



VOLVO

OIL ANALYSIS REPORT

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



Area
[403446]

Machine Id
16-8001

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 | | VCP450168 | VCP391783 | VCP429967 |
| Sample Date | | Client Info | | 06 May 2024 | 24 Nov 2023 | 27 Sep 2023 |
| Machine Age | hrs | Client Info | | 0 | 26059 | 25349 |
| Oil Age | hrs | Client Info | | 500 | 0 | 500 |
| 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 | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|----------|-----|---------------|------|--------------|----|----|
| Iron | ppm | ASTM D5185(m) | >100 | 8 | 8 | 19 |
| Chromium | ppm | ASTM D5185(m) | >10 | 0 | 0 | <1 |
| Nickel | ppm | ASTM D5185(m) | >10 | <1 | <1 | 0 |
| Titanium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185(m) | >2 | 0 | <1 | <1 |
| Aluminum | ppm | ASTM D5185(m) | >10 | 2 | 2 | 2 |
| Lead | ppm | ASTM D5185(m) | >20 | <1 | 2 | 1 |
| Copper | ppm | ASTM D5185(m) | >15 | 3 | 2 | 2 |
| Tin | ppm | ASTM D5185(m) | >10 | 0 | <1 | 0 |
| Vanadium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |

CONTAMINATION

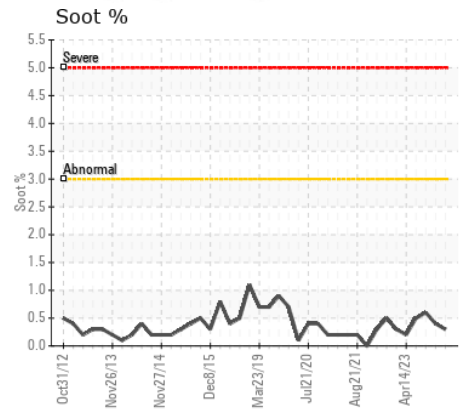
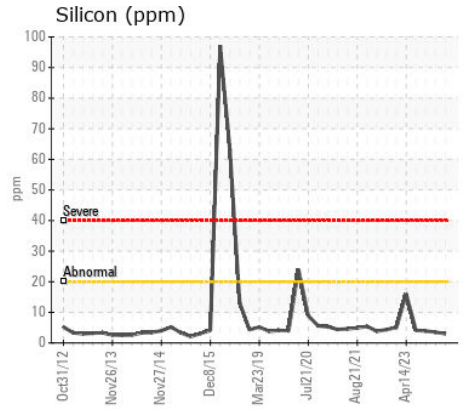
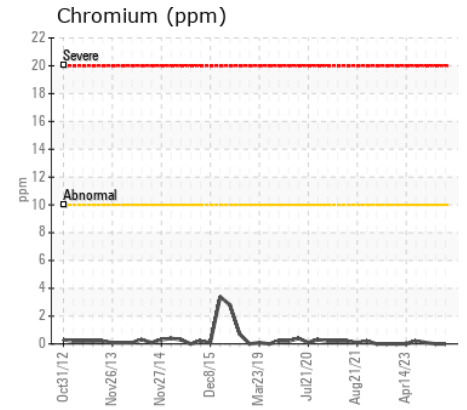
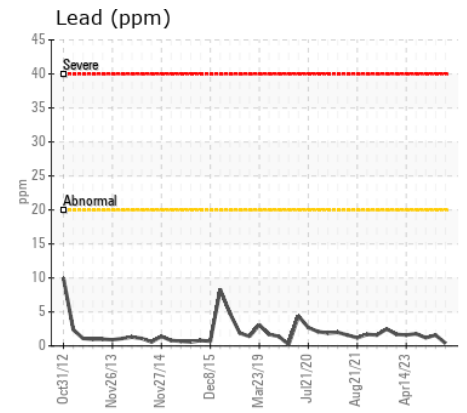
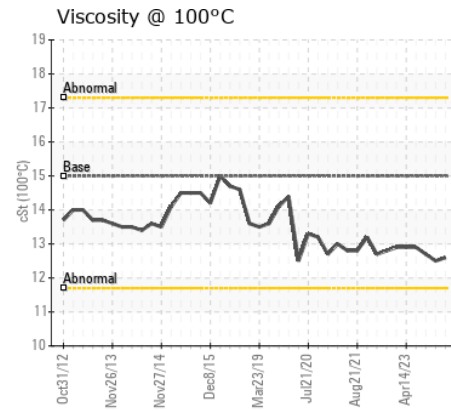
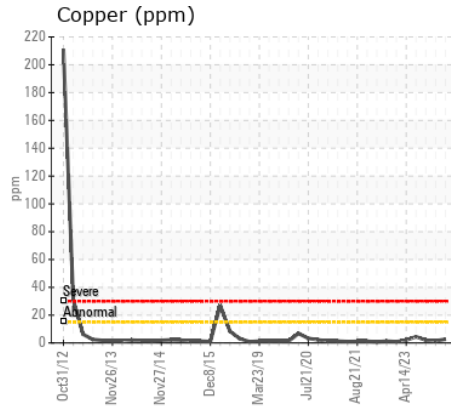
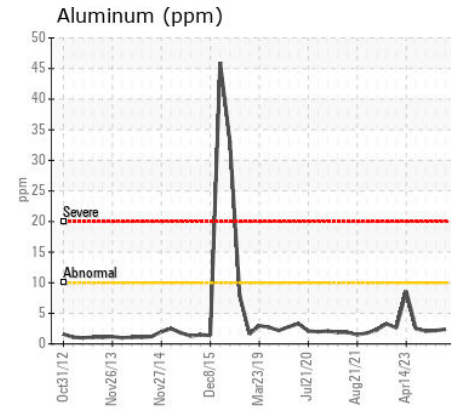
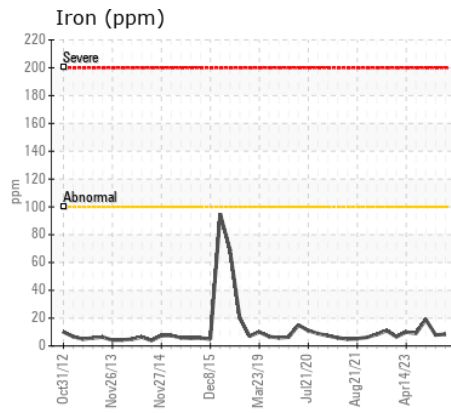
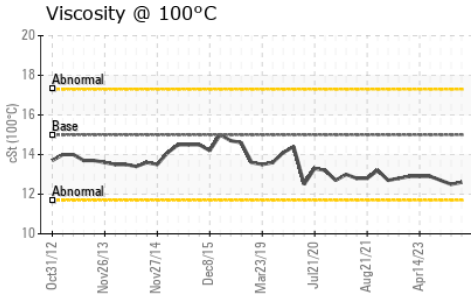
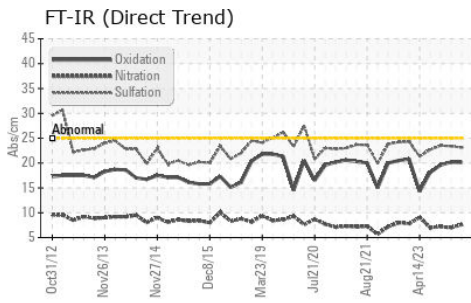
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|---------------|------|----------------|------|------|
| Silicon | ppm | ASTM D5185(m) | >20 | 3 | 4 | 4 |
| Potassium | ppm | ASTM D5185(m) | >20 | <1 | 0 | 0 |
| Fuel | | WC Method | >6.0 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.1 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | ASTM D7844* | >3 | 0.3 | 0.4 | 0.6 |
| Nitration | Abs/cm | ASTM D7624* | >20 | 7.6 | 7.0 | 7.2 |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | 23.1 | 23.4 | 23.5 |
| Emulsified Water | scalar | Visual* | >0.1 | NEG | NEG | NEG |

