



WEAR CHECK

OIL ANALYSIS REPORT

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

Machine Id
263
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 40 (--- QTS)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | WC0719776 | WC0719773 | WCM1383974 |
| Sample Date | | Client Info | | 17 Jan 2024 | 08 May 2023 | 31 Jul 2020 |
| Machine Age | hrs | Client Info | | 2520 | 2425 | 1657 |
| Oil Age | hrs | Client Info | | 0 | 0 | 0 |
| Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | Changed | Changed | N/A |
| Filter Changed | | Client Info | | Changed | Changed | N/A |
| Sample Status | | | | ATTENTION | ABNORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|-------|------|
| Iron | ppm | ASTM D5185m | >100 | 9 | ▲ 124 | 60 |
| Chromium | ppm | ASTM D5185m | >20 | 0 | 3 | 1 |
| Nickel | ppm | ASTM D5185m | >4 | <1 | <1 | <1 |
| Titanium | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | >20 | 2 | 5 | 6 |
| Lead | ppm | ASTM D5185m | >40 | 1 | 0 | 1 |
| Copper | ppm | ASTM D5185m | >330 | 19 | 3 | 96 |
| Tin | ppm | ASTM D5185m | >15 | <1 | <1 | 2 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

Fuel content negligible. There is no indication of any contamination in the oil.

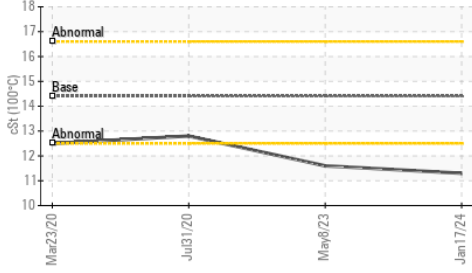
| | | | | | | |
|------------------|----------|-------------|-------|--------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >25 | 4 | 12 | 9 |
| Potassium | ppm | ASTM D5185m | >20 | <1 | 5 | 5 |
| Fuel | % | ASTM D3524 | >5 | 0.6 | ▲ 7.0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | 0.2 | 1 | 0.7 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 6.4 | 14.4 | 9.4 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 18.3 | 41.5 | 21.9 |
| 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

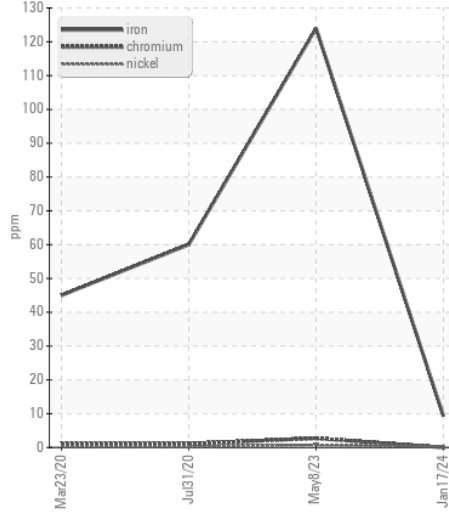
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

| | | | | | | |
|------------------|----------|-------------|------|---------------|--------|------|
| Sodium | ppm | ASTM D5185m | >216 | 1 | 9 | 1 |
| Boron | ppm | ASTM D5185m | 250 | 1 | <1 | 9 |
| Barium | ppm | ASTM D5185m | 10 | 0 | 0 | <1 |
| Molybdenum | ppm | ASTM D5185m | 100 | 31 | 90 | 9 |
| Manganese | ppm | ASTM D5185m | | <1 | 1 | 1 |
| Magnesium | ppm | ASTM D5185m | 450 | 17 | 20 | 43 |
| Calcium | ppm | ASTM D5185m | 3000 | 2502 | 3532 | 2279 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 978 | 1192 | 860 |
| Zinc | ppm | ASTM D5185m | 1350 | 1152 | 1455 | 1047 |
| Sulfur | ppm | ASTM D5185m | 4250 | 7308 | 14569 | 3069 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 11.5 | 32.7 | 13.5 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 8.5 | 7.7 | 5.7 | --- |
| Visc @ 100°C | cSt | ASTM D445 | 14.4 | ▲ 11.3 | ▲ 11.6 | 12.8 |

