



OIL ANALYSIS REPORT

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

Machine Id
CASE IH 535 Z8F109453
Component
Diesel Engine
Fluid
SHELL ROTELLA T4 15W40 (12 GAL)

RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|----------|
| Sample Number | | Client Info | | KLM2340160 | KLM2338884 | --- |
| Sample Date | | Client Info | | 14 Apr 2022 | 30 Mar 2022 | --- |
| Machine Age | hrs | Client Info | | 7040 | 6990 | --- |
| Oil Age | hrs | Client Info | | 111 | 67 | --- |
| Filter Age | hrs | Client Info | | 44 | 67 | --- |
| Oil Changed | | Client Info | | Not Changd | Not Changd | --- |
| Filter Changed | | Client Info | | Not Changd | Changed | --- |
| Sample Status | | | | ABNORMAL | NORMAL | --- |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|-----|
| Iron | ppm | ASTM D5185m | >100 | 6 | 3 | --- |
| Chromium | ppm | ASTM D5185m | >20 | <1 | <1 | --- |
| Nickel | ppm | ASTM D5185m | >4 | 0 | 0 | --- |
| Titanium | ppm | ASTM D5185m | | <1 | 0 | --- |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | --- |
| Aluminum | ppm | ASTM D5185m | >20 | 2 | 1 | --- |
| Lead | ppm | ASTM D5185m | >40 | 2 | 2 | --- |
| Copper | ppm | ASTM D5185m | >330 | <1 | <1 | --- |
| Tin | ppm | ASTM D5185m | >15 | 2 | <1 | --- |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | --- |
| White Metal | scalar | *Visual | NONE | NONE | NONE | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | --- |