FLUID CONDITION

The condition of the oil is acceptable for the time in service.

| | | | | | | |
|--------------|----------|---------------|------|--------------|------|------|
| Sodium | ppm | ASTM D5185(m) | | 2 | 2 | 3 |
| Boron | ppm | ASTM D5185(m) | 2.5 | 32 | 31 | 29 |
| Barium | ppm | ASTM D5185(m) | 0.0 | 0 | <1 | <1 |
| Molybdenum | ppm | ASTM D5185(m) | 0.7 | 37 | 40 | 40 |
| Manganese | ppm | ASTM D5185(m) | 0.0 | <1 | 0 | 0 |
| Magnesium | ppm | ASTM D5185(m) | 256 | 474 | 495 | 503 |
| Calcium | ppm | ASTM D5185(m) | 2057 | 1567 | 1612 | 1614 |
| Phosphorus | ppm | ASTM D5185(m) | 935 | 814 | 859 | 870 |
| Zinc | ppm | ASTM D5185(m) | 1223 | 979 | 1014 | 1035 |
| Sulfur | ppm | ASTM D5185(m) | 4079 | 2197 | 2269 | 2366 |
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | 20.1 | 20.2 | 19.6 |
| Visc @ 100°C | cSt | ASTM D7279(m) | 15.0 | 12.6 | 12.5 | 12.7 |



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : VCP450168
Lab Number : 02637128
Unique Number : 5786290
Test Package : MOB 1
Received : 23 May 2024
Tested : 23 May 2024
Diagnosed : 23 May 2024 - Wes Davis

CRH CANADA GROUP INC.
 P.O. BOX 5400
 CONCORD, ON
 CA L4K 1B6
 Contact: Dan Brown
 dan.brown@ca.crh.com

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.