



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

Machine Id
FREIGHTLINER 347
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 10W30 (10 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|----------|
| Sample Number | | Client Info | | LW0009404 | LW0008990 | --- |
| Sample Date | | Client Info | | 17 Jun 2024 | 06 Mar 2024 | --- |
| Machine Age | mls | Client Info | | 684305 | 630351 | --- |
| Oil Age | mls | Client Info | | 53954 | 50000 | --- |
| Filter Age | mls | Client Info | | 25000 | 25000 | --- |
| Oil Changed | | Client Info | | Changed | Changed | --- |
| Filter Changed | | Client Info | | Changed | Changed | --- |
| Sample Status | | | | NORMAL | NORMAL | --- |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|-----|
| Iron | ppm | ASTM D5185m | >80 | 29 | 33 | --- |
| Chromium | ppm | ASTM D5185m | >5 | 2 | <1 | --- |
| Nickel | ppm | ASTM D5185m | >2 | <1 | 0 | --- |
| Titanium | ppm | ASTM D5185m | | <1 | 0 | --- |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | --- |
| Aluminum | ppm | ASTM D5185m | >30 | 10 | 13 | --- |
| Lead | ppm | ASTM D5185m | >30 | 0 | 0 | --- |
| Copper | ppm | ASTM D5185m | >150 | 10 | 7 | --- |
| Tin | ppm | ASTM D5185m | >5 | <1 | 0 | --- |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | --- |
| White Metal | scalar | *Visual | NONE | NONE | NONE | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | --- |

