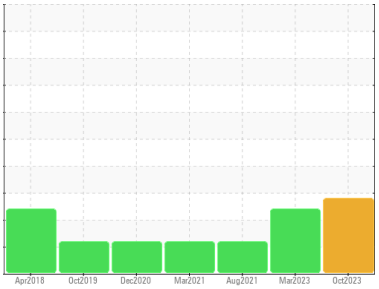
ASCENDUM

# PROBLEM SUMMARY

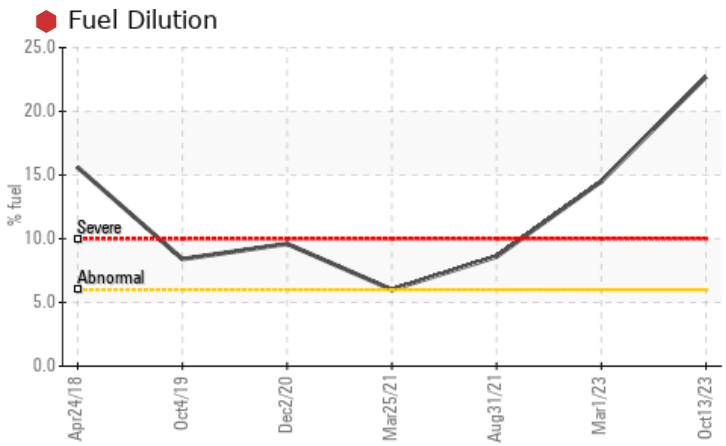
Area
## [FRENCH BOARD STONE]
Machine Id
## VOLVO L30G 220071
Component
**Diesel Engine**
Fluid
**VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (--- GAL)**

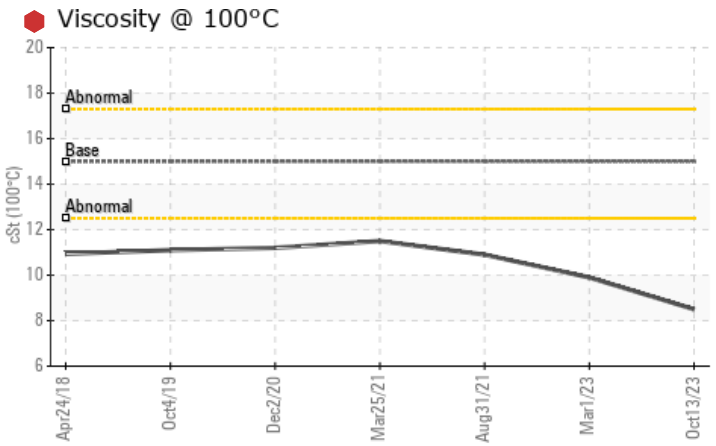
**Sample Rating Trend**




**FUEL**

## COMPONENT CONDITION SUMMARY




## RECOMMENDATION

We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

## PROBLEMATIC TEST RESULTS

| Sample Status | | | | SEVERE | SEVERE | ABNORMAL |
|---|---|---|---|---|---|---|
| Fuel | % | ASTM D3524 | >6.0 | **22.7** | 14.5 | 8.6 |
| Visc @ 100°C | cSt | ASTM D445 | 15.0 | **8.5** | 9.9 | 10.9 |

**Customer Id:** VOLVO1672
**Sample No.:** ASC0003237
**Lab Number:** 05979387
**Test Package:** CONST

*To manage this report scan the QR code*

*To discuss the diagnosis or test data:*
Wes Davis +1 905-569-8600 x223
wesd@wearcheck.ca

*To change component or sample information:*
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

## RECOMMENDED ACTIONS

| Action | Status | Date | Done By | Description |
|---|---|---|---|---|
| Resample | --- | --- | ? | We recommend an early resample to monitor this condition. |
| Check Fuel/injector System | --- | --- | ? | We advise that you check the fuel injection system. |

## HISTORICAL DIAGNOSIS

**01 Mar 2023 Diag: Don Baldridge**

FUEL

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.All component wear rates are normal. There is a high amount of fuel present in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

view report

**31 Aug 2021 Diag: Jonathan Hester**

FUEL

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.All component wear rates are normal. There is a moderate amount of fuel present in the oil. Fuel is present in the oil and is lowering the viscosity.

view report

**25 Mar 2021 Diag: Doug Bogart**

FUEL

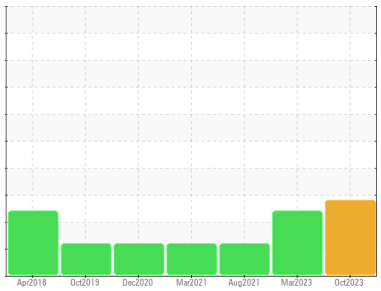
We advise that you check the fuel injection system. Resample at the next service interval to monitor.All component wear rates are normal. There is a moderate amount of fuel present in the oil. Fuel is present in the oil and is lowering the viscosity.

view report

ASCENDUM

# OIL ANALYSIS REPORT

Sample Rating Trend




**FUEL**

Area
## [FRENCH BOARD STONE]
Machine Id
## VOLVO L30G 220071
Component
**Diesel Engine**
Fluid
**VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (--- GAL)**

## DIAGNOSIS

**Recommendation**
We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

**Wear**
All component wear rates are normal.

**Contamination**
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

**Fluid Condition**
The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **ASC0003237** | VCP382839 | VCP318723 |
| Sample Date | | Client Info | | **13 Oct 2023** | 01 Mar 2023 | 31 Aug 2021 |
| Machine Age | hrs | Client Info | | **10738** | 9933 | 7774 |
| Oil Age | hrs | Client Info | | **500** | 0 | 0 |
| Oil Changed | | Client Info | | **Changed** | Changed | Changed |
| Sample Status | | | | **SEVERE** | SEVERE | ABNORMAL |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Glycol | | WC Method | | **NEG** | NEG | NEG |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >200 | **7** | 13 | 8 |
| Chromium | ppm | ASTM D5185m | >20 | **<1** | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >5 | **<1** | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | **0** | <1 | 0 |
| Silver | ppm | ASTM D5185m | >2 | **0** | <1 | <1 |
| Aluminum | ppm | ASTM D5185m | >30 | **0** | 3 | <1 |
| Lead | ppm | ASTM D5185m | >40 | **<1** | 0 | 0 |
| Copper | ppm | ASTM D5185m | >20 | **<1** | <1 | 1 |
| Tin | ppm | ASTM D5185m | >20 | **<1** | <1 | <1 |
| Antimony | ppm | ASTM D5185m | | **---** | --- | 0 |
| Vanadium | ppm | ASTM D5185m | | **0** | <1 | 0 |
| Cadmium | ppm | ASTM D5185m | | **0** | 0 | 0 |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | 2.5 | **34** | 31 | 35 |
| Barium | ppm | ASTM D5185m | 0.0 | **2** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 0.7 | **35** | 38 | 38 |
| Manganese | ppm | ASTM D5185m | 0.0 | **<1** | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 256 | **384** | 437 | 489 |
| Calcium | ppm | ASTM D5185m | 2057 | **1304** | 1553 | 1652 |
| Phosphorus | ppm | ASTM D5185m | 935 | **721** | 824 | 845 |
| Zinc | ppm | ASTM D5185m | 1223 | **861** | 1044 | 1053 |
| Sulfur | ppm | ASTM D5185m | 4079 | **2183** | 2620 | 2245 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >20 | **6** | 6 | 5 |
| Sodium | ppm | ASTM D5185m | | **0** | 4 | 4 |
| Potassium | ppm | ASTM D5185m | >20 | **<1** | 1 | 0 |
| Fuel | % | ASTM D3524 | >6.0 | **22.7** | 14.5 | 8.6 |

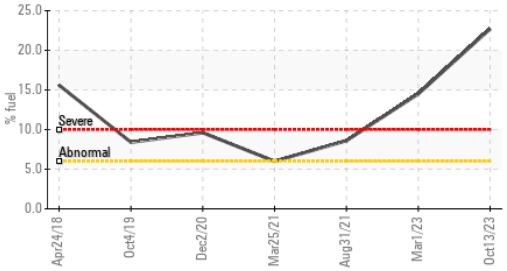
| INFRA-RED | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Soot % | % | *ASTM D7844 | >3 | **0.2** | 0.3 | 0.3 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | **9.0** | 11.4 | 10.3 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | **20.5** | 23.0 | 23.8 |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | **19.9** | 24.3 | 23.4 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 10 | **7.3** | 7.8 | --- |

