



OIL ANALYSIS REPORT

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

Machine Id
FTL-10
 Component
Diesel Engine
 Fluid
SHELL ROTELLA T 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | KL0011815 | KL0011808 | KL0011710 |
| Sample Date | | Client Info | | 25 Dec 2023 | 28 Nov 2023 | 04 Nov 2023 |
| Machine Age | mls | Client Info | | 247417 | 243624 | 240661 |
| Oil Age | mls | Client Info | | 6756 | 2963 | 63804 |
| Filter Age | mls | Client Info | | 6756 | 2963 | 63804 |
| Oil Changed | | Client Info | | Not Changd | Not Changd | Changed |
| Filter Changed | | Client Info | | Not Changd | Not Changd | Changed |
| Sample Status | | | | NORMAL | NORMAL | SEVERE |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|-------|
| Iron | ppm | ASTM D5185m | >100 | 30 | 41 | ▲ 537 |
| Chromium | ppm | ASTM D5185m | >20 | 1 | 4 | ▲ 51 |
| Nickel | ppm | ASTM D5185m | >4 | 0 | 0 | 2 |
| Titanium | ppm | ASTM D5185m | | 0 | <1 | 3 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 2 | 4 | ● 51 |
| Lead | ppm | ASTM D5185m | >40 | 0 | 4 | ▲ 46 |
| Copper | ppm | ASTM D5185m | >330 | <1 | 2 | 16 |
| Tin | ppm | ASTM D5185m | >15 | 0 | 0 | 7 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

