



McCLUNG-LOGAN
EQUIPMENT COMPANY, INC.

OIL ANALYSIS REPORT

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



Area
[W05004161]
Machine Id
VOLVO A40G 341427
Component
Diesel Engine
Fluid
MOBIL 15W40 (15 GAL)

RECOMMENDATION

Resample at the next service interval to monitor. (Customer Sample Comment: W05004161)

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | ML0000447 | ML0000396 | VCP189544 |
| Sample Date | | Client Info | | 16 Apr 2024 | 19 Mar 2024 | 08 Jan 2024 |
| Machine Age | hrs | Client Info | | 11524 | 11295 | 11033 |
| Oil Age | hrs | Client Info | | 250 | 250 | 250 |
| Filter Age | hrs | Client Info | | 250 | 250 | 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 D5185m | >100 | 4 | 2 | 1 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | 0 | 0 |
| Nickel | ppm | ASTM D5185m | >2 | 1 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >2 | <1 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >25 | 2 | 3 | 2 |
| Lead | ppm | ASTM D5185m | >40 | 1 | 0 | <1 |
| Copper | ppm | ASTM D5185m | >330 | 1 | <1 | 0 |
| Tin | ppm | ASTM D5185m | >15 | 1 | <1 | 0 |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

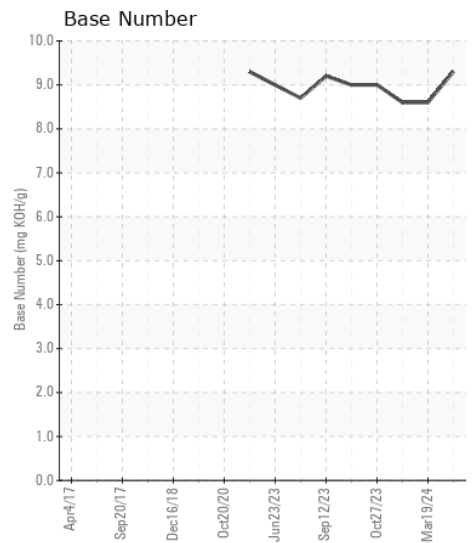
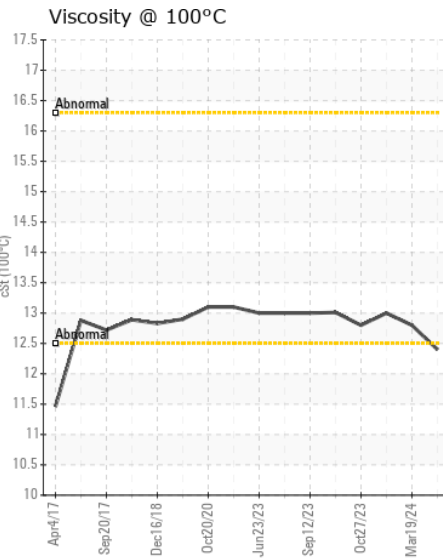
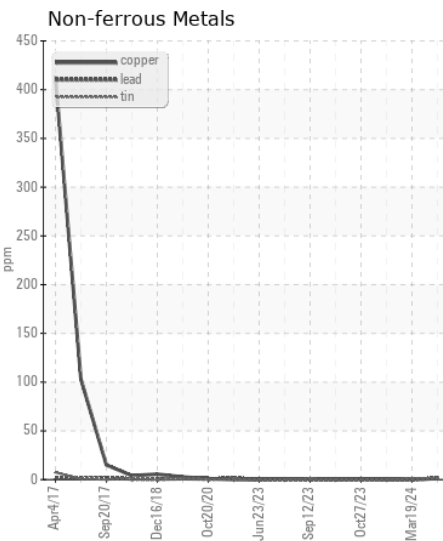
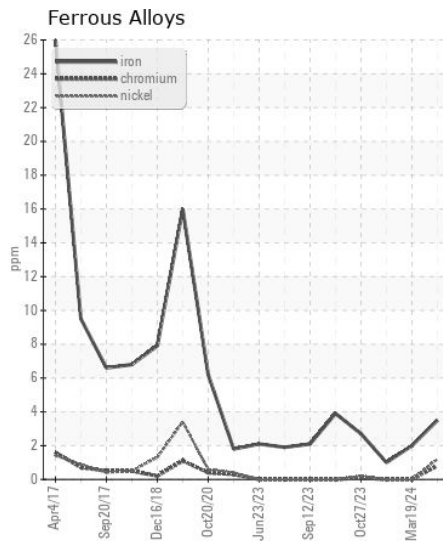
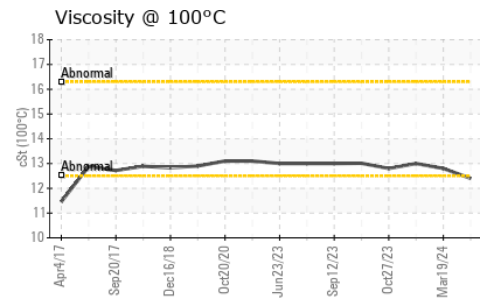
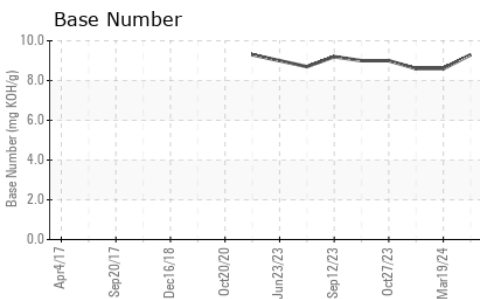
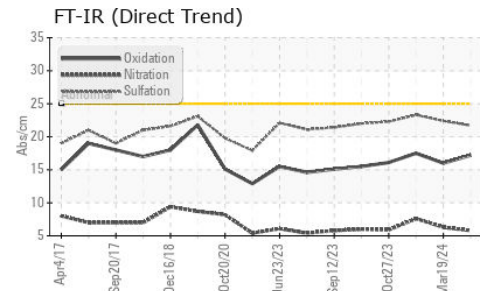
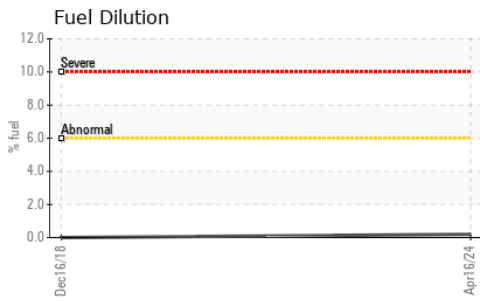
Fuel content negligible. There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|--------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >25 | 5 | 4 | 5 |
| Potassium | ppm | ASTM D5185m | >20 | 2 | 2 | <1 |
| Fuel | % | ASTM D3524 | >6.0 | 0.2 | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | 0.1 | 0.1 | 0.1 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 5.8 | 6.3 | 7.6 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 21.7 | 22.4 | 23.3 |
| 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 | >118 | 2 | 4 | <1 |
| Boron | ppm | ASTM D5185m | | 220 | 323 | 300 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 83 | 122 | 113 |
| Manganese | ppm | ASTM D5185m | | 1 | <1 | 0 |
| Magnesium | ppm | ASTM D5185m | | 545 | 668 | 626 |
| Calcium | ppm | ASTM D5185m | | 1535 | 1495 | 1579 |
| Phosphorus | ppm | ASTM D5185m | | 879 | 737 | 735 |
| Zinc | ppm | ASTM D5185m | | 947 | 852 | 933 |
| Sulfur | ppm | ASTM D5185m | | 3022 | 2916 | 2537 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 17.2 | 16.0 | 17.5 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | 9.3 | 8.6 | 8.6 |
| Visc @ 100°C | cSt | ASTM D445 | | 12.4 | 12.8 | 13.0 |



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ML0000447 **Received** : 18 Apr 2024
Lab Number : 06152745 **Tested** : 23 Apr 2024
Unique Number : 10982823 **Diagnosed** : 23 Apr 2024 - Jonathan Hester
Test Package : CONST (Additional Tests: FuelDilution, 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)

MCCLEUNG-LOGAN EQUIPMENT CO - MANASSAS
 8450 QUARRY ROAD
 MANASSAS, VA
 US 20110
 Contact: MIKE MAYHUGH
 MMAYHUGH@MCCLEUNG-LOGAN.COM
 T: (703)393-7344
 F: (703)393-7844