CONST

WEAR CHECK

OIL ANALYSIS REPORT

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

Machine Id
## MACK CXU 613 T-94 (S/N 1M1AW02Y19N0077612)
Component
## Diesel Engine
Fluid
## CONOCO PHILLIPS GUARDOL ECT 15W40 (10 GAL)

## RECOMMENDATION

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

## WEAR

All component wear rates are normal.

## CONTAMINATION

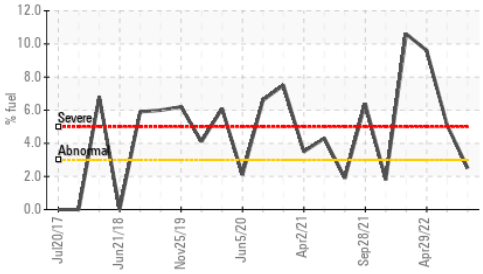
Light fuel dilution occurring. No other contaminants were detected in the oil.

## FLUID CONDITION

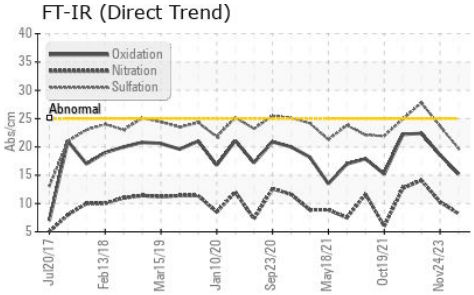
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | WC0899837 | WC0828396 | WC0683175 |
| Sample Date | | Client Info | | 09 Apr 2024 | 24 Nov 2023 | 29 Apr 2022 |
| Machine Age | mls | Client Info | | 668171 | 664149 | 646809 |
| Oil Age | mls | Client Info | | 17280 | 1977 | 2491 |
| Filter Age | mls | Client Info | | 17280 | 1977 | 2491 |
| Oil Changed | | Client Info | | Changed | Not Changd | Changed |
| Filter Changed | | Client Info | | Changed | Not Changd | Changed |
| Sample Status | | | | NORMAL | ABNORMAL | SEVERE |
| Iron | ppm | ASTM D5185m | >120 | 9 | 37 | 33 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | 2 | 1 |
| Nickel | ppm | ASTM D5185m | >5 | 2 | ▲ 11 | 0 |
| Titanium | ppm | ASTM D5185m | >2 | 75 | 2 | 67 |
| Silver | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 3 | 8 | 14 |
| Lead | ppm | ASTM D5185m | >40 | 0 | <1 | <1 |
| Copper | ppm | ASTM D5185m | >330 | 2 | 7 | 2 |
| Tin | ppm | ASTM D5185m | >15 | 1 | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | <1 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Silicon | ppm | ASTM D5185m | >25 | 6 | 23 | 10 |
| Potassium | ppm | ASTM D5185m | >20 | 3 | 4 | 4 |
| Fuel | % | ASTM D3524 | >3.0 | 2.5 | ▲ 5.1 | ▲ 9.6 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >4 | 0.2 | 0.5 | 0.4 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 8.2 | 10.3 | 14.1 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 19.7 | 23.7 | 27.8 |
| 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 |
| Sodium | ppm | ASTM D5185m | | 4 | 16 | 6 |
| Boron | ppm | ASTM D5185m | 85 | 121 | 41 | 20 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 3 | 12 | 19 |
| Manganese | ppm | ASTM D5185m | | <1 | 3 | <1 |
| Magnesium | ppm | ASTM D5185m | 350 | 365 | 68 | 418 |
| Calcium | ppm | ASTM D5185m | 1800 | 1781 | 1996 | 1742 |
| Phosphorus | ppm | ASTM D5185m | 1000 | 903 | 780 | 926 |
| Zinc | ppm | ASTM D5185m | 1100 | 1096 | 1118 | 1147 |
| Sulfur | ppm | ASTM D5185m | 3500 | 4401 | 3476 | 2916 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 15.2 | 18.6 | 22.4 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.5 | 8.8 | ▲ 3.6 | 6.0 |
| Visc @ 100°C | cSt | ASTM D445 | 15.3 | 13.8 | 12.5 | ▲ 11.8 |