CONTAMINATION

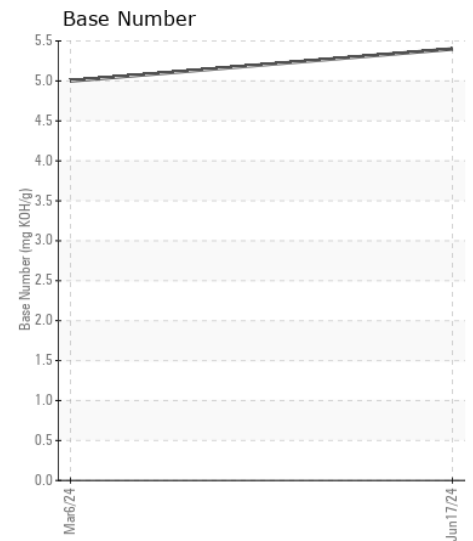
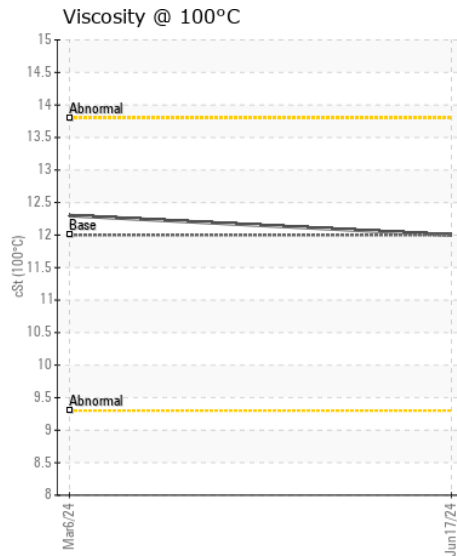
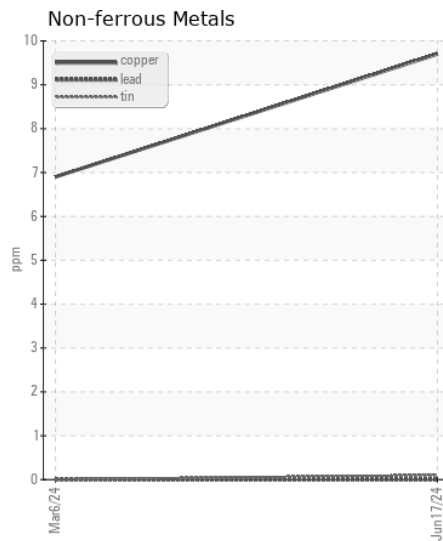
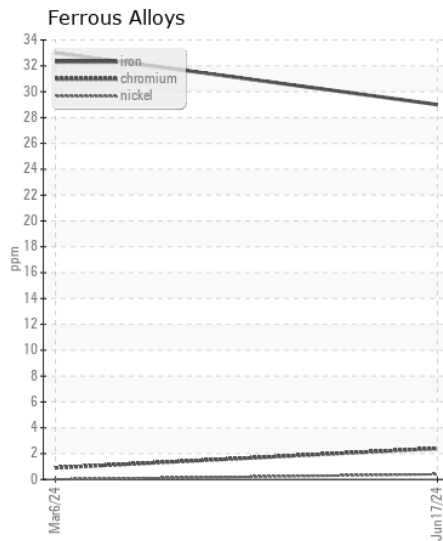
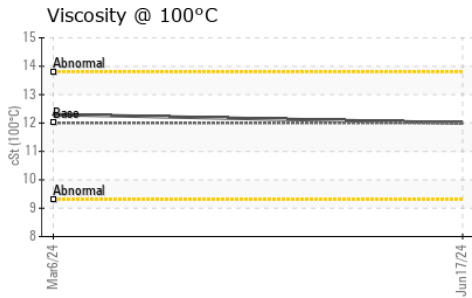
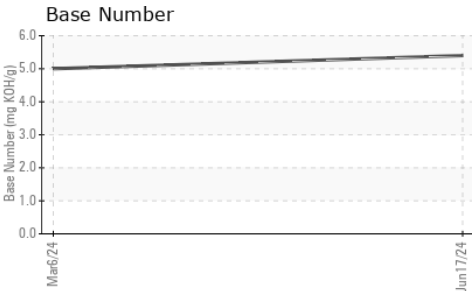
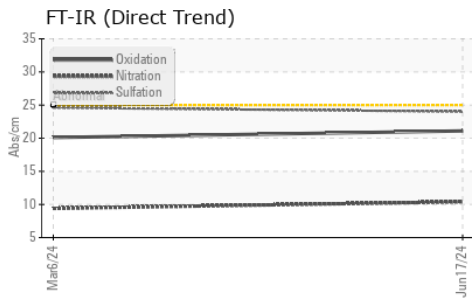
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-----|
| Silicon | ppm | ASTM D5185m | >20 | 7 | 8 | --- |
| Potassium | ppm | ASTM D5185m | >20 | 2 | 10 | --- |
| Fuel | | WC Method | >5 | <1.0 | <1.0 | --- |
| Water | | WC Method | >0.2 | NEG | NEG | --- |
| Glycol | | WC Method | | NEG | NEG | --- |
| Soot % | % | *ASTM D7844 | >3 | 0.7 | 0.5 | --- |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 10.4 | 9.4 | --- |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 24.0 | 24.6 | --- |
| Silt | scalar | *Visual | NONE | NONE | NONE | --- |
| Debris | scalar | *Visual | NONE | NONE | NONE | --- |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | --- |
| Appearance | scalar | *Visual | NORML | NORML | NORML | --- |
| Odor | scalar | *Visual | NORML | NORML | NORML | --- |
| Emulsified Water | scalar | *Visual | >0.2 | 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 | | 1 | 1 | --- |
| Boron | ppm | ASTM D5185m | 2 | 2 | 34 | --- |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 | --- |
| Molybdenum | ppm | ASTM D5185m | 50 | 56 | 7 | --- |
| Manganese | ppm | ASTM D5185m | 0 | <1 | 0 | --- |
| Magnesium | ppm | ASTM D5185m | 950 | 906 | 67 | --- |
| Calcium | ppm | ASTM D5185m | 1050 | 1460 | 2297 | --- |
| Phosphorus | ppm | ASTM D5185m | 995 | 1111 | 1038 | --- |
| Zinc | ppm | ASTM D5185m | 1180 | 1442 | 1234 | --- |
| Sulfur | ppm | ASTM D5185m | 2600 | 3146 | 3614 | --- |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 21.1 | 20.1 | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | 5.4 | 5.0 | --- |
| Visc @ 100°C | cSt | ASTM D445 | 12.00 | 12.0 | 12.3 | --- |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LW0009404
Lab Number : 06217921
Unique Number : 11096118
Test Package : FLEET

Received : 24 Jun 2024
Tested : 25 Jun 2024
Diagnosed : 25 Jun 2024 - Wes Davis

LIV TRANSPORTATION, INC
 9809 INDUSTRIAL DRIVE
 BRIDGEVIEW, IL
 US 60455

Contact: BART KORLAGA
 BART@LIVTRANSPORTATION.COM

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)

T: (224)875-1049

F: