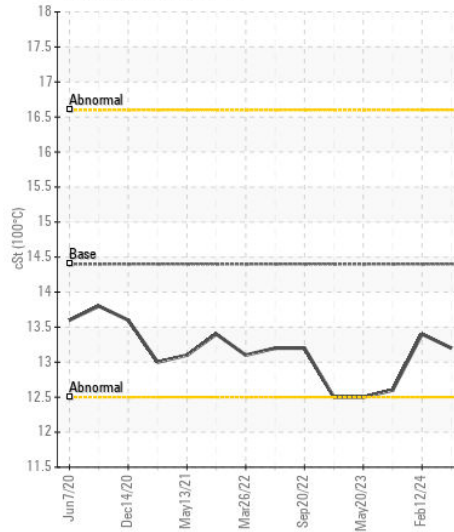
Ferrous Alloys



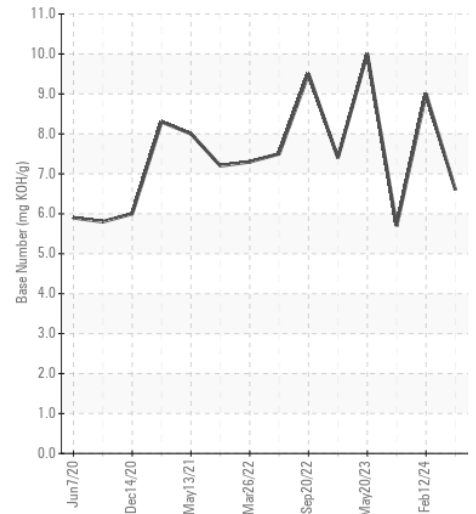
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : WC0933293

Lab Number : 06211117

Unique Number : 11083981

Test Package : FLEET

Received : 14 Jun 2024

Tested : 19 Jun 2024

Diagnosed : 19 Jun 2024 - Sean Felton

SALEM NATIONALEASE CORPORATION

198 PARK PLAZA DRIVE

WINSTON SALEM, NC

US 27105

Contact: Audrey Hopkins

Audrey.Hopkins@salemcorp.com

T: (336)767-9642

F: x:

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)