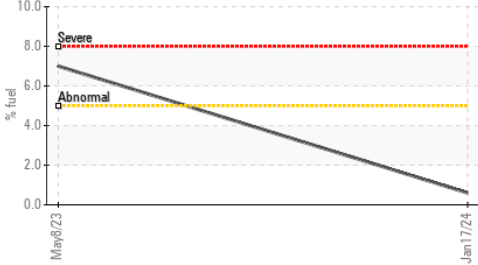
▲ Viscosity @ 100°C



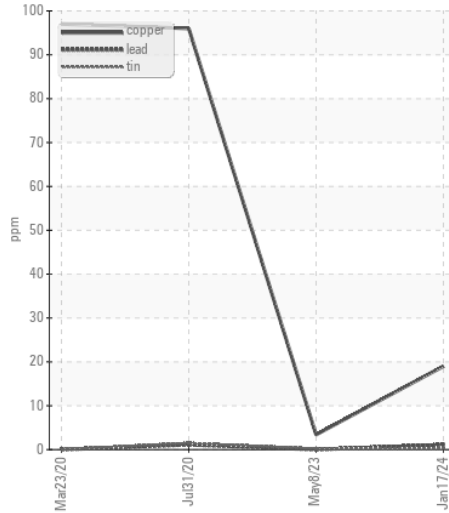
Ferrous Alloys



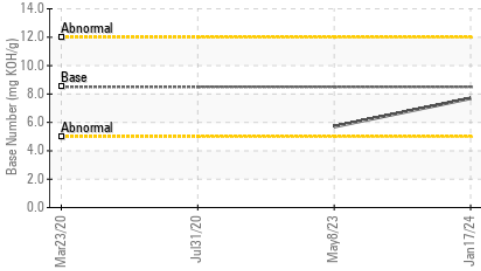
Fuel Dilution



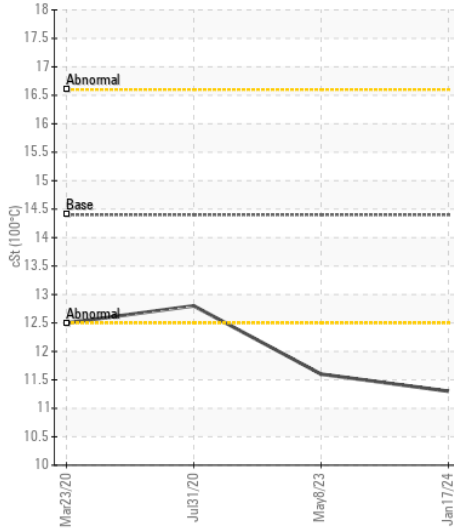
Non-ferrous Metals



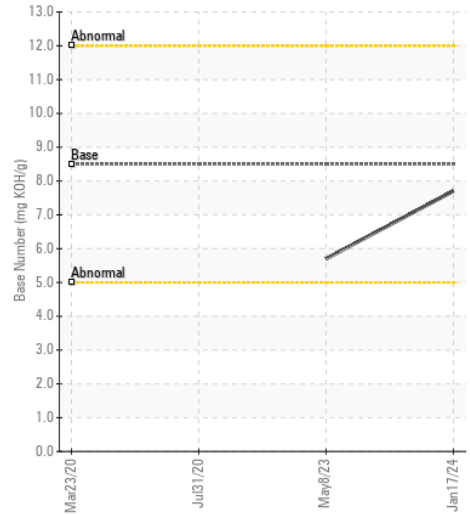
Base Number



▲ Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : WC0719776

Lab Number : 06087951

Unique Number : 10875396

Test Package : FLEET (Additional Tests: PercentFuel)

Received : 13 Feb 2024

Tested : 19 Feb 2024

Diagnosed : 19 Feb 2024 - Doug Bogart

ALMSTEAD TREE & SHRUB CARE CO

58 BEECHWOOD AVE

NEW ROCHELLE, NY

US 10801

Contact:

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)

T:

F: