



McCLUNG-LOGAN
EQUIPMENT COMPANY, INC.

OIL ANALYSIS REPORT

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



Area
[W/O 10988]
Machine Id
VOLVO A30F 82261
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 30 (10 GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | ML0002117 | VCP413941 | VCP177035 |
| Sample Date | | Client Info | | 14 Jun 2024 | 07 Aug 2023 | 29 Mar 2016 |
| Machine Age | hrs | Client Info | | 7694 | 7312 | 2101 |
| Oil Age | hrs | Client Info | | 382 | 0 | 0 |
| Filter Age | hrs | Client Info | | 382 | 0 | 0 |
| Oil Changed | | Client Info | | Not Chngd | Changed | N/A |
| Filter Changed | | Client Info | | Not Chngd | Changed | N/A |
| Sample Status | | | | MARGINAL | ABNORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >200 | 28 | 18 | 16 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >10 | 2 | <1 | 2 |
| Titanium | ppm | ASTM D5185m | | 2 | <1 | <1 |
| Silver | ppm | ASTM D5185m | >2 | 0 | <1 | 0 |
| Aluminum | ppm | ASTM D5185m | >30 | 16 | 8 | 3 |
| Lead | ppm | ASTM D5185m | >40 | <1 | <1 | 2 |
| Copper | ppm | ASTM D5185m | >20 | 5 | 6 | 20 |
| Tin | ppm | ASTM D5185m | >20 | <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

