WEAR CONTAMINATION FLUID CONDITION

NORMAL SEVERE ABNORMAL

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[G08921]

VOLVO L60E 60214

Diesel Engine

SAE 15W40 (--- GAL)

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|------|---------------------------|-------------------------|-----------|
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We advise that you check the fuel injection system. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|-------------|-------------|-------------|
| Sample Number | | Client Info | | VCP449841 | VCP091883 | VC234204 |
| Sample Date | | Client Info | | 12 Jun 2024 | 21 Jul 2009 | 03 Mar 2008 |
| Machine Age | hrs | Client Info | | 5013 | 4000 | 3286 |
| Oil Age | hrs | Client Info | | 0 | 250 | 286 |
| Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | N/A | Changed | Changed |
| Filter Changed | | Client Info | | N/A | Changed | Changed |
| Sample Status | | | | SEVERE | NORMAL | NORMAL |
| | | | | | | |
| Iron | ppm | ASTM D5185m | >100 | 13 | 8 | 10 |
| Chromium | ppm | ASTM D5185m | >10 | 0 | <1 | <1 |
| Nickel | nnm | ASTM D5185m | >10 | <1 | 0 | 0 |

WEAR

All component wear rates are normal.

| Iron | ppm | ASTM D5185m | >100 | 13 | 8 | 10 |
|--------------|--------|-------------|------|------|------|-----|
| Chromium | ppm | ASTM D5185m | >10 | 0 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >10 | <1 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| Silver | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >10 | 2 | 3 | 2 |
| Lead | ppm | ASTM D5185m | >20 | 1 | <1 | <1 |
| Copper | ppm | ASTM D5185m | >15 | 1 | <1 | <1 |
| Tin | ppm | ASTM D5185m | >10 | <1 | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NON |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NON |

CONTAMINATION

There is a high amount of fuel present in the oil.

| Silicon | ppm | ASTM D5185m | >20 | 5 | 6 | 4 |
|-------------------------|----------|-------------|-------|-------------|-------|-------|
| Potassium | ppm | ASTM D5185m | >20 | 2 | 5 | 12 |
| Fuel | % | ASTM D3524 | >6.0 | 13.8 | <1.0 | <1.0 |
| Water | | WC Method | >0.1 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | 0.2 | 0 | 0 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 10.1 | 7. | 6. |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 22.1 | 16. | 15. |
| 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 | >0.1 | NEG | NEG | NEG |

FLUID CONDITION

Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

| Odor | scalar | *Visual | NORML | NORML | NORML | NORML |
|-------------------------|----------|-------------|-------|-------|-------|-------|
| Emulsified Water | scalar | *Visual | >0.1 | NEG | NEG | NEG |
| | | | | | | |
| Sodium | ppm | ASTM D5185m | >57 | 4 | 3 | <1 |
| Boron | ppm | ASTM D5185m | | 49 | 4 | 4 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 42 | <1 | 0 |
| Manganese | ppm | ASTM D5185m | | 1 | <1 | 0 |
| Magnesium | ppm | ASTM D5185m | | 436 | 288 | 231 |
| Calcium | ppm | ASTM D5185m | | 1468 | 2395 | 1769 |
| Phosphorus | ppm | ASTM D5185m | | 748 | 1128 | 851 |
| Zinc | ppm | ASTM D5185m | | 943 | 1238 | 991 |
| Sulfur | ppm | ASTM D5185m | | 3165 | 6087 | 5046 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 24.6 | 12. | 11. |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | 6.3 | | |

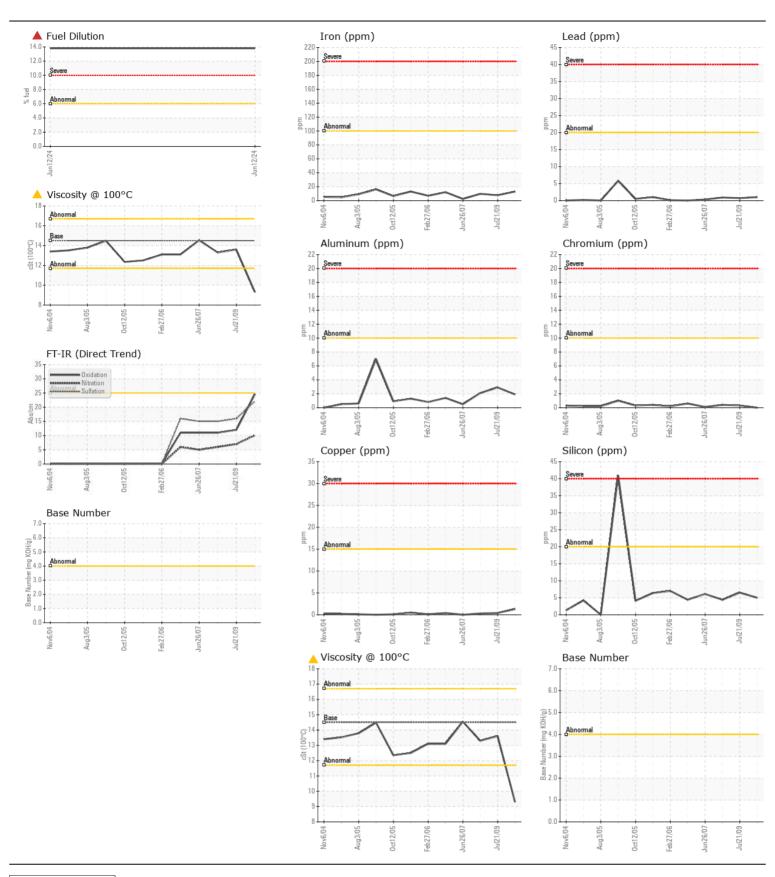
ASTM D445 14.5

Visc @ 100°C cSt

13.6

9.3

13.3







Certificate L2367

Laboratory Sample No.

: VCP449841 Lab Number : 06212723

: WearCheck USA - 501 Madison Ave., Cary, NC 27513

Tested Unique Number : 11085587

Diagnosed Test Package: MOB 1 (Additional Tests: FuelDilution, PercentFuel, TBN)

Received

: 20 Jun 2024

: 17 Jun 2024

: 20 Jun 2024 - Sean Felton

OLD BRIDGE CONSTRUCTION CO. 6000 SAGEMORE DR. SUITE 6301 MARLTON, NJ

US 08053

T: (856)985-1200

Contact: SERVICE MANAGER

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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