



ASCENDUM

OIL ANALYSIS REPORT



Area

Ascendum Machinery

Machine Id

VOLVO L220H 3075

Component

Diesel Engine

Fluid

VOLVO VDS-4.5 Premium Motor Oil 15W40 (--- GAL)

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

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | ASC0009790 | ASC0007670 | ASC0000354 |
| Sample Date | | Client Info | | 17 Jun 2024 | 22 Feb 2024 | 26 Jul 2023 |
| Machine Age | hrs | Client Info | | 8014 | 7496 | 6505 |
| Oil Age | hrs | Client Info | | 518 | 991 | 500 |
| Filter Age | hrs | Client Info | | 0 | 0 | 500 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Filter Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | NORMAL | NORMAL | SEVERE |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >200 | 5 | 5 | 92 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | 0 | ▲ 18 |
| Nickel | ppm | ASTM D5185m | >5 | 0 | 0 | 3 |
| Titanium | ppm | ASTM D5185m | | <1 | 0 | 2 |
| Silver | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >30 | 2 | <1 | ● 37 |
| Lead | ppm | ASTM D5185m | >40 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >20 | <1 | 2 | 6 |
| Tin | ppm | ASTM D5185m | >20 | 0 | 0 | 1 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

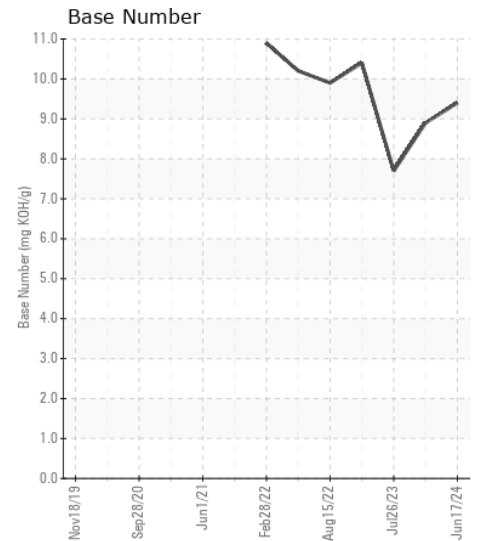
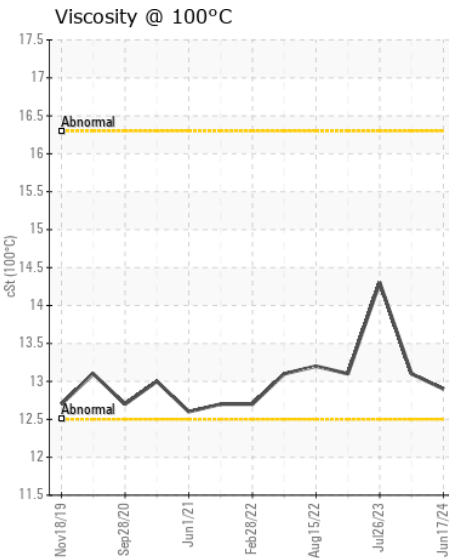
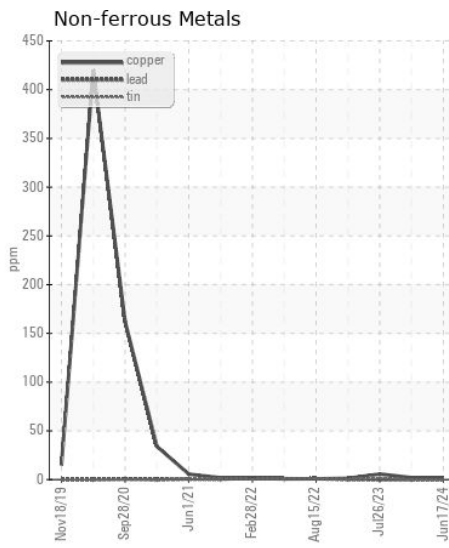
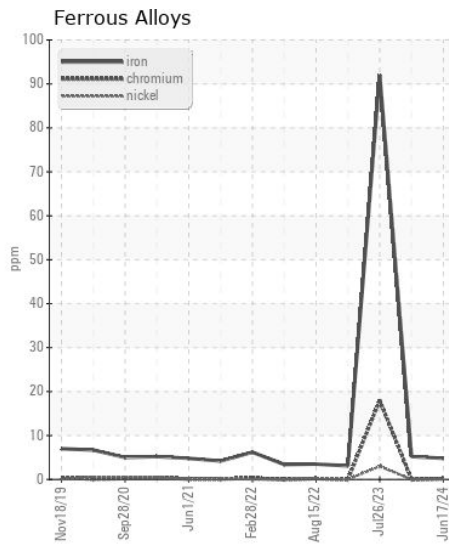
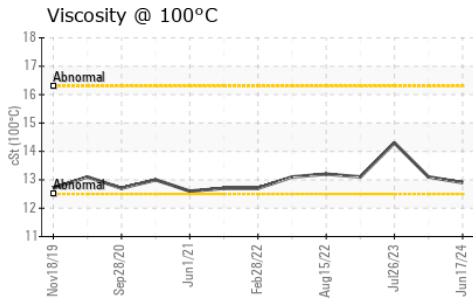
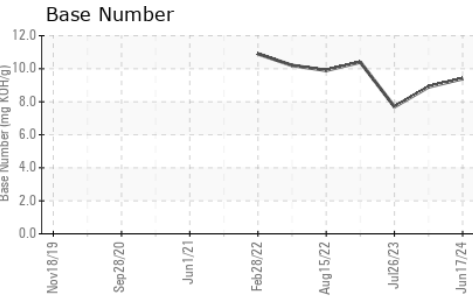
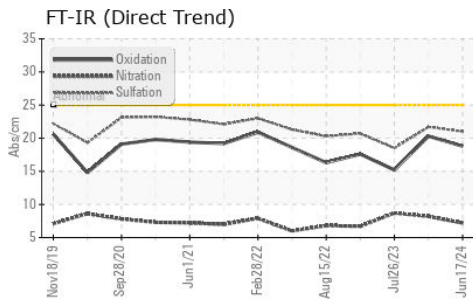
