



OIL ANALYSIS REPORT

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

Machine Id
3773
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 10W30 (--- QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | WC0916498 | WC0854076 | WC0800600 |
| Sample Date | | Client Info | | 14 Jun 2024 | 07 Nov 2023 | 08 May 2023 |
| Machine Age | mls | Client Info | | 226326 | 162735 | 102309 |
| Oil Age | mls | Client Info | | 29595 | 60426 | 20816 |
| Filter Age | mls | Client Info | | 29595 | 60426 | 20816 |
| 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 | 14 | 34 | 10 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | 1 | <1 |
| Nickel | ppm | ASTM D5185m | >4 | <1 | <1 | <1 |
| Titanium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >3 | <1 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 4 | 6 | 1 |
| Lead | ppm | ASTM D5185m | >40 | 1 | 4 | <1 |
| Copper | ppm | ASTM D5185m | >330 | 1 | 2 | 2 |
| Tin | ppm | ASTM D5185m | >15 | <1 | 1 | <1 |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

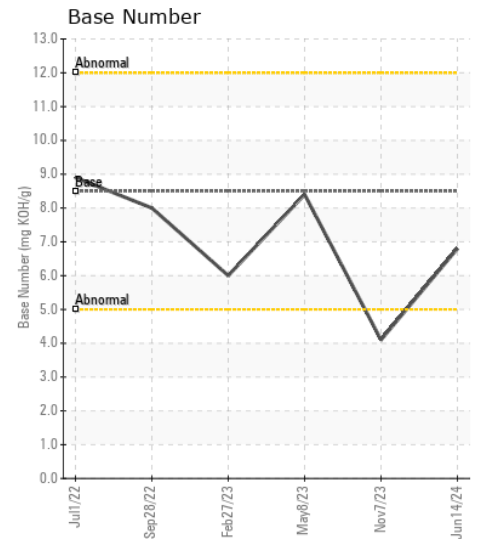
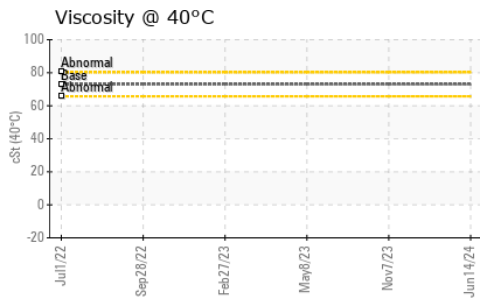
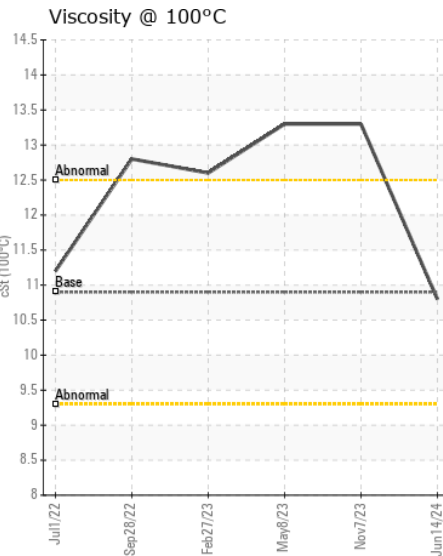
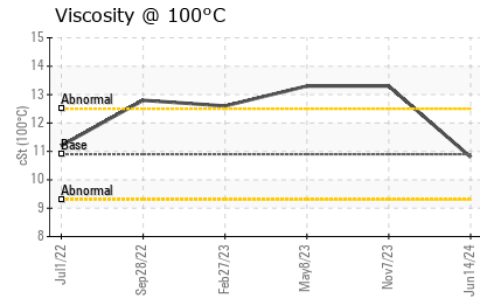
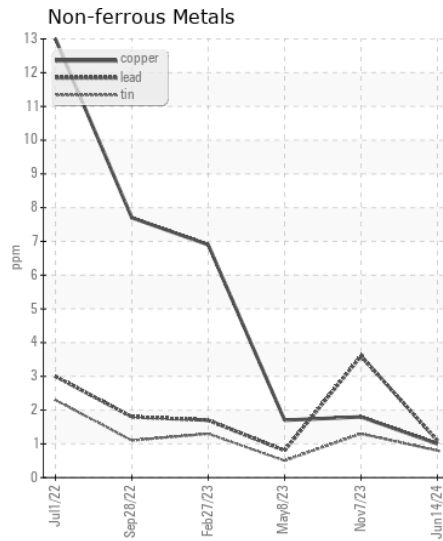
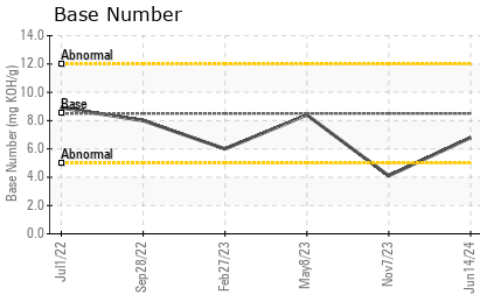
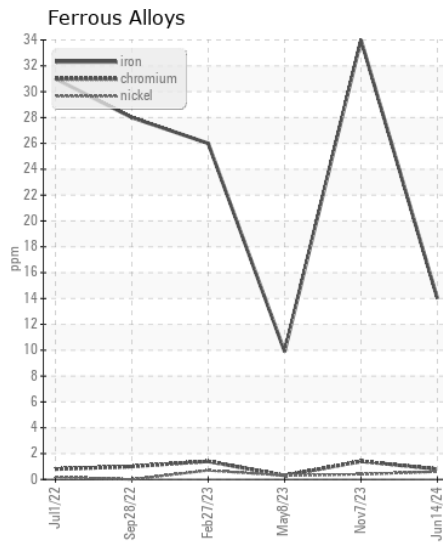
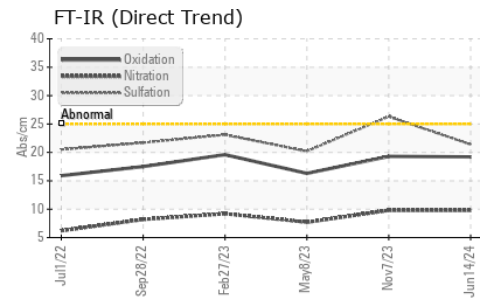
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >25 | 5 | 9 | 6 |
| Potassium | ppm | ASTM D5185m | >20 | 8 | 14 | 8 |
