



OIL ANALYSIS REPORT

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



Machine Id
MACK 1210
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|-------------|-------------|----------|
| Sample Number | | Client Info | | WC0917111 | WC0917316 | --- |
| Sample Date | | Client Info | | 08 May 2024 | 25 Mar 2024 | --- |
| Machine Age | mls | Client Info | | 41136 | 636777 | --- |
| Oil Age | mls | Client Info | | 0 | 0 | --- |
| Filter Age | mls | Client Info | | 0 | 0 | --- |
| Oil Changed | | Client Info | | Changed | Changed | --- |
| Filter Changed | | Client Info | | Changed | Changed | --- |
| Sample Status | | | | ABNORMAL | SEVERE | --- |

WEAR

Metal levels are typical for a new component breaking in.

| | | | | | | |
|--------------|--------|-------------|------|------|------|-----|
| Iron | ppm | ASTM D5185m | >120 | 3 | 8 | --- |
| Chromium | ppm | ASTM D5185m | >20 | <1 | 1 | --- |
| Nickel | ppm | ASTM D5185m | >5 | <1 | 4 | --- |
| Titanium | ppm | ASTM D5185m | >2 | 0 | <1 | --- |
| Silver | ppm | ASTM D5185m | >2 | 0 | <1 | --- |
| Aluminum | ppm | ASTM D5185m | >20 | 2 | 2 | --- |
| Lead | ppm | ASTM D5185m | >40 | 0 | 2 | --- |
| Copper | ppm | ASTM D5185m | >330 | <1 | 3 | --- |
| Tin | ppm | ASTM D5185m | >15 | 0 | 1 | --- |
| Vanadium | ppm | ASTM D5185m | | 0 | <1 | --- |
| White Metal | scalar | *Visual | NONE | NONE | NONE | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | --- |