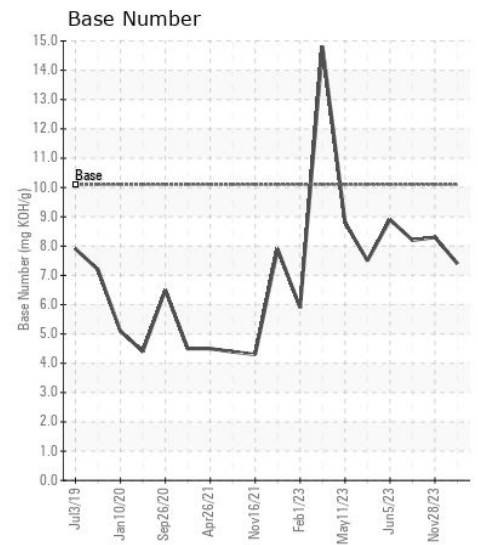
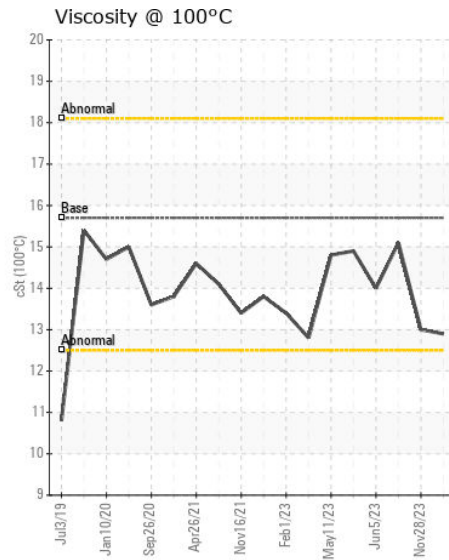
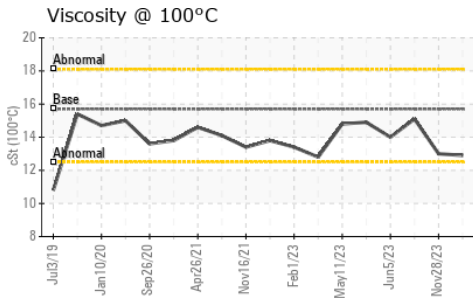
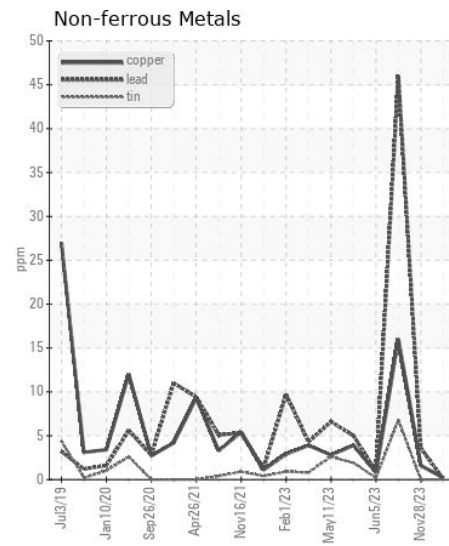
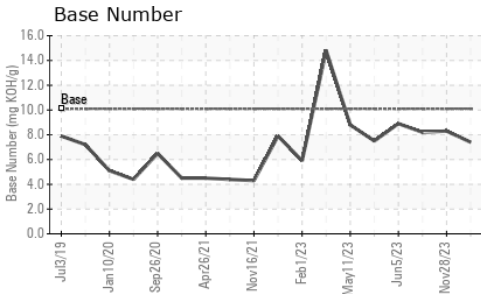
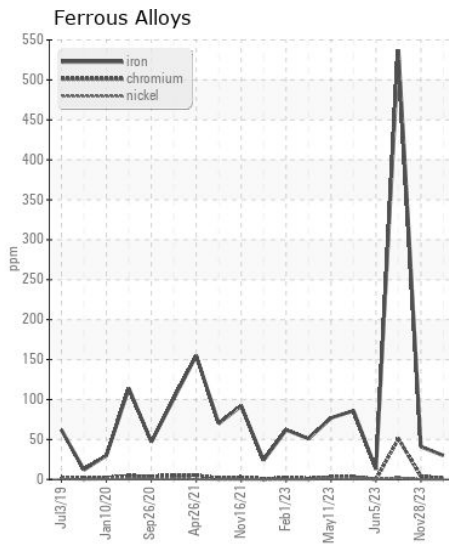
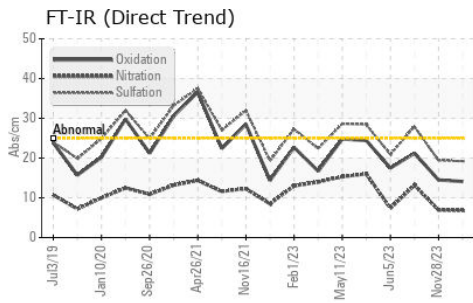
No evidence of coolant present in the oil. There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|--------|
| Silicon | ppm | ASTM D5185m | >25 | 7 | 18 | ▲ 176 |
| Potassium | ppm | ASTM D5185m | >20 | 9 | 35 | ▲ 404 |
| Fuel | | WC Method | >5 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | ▲ 0.10 |
| Soot % | % | *ASTM D7844 | >3 | 0.7 | 0.6 | 2.6 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 6.8 | 6.9 | 13.2 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 19.2 | 19.4 | 27.9 |
| 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 | | 6 | 23 | ▲ 270 |
| Boron | ppm | ASTM D5185m | 316 | 55 | 59 | 16 |
| Barium | ppm | ASTM D5185m | 0.0 | 0 | 2 | 0 |
| Molybdenum | ppm | ASTM D5185m | 1.2 | 34 | 42 | 89 |
| Manganese | ppm | ASTM D5185m | | <1 | 0 | 6 |
| Magnesium | ppm | ASTM D5185m | 24 | 329 | 316 | 607 |
| Calcium | ppm | ASTM D5185m | 2292 | 1663 | 1599 | 1733 |
| Phosphorus | ppm | ASTM D5185m | 1064 | 859 | 846 | 955 |
| Zinc | ppm | ASTM D5185m | 1160 | 1076 | 1038 | 1373 |
| Sulfur | ppm | ASTM D5185m | 4996 | 2975 | 3127 | 2930 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 14.1 | 14.5 | 21.2 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 10.1 | 7.4 | 8.3 | 8.2 |
| Visc @ 100°C | cSt | ASTM D445 | 15.7 | 12.9 | 13.0 | 15.1 |



Certificate L2367

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

Sample No. : KL0011815

Lab Number : 06044485

Unique Number : 10805093

Test Package : FLEET

Received : 26 Dec 2023

Tested : 27 Dec 2023

Diagnosed : 27 Dec 2023 - Doug Bogart

FTL LTD

2302 E DUPONT AVE

BELLE, WV

US 25015

Contact: JOHN SMITH

johnhotrodsmith@gmail.com

T:

F:

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)