| Fuel | | WC Method | >5 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | 0.4 | 0.5 | 0.2 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 9.8 | 9.8 | 7.7 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 21.4 | 26.3 | 20.2 |
| 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 | | 0 | <1 | 2 |
| Boron | ppm | ASTM D5185m | 250 | 1 | 4 | 66 |
| Barium | ppm | ASTM D5185m | 10 | <1 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 100 | 63 | 19 | 64 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 450 | 944 | 130 | 418 |
| Calcium | ppm | ASTM D5185m | 3000 | 1117 | 2238 | 1907 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 990 | 956 | 1022 |
| Zinc | ppm | ASTM D5185m | 1350 | 1238 | 1204 | 1315 |
| Sulfur | ppm | ASTM D5185m | 4250 | 2843 | 3370 | 3806 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 19.2 | 19.3 | 16.3 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 8.5 | 6.8 | 4.1 | 8.4 |
| Visc @ 100°C | cSt | ASTM D445 | 10.9 | 10.8 | 13.3 | 13.3 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0916498 **Received** : 01 Jul 2024
Lab Number : 06225670 **Tested** : 03 Jul 2024
Unique Number : 11103867 **Diagnosed** : 03 Jul 2024 - Don Baldrige
Test Package : FLEET (Additional Tests: KV40)

CARCO TRANSPORTATION
 3403 EAST ROOSEVELT ROAD
 LITTLE ROCK, AR
 US 72206
 Contact: DENNIS CATES
 denniscates@carcotrans.com
 T: (800)967-0777
 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)