



VOLVO

OIL ANALYSIS REPORT

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

Area

[74852 LAKE CONWAY]

Machine Id

TAKEUCHI TB223 122600181

Component

Diesel Engine

Fluid

DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|-------------|-------------|-------------|
| Sample Number | | Client Info | | VCP445675 | VCP389614 | VCP340453 |
| Sample Date | | Client Info | | 18 Feb 2024 | 21 Oct 2022 | 21 Jul 2022 |
| Machine Age | hrs | Client Info | | 811 | 366 | 269 |
| Oil Age | hrs | Client Info | | 0 | 0 | 0 |
| 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 | ATTENTION |

WEAR

Metal levels are typical for a new component breaking in.

| | | | | | | |
|--------------|--------|-------------|------|------|------|------|
| Iron | ppm | ASTM D5185m | >100 | 51 | 22 | 66 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | <1 | 1 |
| Nickel | ppm | ASTM D5185m | >4 | <1 | <1 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 2 | 5 | 10 |
| Lead | ppm | ASTM D5185m | >40 | 0 | 0 | 1 |
| Copper | ppm | ASTM D5185m | >330 | 2 | 2 | 16 |
| Tin | ppm | ASTM D5185m | >15 | <1 | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

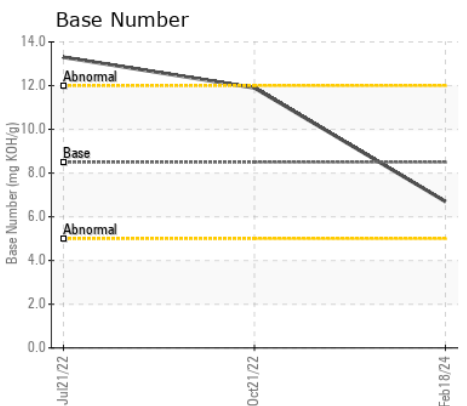
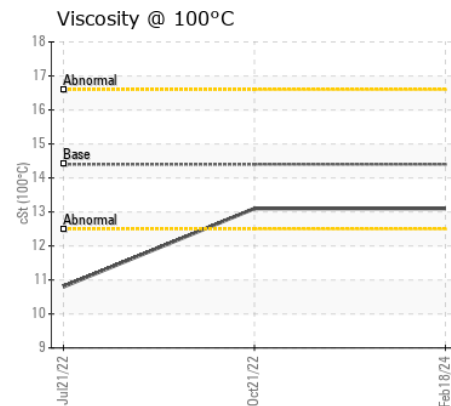
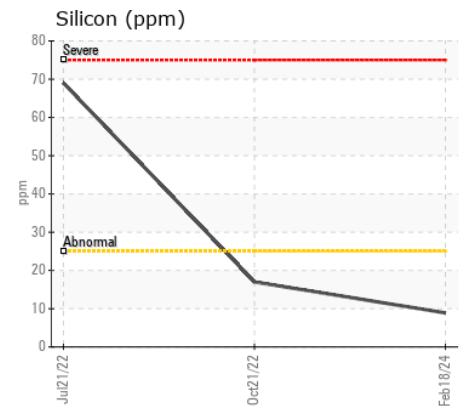
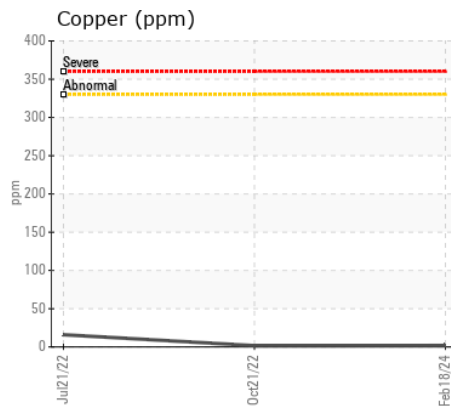
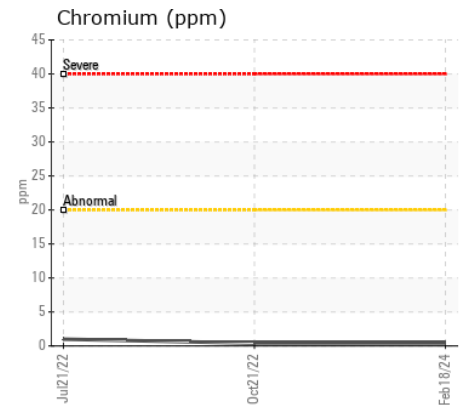
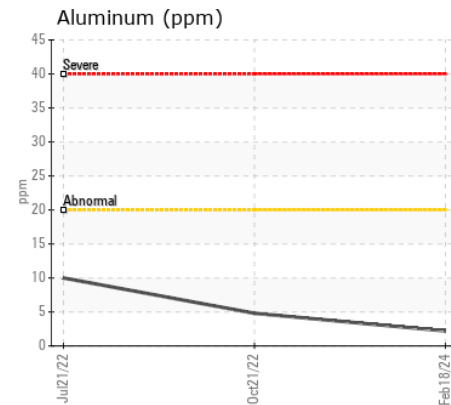
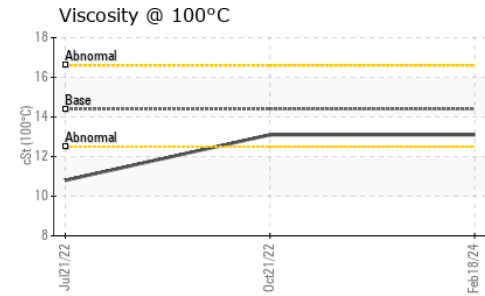
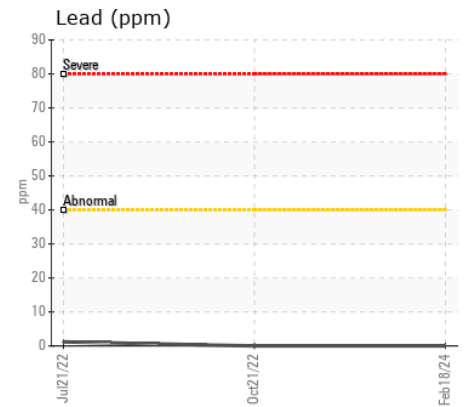
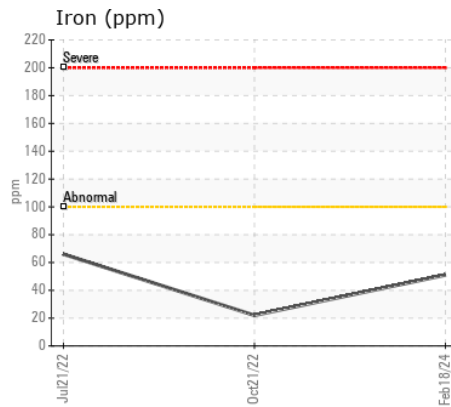
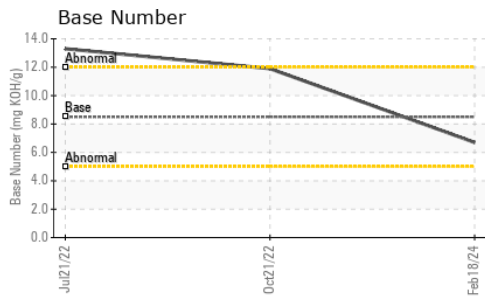
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|-------|-------|-------|