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >20 | 4 | 4 | ▲ 67 |
| Potassium | ppm | ASTM D5185m | >20 | 2 | 0 | 2 |
| 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 | 0.2 | 0.2 | 0.5 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 7.2 | 8.2 | 8.7 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 21.0 | 21.7 | 18.5 |
| 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 | | <1 | 2 | 3 |
| Boron | ppm | ASTM D5185m | | 54 | 42 | 4 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 45 | 43 | 57 |
| Manganese | ppm | ASTM D5185m | | 0 | <1 | 1 |
| Magnesium | ppm | ASTM D5185m | | 453 | 483 | 919 |
| Calcium | ppm | ASTM D5185m | | 1744 | 1779 | 1084 |
| Phosphorus | ppm | ASTM D5185m | | 965 | 971 | 990 |
| Zinc | ppm | ASTM D5185m | | 1184 | 1118 | 1224 |
| Sulfur | ppm | ASTM D5185m | | 3023 | 3111 | 3484 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 18.8 | 20.3 | 15.2 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | 9.4 | 8.9 | 7.7 |
| Visc @ 100°C | cSt | ASTM D445 | | 12.9 | 13.1 | 14.3 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ASC0009790 **Received** : 21 Jun 2024
Lab Number : 06216552 **Tested** : 24 Jun 2024
Unique Number : 11089416 **Diagnosed** : 24 Jun 2024 - Wes Davis
Test Package : CONST (Additional Tests: TBN)

GERDAU AMERISTEEL
 4221 W BOY SCOUT BLVD #600
 TAMPA, FL
 US 33607
 Contact: Service Manager

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)

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