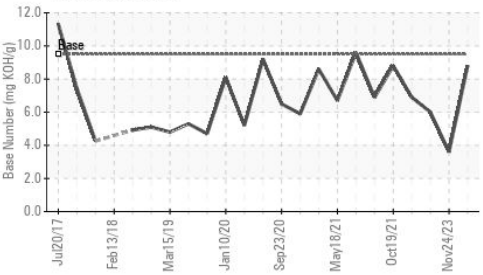
Fuel Dilution



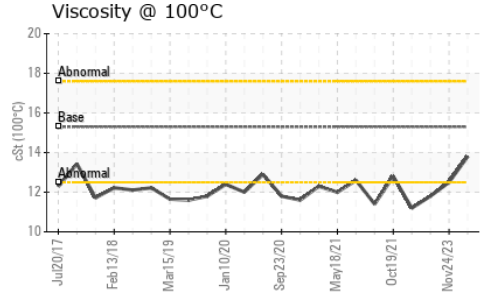

FT-IR (Direct Trend)



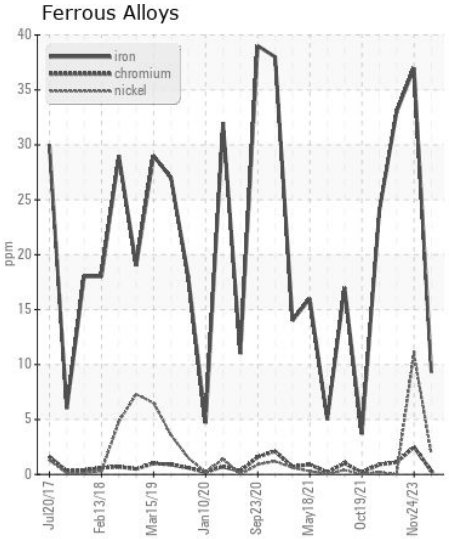

Base Number



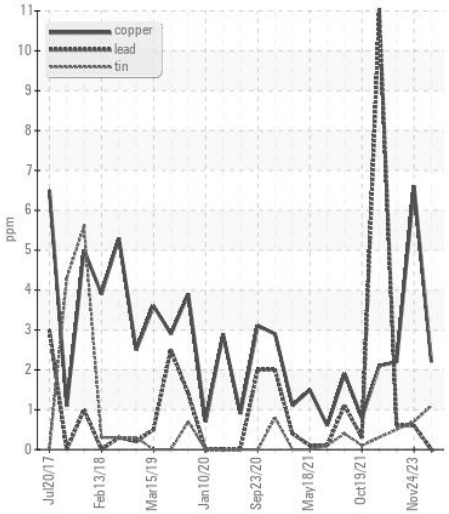

Viscosity @ 100°C



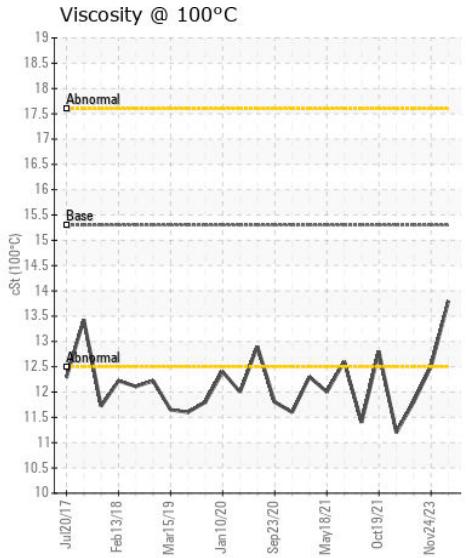

Ferrous Alloys



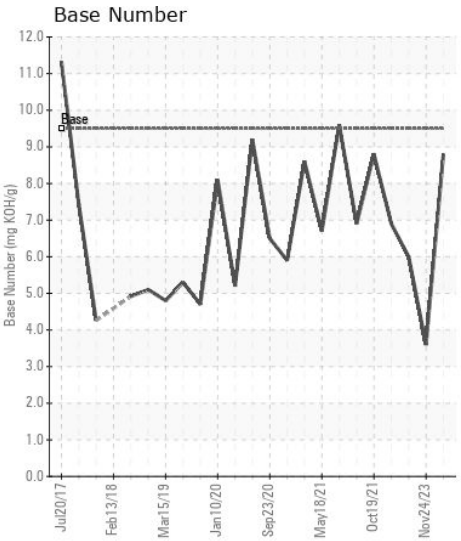

Non-ferrous Metals




Viscosity @ 100°C




Base Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : WC0899837 **Received** : 16 Apr 2024
**Lab Number** : 06150187 **Tested** : 22 Apr 2024
**Unique Number** : 10980265 **Diagnosed** : 22 Apr 2024 - Wes Davis
**Test Package** : CONST ( Additional Tests: PercentFuel, TBN )

*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)*

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