| Silicon | ppm | ASTM D5185m | >25 | 9 | 17 | 69 |
| Potassium | ppm | ASTM D5185m | >20 | 0 | <1 | 3 |
| Fuel | | WC Method | >5 | <1.0 | <1.0 | 0.3 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | 0.4 | 0.2 | 0.3 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 8.8 | 6.9 | 7.7 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 19.2 | 23.0 | 19.6 |
| 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 | >158 | 4 | 4 | 21 |
| Boron | ppm | ASTM D5185m | 250 | 11 | 54 | 59 |
| Barium | ppm | ASTM D5185m | 10 | 0 | 0 | 14 |
| Molybdenum | ppm | ASTM D5185m | 100 | 12 | 45 | 103 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | 2 |
| Magnesium | ppm | ASTM D5185m | 450 | 84 | 472 | 131 |
| Calcium | ppm | ASTM D5185m | 3000 | 2224 | 1812 | 3882 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 851 | 894 | 1148 |
| Zinc | ppm | ASTM D5185m | 1350 | 972 | 1091 | 1388 |
| Sulfur | ppm | ASTM D5185m | 4250 | 3231 | 3350 | 7137 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 13.5 | 20.9 | 12.8 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 8.5 | 6.7 | 11.9 | 13.3 |
| Visc @ 100°C | cSt | ASTM D445 | 14.4 | 13.1 | 13.1 | ▲ 10.8 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VCP445675 **Received** : 23 Feb 2024
Lab Number : 06098212 **Tested** : 25 Feb 2024
Unique Number : 10896442 **Diagnosed** : 25 Feb 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: TBN)

ALTA EQUIPMENT/FLAGLER CONSTRUCTION EQUIPMENT LLC
 8418 PALM RIVER ROAD
 TAMPA, FL
 US 33619
 Contact: KENNY HANEY
 khaney@flaglerce.com
 T: (813)630-0077
 F: (813)630-2233

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)