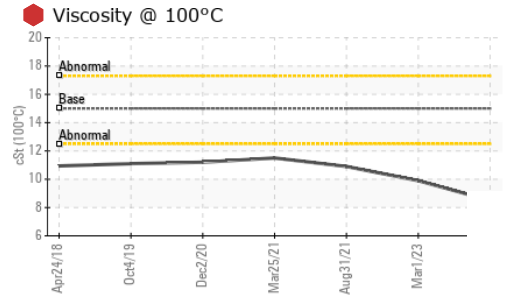
ASCENDUM

# OIL ANALYSIS REPORT

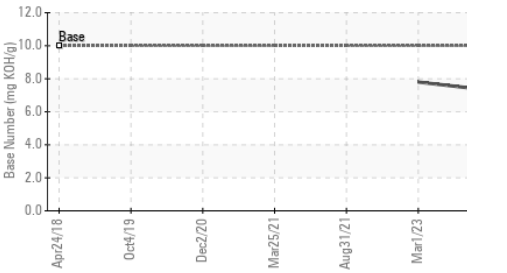
Fuel Dilution




Viscosity @ 100°C




Base Number

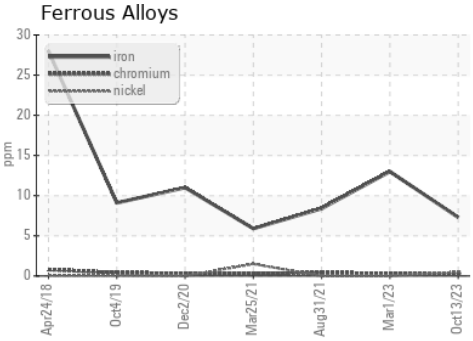



| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| 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 |
| Free Water | scalar | *Visual | | **NEG** | NEG | NEG |

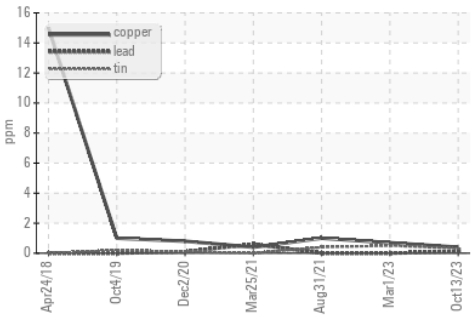
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 100°C | cSt | ASTM D445 | 15.0 | **8.5** | 9.9 | 10.9 |

## GRAPHS

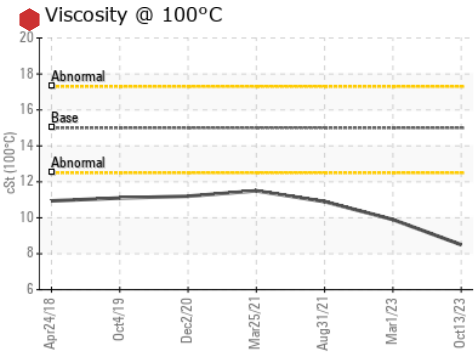
Ferrous Alloys



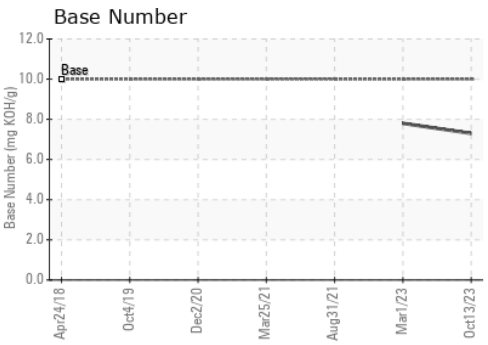

Non-ferrous Metals




Viscosity @ 100°C




Base Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : ASC0003237 **Received** : 16 Oct 2023
**Lab Number** : 05979387 **Diagnosed** : 17 Oct 2023
**Unique Number** : 10696682 **Diagnostician** : Wes Davis
**Test Package** : CONST ( Additional Tests: PercentFuel, TBN )

*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)*


**160 - ASCENDUM MACHINERY INC - MILLS RIVER**
215 FANNING FIELDS RD
MILLS RIVER, NC
US 28759
Contact: BRANDON DRAKE
brandon.drake@ascendummachinery.com
T: 8(286)687-0620
F: (828)687-0622