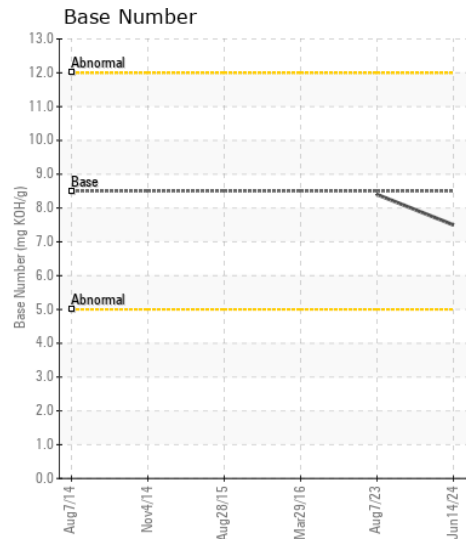
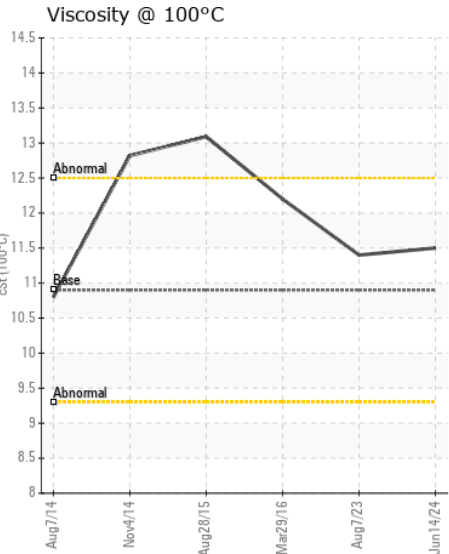
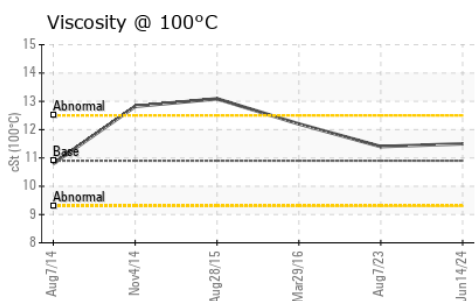
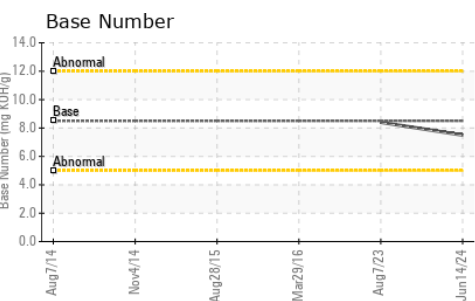
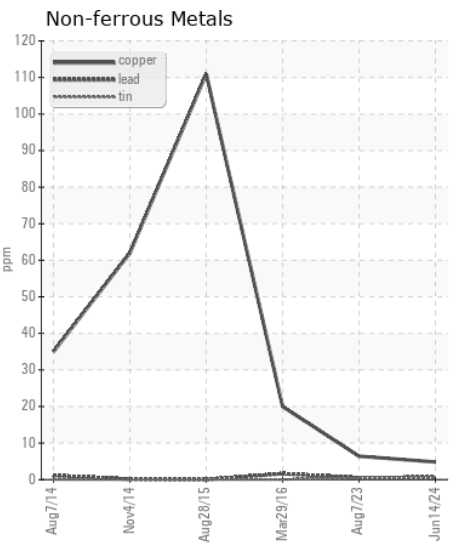
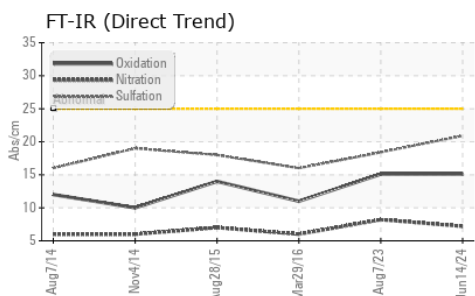
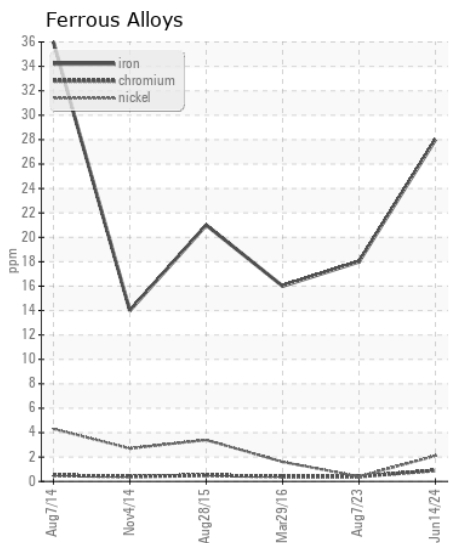
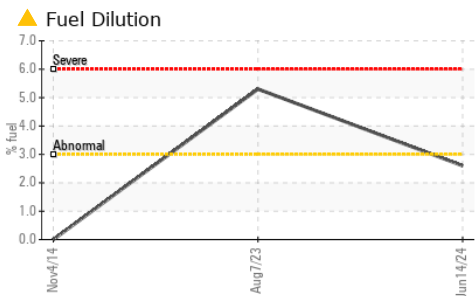
Light fuel dilution occurring.

| | | | | | | |
|------------------|----------|-------------|-------|--------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >20 | 18 | 9 | 5 |
| Potassium | ppm | ASTM D5185m | >20 | 4 | 4 | 1 |
| Fuel | % | ASTM D3524 | >3.0 | ▲ 2.6 | ▲ 5.3 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | 0.2 | 0.1 | 0 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 7.2 | 8.2 | 6. |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 20.9 | 18.4 | 16. |
| 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 | >75 | 2 | 3 | 4 |
| Boron | ppm | ASTM D5185m | 250 | 390 | 63 | 21 |
| Barium | ppm | ASTM D5185m | 10 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 100 | 97 | 70 | 44 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 450 | 534 | 1011 | 699 |
| Calcium | ppm | ASTM D5185m | 3000 | 1673 | 1469 | 1544 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 1229 | 1061 | 937 |
| Zinc | ppm | ASTM D5185m | 1350 | 1497 | 1225 | 1041 |
| Sulfur | ppm | ASTM D5185m | 4250 | 3834 | 3545 | 3177 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 15.1 | 15.1 | 11. |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 8.5 | 7.5 | 8.4 | --- |
| Visc @ 100°C | cSt | ASTM D445 | 10.9 | 11.5 | 11.4 | 12.2 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ML0002117
Lab Number : 06216430
Unique Number : 11089294
Test Package : CONST (Additional Tests: PercentFuel, TBN)

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*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)*