



ASCENDUM

OIL ANALYSIS REPORT

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



Machine Id
VOLVO L150H 6893
Component
Diesel Engine
Fluid
VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | ASC0009175 | ASC0010480 | ASC0006471 |
| Sample Date | | Client Info | | 11 Jul 2024 | 03 Apr 2024 | 03 Jan 2024 |
| Machine Age | hrs | Client Info | | 8158 | 6684 | 6684 |
| Oil Age | hrs | Client Info | | 7236 | 6684 | 6684 |
| Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | Changed | N/A | N/A |
| Filter Changed | | Client Info | | Changed | N/A | N/A |
| Sample Status | | | | NORMAL | ABNORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >200 | 6 | 25 | 0 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | 2 | 0 |
| Nickel | ppm | ASTM D5185m | >5 | <1 | <1 | 0 |
| Titanium | ppm | ASTM D5185m | | <1 | <1 | 0 |
| Silver | ppm | ASTM D5185m | >2 | <1 | 1 | 0 |
| Aluminum | ppm | ASTM D5185m | >30 | 2 | ▲ 35 | 0 |
| Lead | ppm | ASTM D5185m | >40 | <1 | 3 | <1 |
| Copper | ppm | ASTM D5185m | >20 | 1 | 13 | <1 |
| Tin | ppm | ASTM D5185m | >20 | <1 | 3 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | <1 | 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.

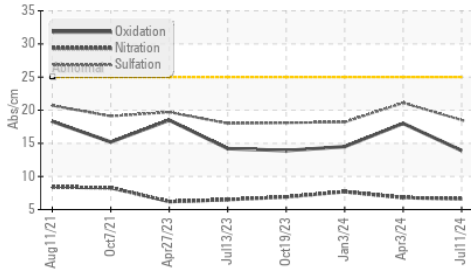
| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >20 | 7 | 17 | 2 |
| Potassium | ppm | ASTM D5185m | >20 | 36 | 4 | <1 |
| Fuel | | WC Method | >6.0 | <1.0 | 0.2 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | 0.1 | 0.3 | 0.1 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 6.6 | 6.8 | 7.7 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 18.5 | 21.1 | 18.2 |
| 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

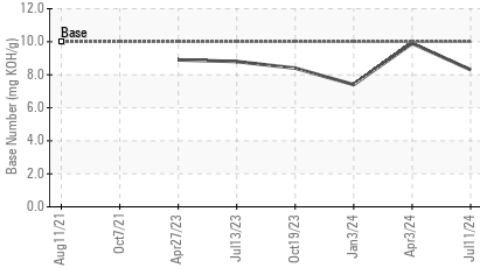
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

| | | | | | | |
|------------------|----------|-------------|------|--------------|--------|------|
| Sodium | ppm | ASTM D5185m | | 14 | <1 | <1 |
| Boron | ppm | ASTM D5185m | 2.5 | 3 | 45 | 15 |
| Barium | ppm | ASTM D5185m | 0.0 | <1 | 11 | 0 |
| Molybdenum | ppm | ASTM D5185m | 0.7 | 62 | 40 | 56 |
| Manganese | ppm | ASTM D5185m | 0.0 | <1 | 3 | 0 |
| Magnesium | ppm | ASTM D5185m | 256 | 952 | 554 | 873 |
| Calcium | ppm | ASTM D5185m | 2057 | 1135 | 1420 | 1069 |
| Phosphorus | ppm | ASTM D5185m | 935 | 1166 | 848 | 947 |
| Zinc | ppm | ASTM D5185m | 1223 | 1287 | 1062 | 1237 |
| Sulfur | ppm | ASTM D5185m | 4079 | 3055 | 3328 | 2886 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 13.9 | 18.0 | 14.5 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 10 | 8.3 | 9.9 | 7.4 |
| Visc @ 100°C | cSt | ASTM D445 | 15.0 | 13.6 | ▲ 12.3 | 13.3 |

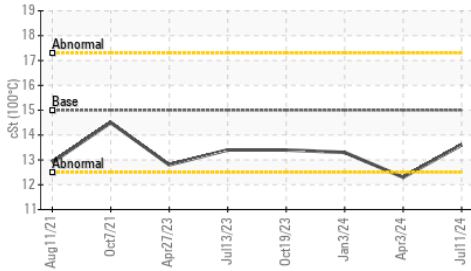
FT-IR (Direct Trend)



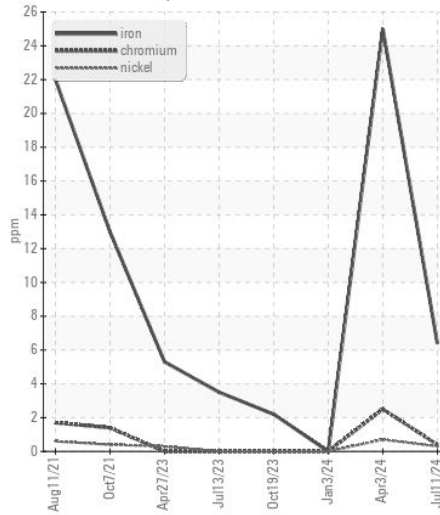
Base Number



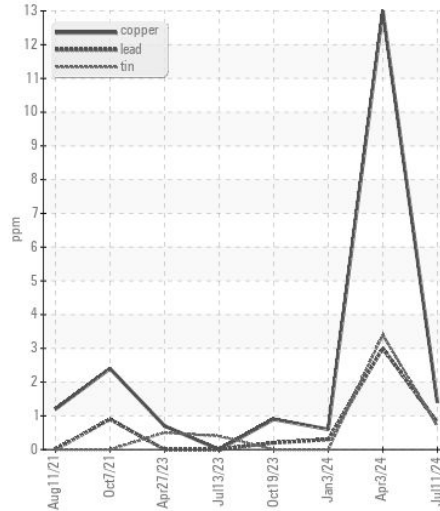
Viscosity @ 100°C



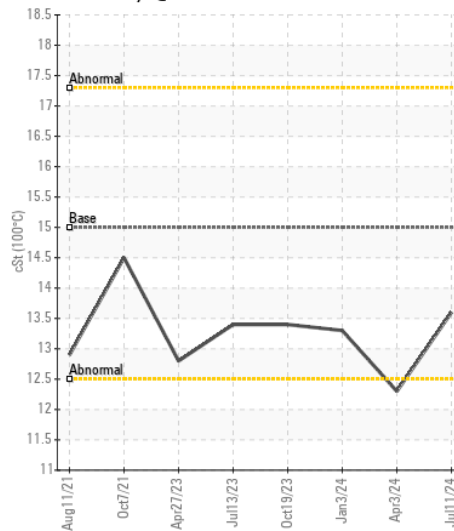
Ferrous Alloys



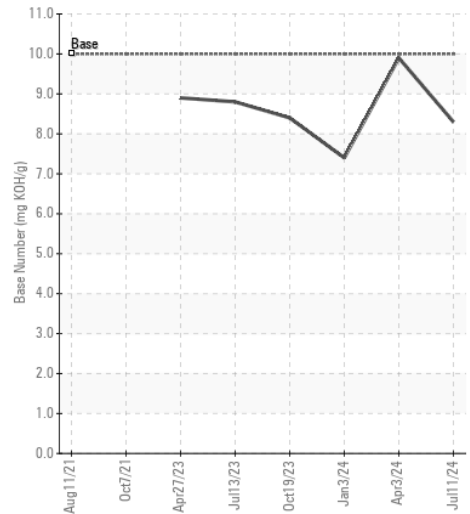
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : ASC0009175 Received : 16 Jul 2024
 Lab Number : 06238654 Tested : 17 Jul 2024
 Unique Number : 11127488 Diagnosed : 18 Jul 2024 - Sean Felton
 Test Package : CONST (Additional Tests: TBN)

117 - ASCENDUM MACHINERY INC - GREENVILLE
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 GREENVILLE, NC
 US 27834
 Contact: ALLEN WILLIAMS
 allen.williams@ascendummachinery.com

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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