CONTAMINATION

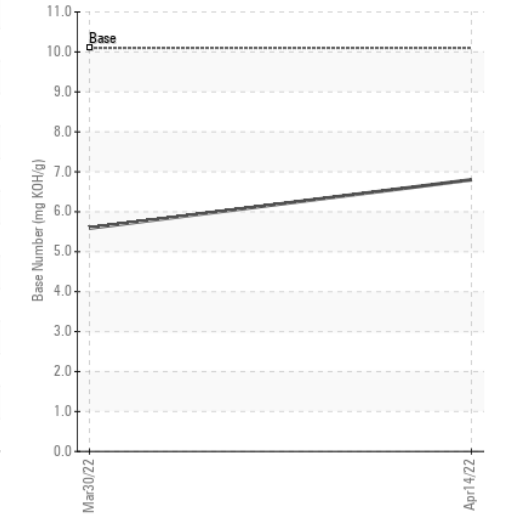
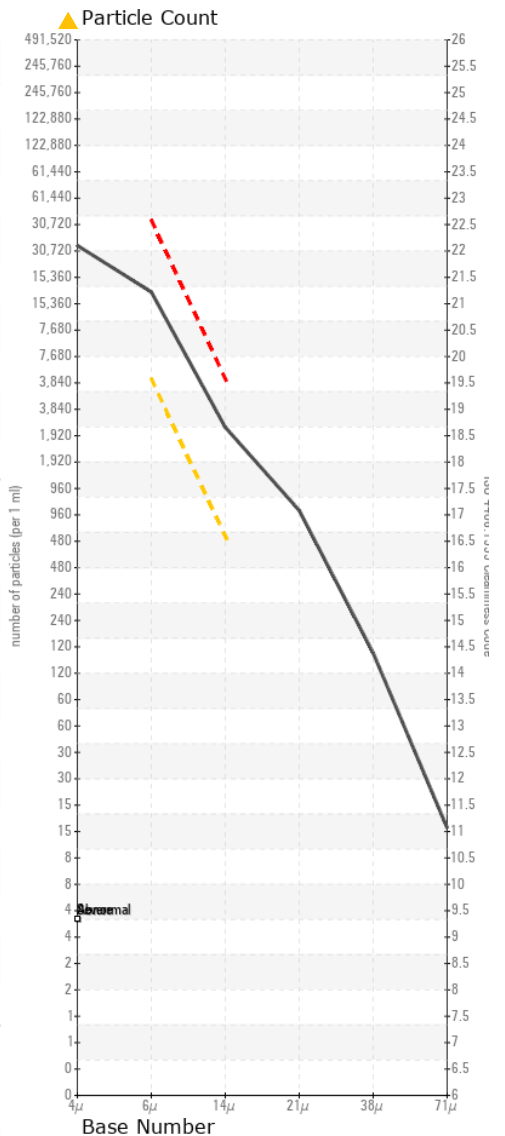
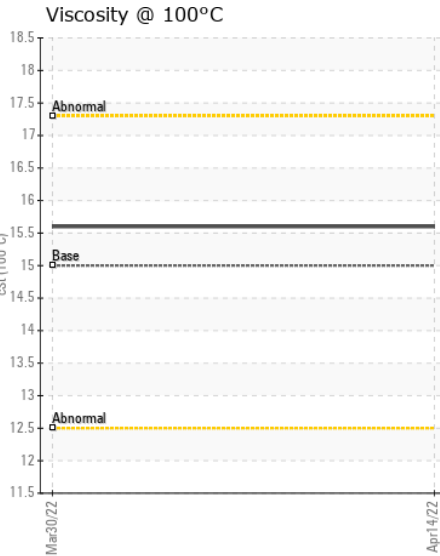
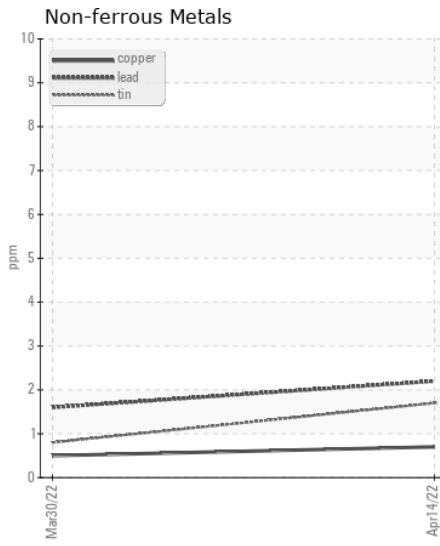
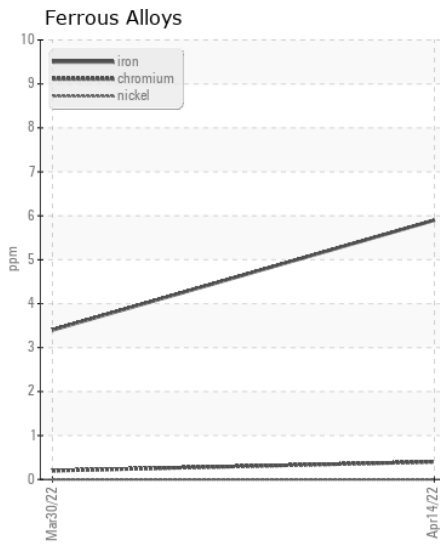
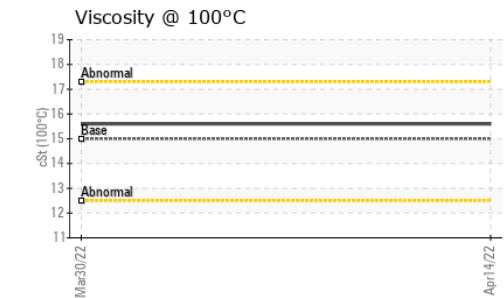
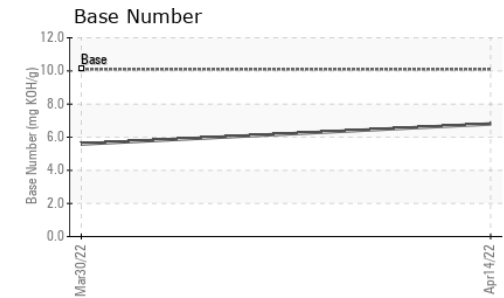
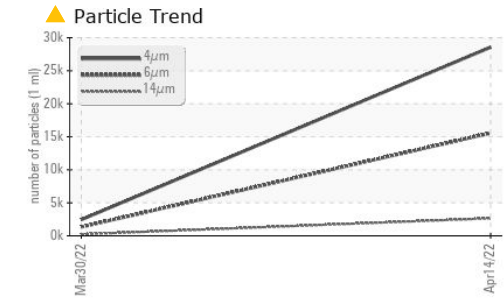
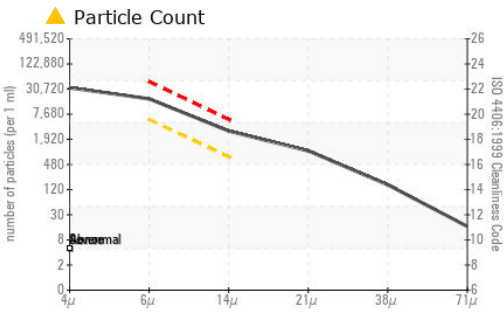
Particles >14µm are abnormally high. Particles >21µm are abnormally high. Particles >38µm are abnormally high. Particles >6µm are abnormally high.

| | | | | | | |
|------------------|----------|--------------|--------|----------------|-------|-----|
| Silicon | ppm | ASTM D5185m | >25 | 17 | 12 | --- |
| Potassium | ppm | ASTM D5185m | >20 | 4 | 5 | --- |
| Fuel | | WC Method | >5 | <1.0 | <1.0 | --- |
| Water | | WC Method | >0.2 | NEG | NEG | --- |
| Glycol | | WC Method | | NEG | NEG | --- |
| Soot % | % | *ASTM D7844 | >3 | 0.2 | 0.2 | --- |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 7.7 | 6.1 | --- |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 22.4 | 20.1 | --- |
| Particles >4µm | | ASTM D7647 | | 28570 | 2445 | --- |
| Particles >6µm | | ASTM D7647 | >5000 | ▲ 15564 | 1332 | --- |
| Particles >14µm | | ASTM D7647 | >640 | ▲ 2649 | 227 | --- |
| Particles >21µm | | ASTM D7647 | >160 | ▲ 892 | 76 | --- |
| Particles >38µm | | ASTM D7647 | >40 | ▲ 138 | 12 | --- |
| Particles >71µm | | ASTM D7647 | >10 | 14 | 1 | --- |
| Oil Cleanliness | | ISO 4406 (c) | >19/16 | ▲ 21/19 | 18/15 | --- |
| 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 | | 2 | 3 | --- |
| Boron | ppm | ASTM D5185m | | 185 | 186 | --- |
| Barium | ppm | ASTM D5185m | | 0 | 0 | --- |
| Molybdenum | ppm | ASTM D5185m | | 13 | 11 | --- |
| Manganese | ppm | ASTM D5185m | | <1 | 0 | --- |
| Magnesium | ppm | ASTM D5185m | | 77 | 44 | --- |
| Calcium | ppm | ASTM D5185m | | 2083 | 1812 | --- |
| Phosphorus | ppm | ASTM D5185m | | 1006 | 881 | --- |
| Zinc | ppm | ASTM D5185m | | 1224 | 1037 | --- |
| Sulfur | ppm | ASTM D5185m | | 3438 | 2574 | --- |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 18.1 | 15.5 | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 10.1 | 6.80 | 5.59 | --- |
| Visc @ 100°C | cSt | ASTM D445 | 15 | 15.6 | 15.6 | --- |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KLM2340160 **Received** : 21 Apr 2022
Lab Number : 05525827 **Tested** : 25 Apr 2022
Unique Number : 9945107 **Diagnosed** : 25 Apr 2022 - Wes Davis
Test Package : MOB 2 (Additional Tests: PrtCount)

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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)