CONTAMINATION

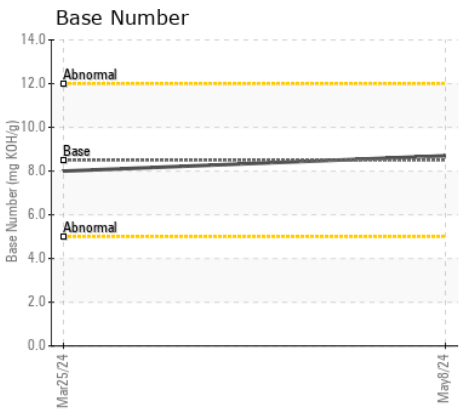
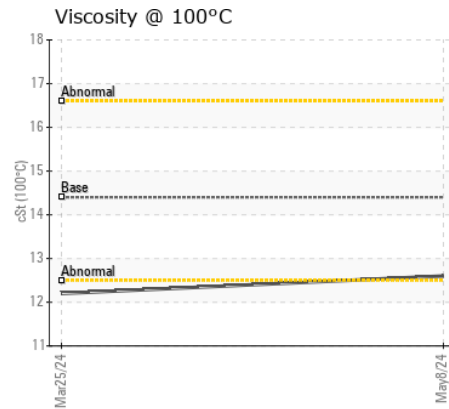
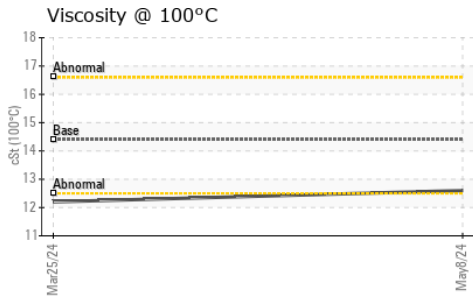
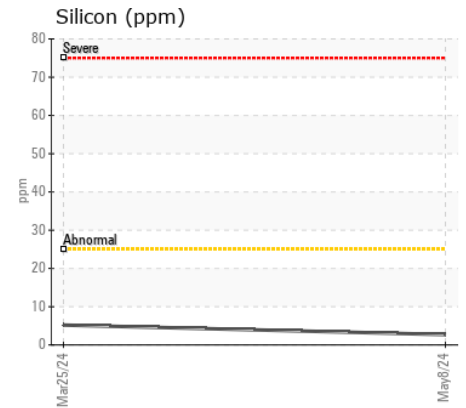
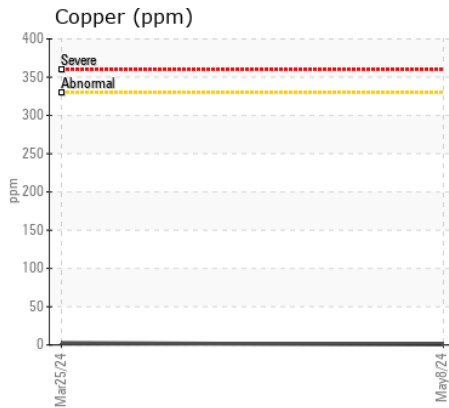
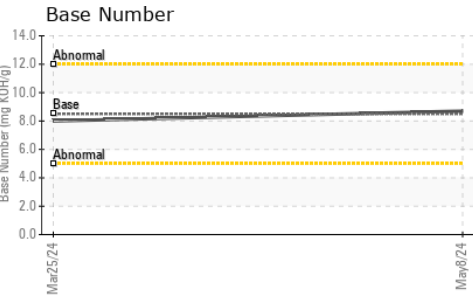
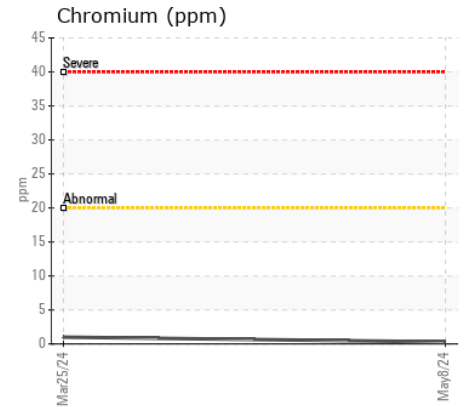
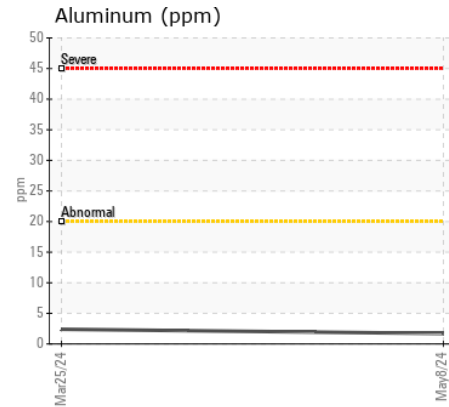
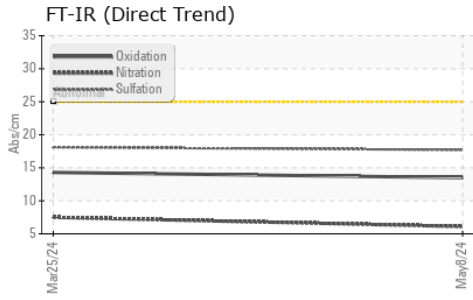
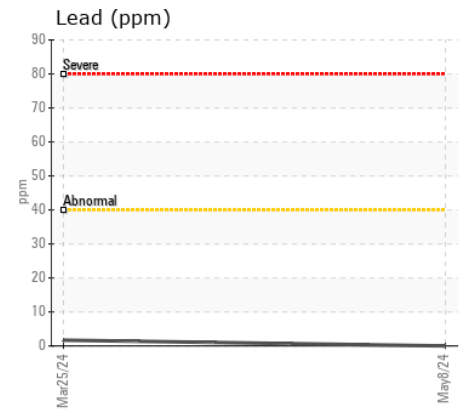
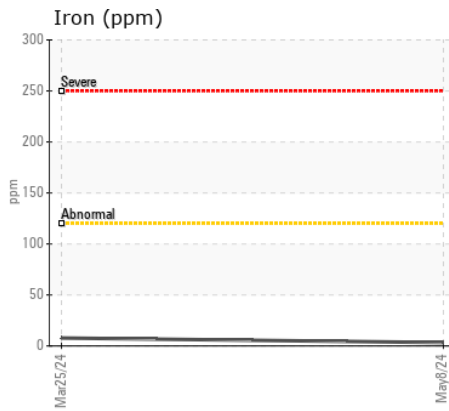
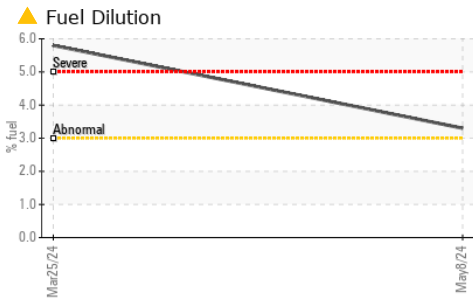
There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|-------|-------|-----|
| Silicon | ppm | ASTM D5185m | >25 | 3 | 5 | --- |
| Potassium | ppm | ASTM D5185m | >20 | 1 | 1 | --- |
| Fuel | % | ASTM D3524 | >3.0 | ▲ 3.3 | ▲ 5.8 | --- |
| Water | | WC Method | >0.2 | NEG | NEG | --- |
| Glycol | | WC Method | | NEG | NEG | --- |
| Soot % | % | *ASTM D7844 | >4 | 0.1 | 0.2 | --- |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 6.1 | 7.5 | --- |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 17.7 | 18.1 | --- |
| 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 oil is no longer serviceable due to the presence of contaminants.

| | | | | | | |
|------------------|----------|-------------|------|------|--------|-----|
| Sodium | ppm | ASTM D5185m | >158 | <1 | 2 | --- |
| Boron | ppm | ASTM D5185m | 250 | 6 | <1 | --- |
| Barium | ppm | ASTM D5185m | 10 | 0 | 0 | --- |
| Molybdenum | ppm | ASTM D5185m | 100 | 54 | 54 | --- |
| Manganese | ppm | ASTM D5185m | | 0 | 1 | --- |
| Magnesium | ppm | ASTM D5185m | 450 | 850 | 823 | --- |
| Calcium | ppm | ASTM D5185m | 3000 | 1014 | 969 | --- |
| Phosphorus | ppm | ASTM D5185m | 1150 | 1043 | 954 | --- |
| Zinc | ppm | ASTM D5185m | 1350 | 1154 | 1082 | --- |
| Sulfur | ppm | ASTM D5185m | 4250 | 2959 | 3028 | --- |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 13.5 | 14.3 | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 8.5 | 8.7 | 8.0 | --- |
| Visc @ 100°C | cSt | ASTM D445 | 14.4 | 12.6 | ▲ 12.2 | --- |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0917111 **Received** : 19 Jun 2024
Lab Number : 06214231 **Tested** : 21 Jun 2024
Unique Number : 11087095 **Diagnosed** : 21 Jun 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: PercentFuel, TBN)

CONCRETE SERVICE CO - FAY BLOCK
 161 BUILDERS BLVD
 FAYETTEVILLE, NC
 US 28301
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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)