



ASCENDUM

OIL ANALYSIS REPORT

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



Machine Id
VOLVO A45G 353072
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|-------------|-------------|-------------|
| Sample Number | | Client Info | | ASC0008751 | VCP423893 | VCP439643 |
| Sample Date | | Client Info | | 27 Mar 2024 | 07 Dec 2023 | 05 Oct 2023 |
| Machine Age | hrs | Client Info | | 5178 | 4693 | 4124 |
| Oil Age | hrs | Client Info | | 0 | 0 | 0 |
| Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Filter Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | NORMAL | NORMAL | ABNORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|------|------|------|
| Iron | ppm | ASTM D5185m | >100 | 10 | 15 | 28 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | <1 | 1 |
| Nickel | ppm | ASTM D5185m | >2 | 1 | 4 | ▲ 10 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >25 | 4 | 3 | 4 |
| Lead | ppm | ASTM D5185m | >40 | 0 | <1 | 1 |
| Copper | ppm | ASTM D5185m | >330 | 3 | 10 | 42 |
| 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

There is no indication of any contamination in the oil.

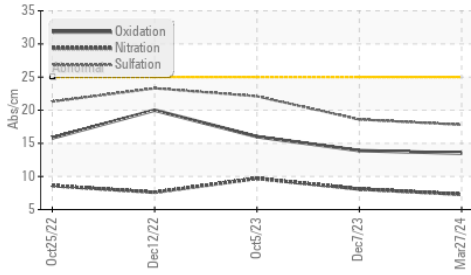
| | | | | | | |
|------------------|----------|-------------|-------|-------|-------|-------|
| Silicon | ppm | ASTM D5185m | >25 | 5 | 4 | 6 |
| Potassium | ppm | ASTM D5185m | >20 | <1 | 0 | <1 |
| Fuel | | WC Method | >6.0 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | 0.5 | 0.7 | 1.2 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 7.3 | 8.1 | 9.7 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 17.8 | 18.6 | 22.1 |
| 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

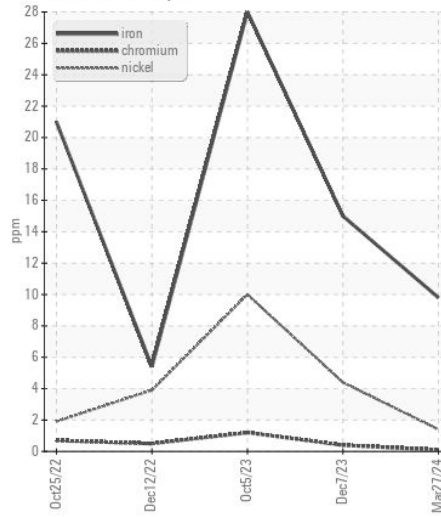
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| | | | | | | |
|------------------|----------|-------------|------|------|------|------|
| Sodium | ppm | ASTM D5185m | >216 | 2 | 1 | 1 |
| Boron | ppm | ASTM D5185m | 250 | 6 | 3 | 5 |
| Barium | ppm | ASTM D5185m | 10 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 100 | 63 | 58 | 62 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | 1 |
| Magnesium | ppm | ASTM D5185m | 450 | 918 | 1053 | 945 |
| Calcium | ppm | ASTM D5185m | 3000 | 1056 | 1201 | 1092 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 1038 | 1116 | 916 |
| Zinc | ppm | ASTM D5185m | 1350 | 1208 | 1282 | 1239 |
| Sulfur | ppm | ASTM D5185m | 4250 | 3515 | 3404 | 2619 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 13.5 | 13.9 | 16.0 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 8.5 | 9.5 | 7.5 | 5.4 |
| Visc @ 100°C | cSt | ASTM D445 | 14.4 | 12.7 | 12.6 | 12.8 |

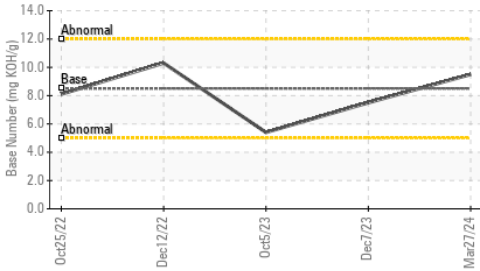
FT-IR (Direct Trend)



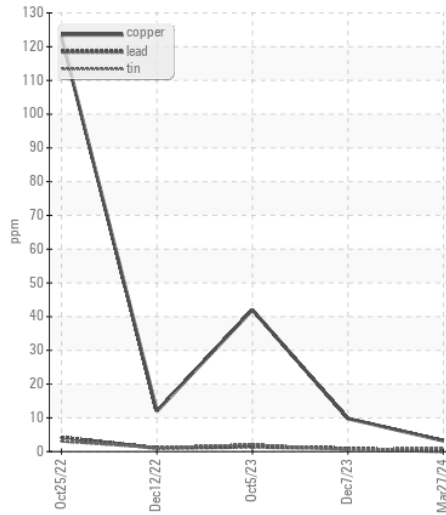
Ferrous Alloys



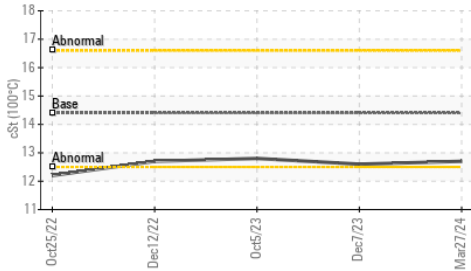
Base Number



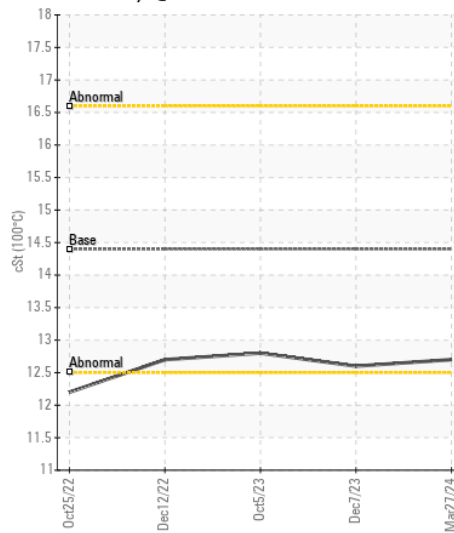
Non-ferrous Metals



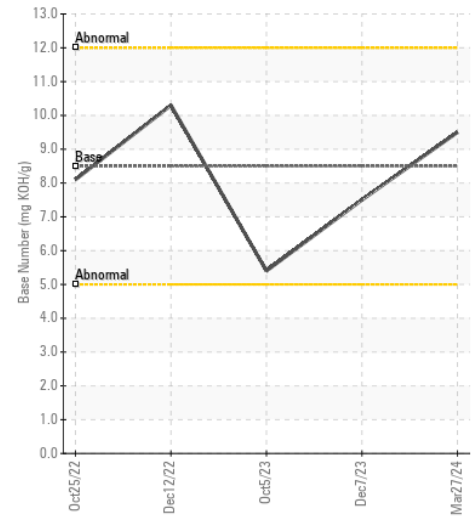
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : ASC0008751

Lab Number : 06157316

Unique Number : 10992739

Test Package : CONST (Additional Tests: TBN)

Received : 23 Apr 2024

Tested : 24 Apr 2024

Diagnosed : 24 Apr 2024 - Wes Davis

117 - ASCENDUM MACHINERY INC - GREENVILLE

2002 N GREENE ST

GREENVILLE, NC

US 27834

Contact: ALLEN WILLIAMS

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T:

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)

F: (704)494-8197