



OIL ANALYSIS REPORT

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

Machine Id
781-242
Component
Diesel Engine
Fluid
{not provided} (--- LTR)

RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Resample at the next service interval to monitor.

WEAR

Cylinder, crank, or cam shaft wear is indicated.

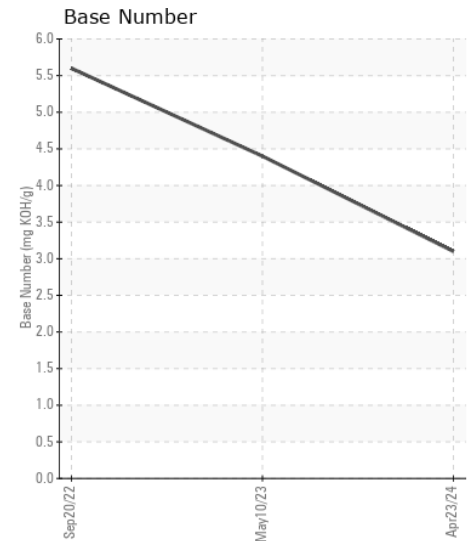
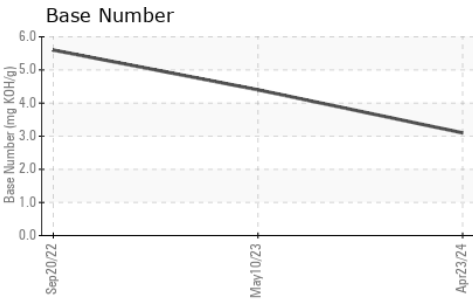
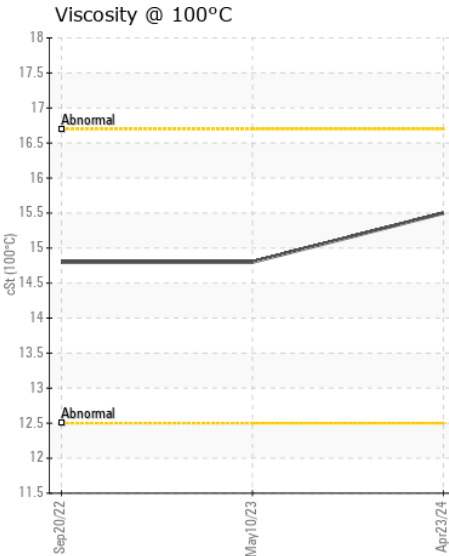
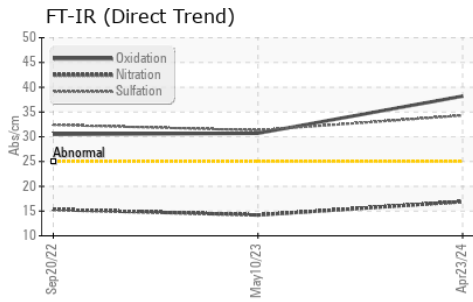
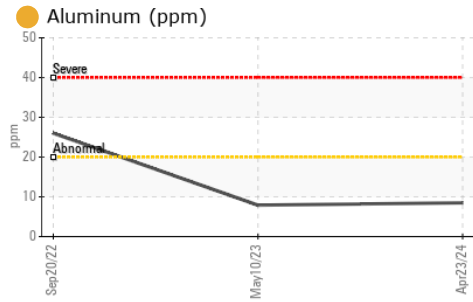
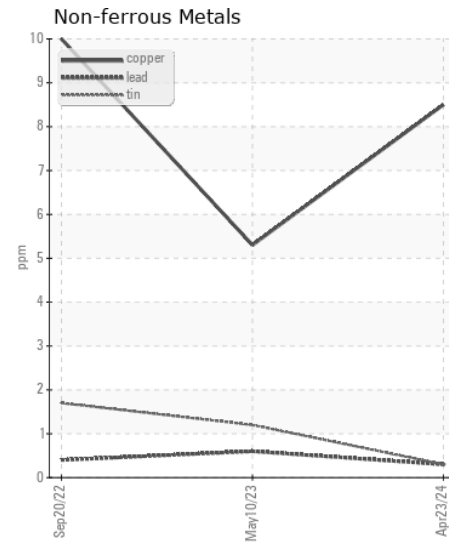
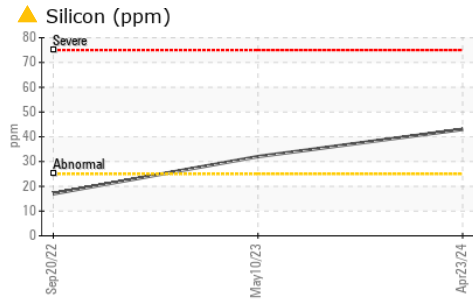
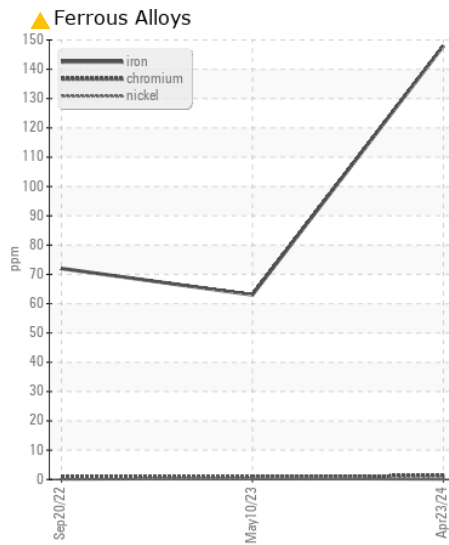
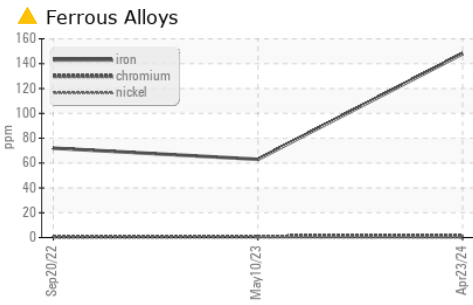
CONTAMINATION

Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

FLUID CONDITION

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

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|------------------|----------|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | RPL06159616 | RPL05849526 | RPL05661472 |
| Sample Date | | Client Info | | 23 Apr 2024 | 10 May 2023 | 20 Sep 2022 |
| Machine Age | mls | Client Info | | 236469 | 0 | 76930 |
| Oil Age | mls | Client Info | | 6090 | 0 | 1969 |
| Filter Age | mls | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | N/A | N/A | N/A |
| Filter Changed | | Client Info | | N/A | N/A | N/A |
| Sample Status | | | | ABNORMAL | ABNORMAL | NORMAL |
| Iron | ppm | ASTM D5185m | >100 | ▲ 148 | 63 | 72 |
| Chromium | ppm | ASTM D5185m | >20 | 1 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >4 | 0 | <1 | 0 |
| Titanium | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Silver | ppm | ASTM D5185m | >3 | 0 | <1 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | ● 8 | ● 8 | 26 |
| Lead | ppm | ASTM D5185m | >40 | <1 | <1 | <1 |
| Copper | ppm | ASTM D5185m | >330 | 8 | 5 | 10 |
| Tin | ppm | ASTM D5185m | >15 | <1 | 1 | 2 |
| Vanadium | ppm | ASTM D5185m | | 0 | <1 | <1 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Silicon | ppm | ASTM D5185m | >25 | ▲ 43 | ▲ 32 | 17 |
| Potassium | ppm | ASTM D5185m | >20 | 3 | 5 | 55 |
| 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 | 1.2 | 0.8 | 1 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 16.9 | 14.2 | 15.3 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 34.3 | 31.3 | 32.4 |
| 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 | | 3 | 2 | 2 |
| Boron | ppm | ASTM D5185m | | 32 | 32 | 24 |
| Barium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 134 | 122 | 110 |
| Manganese | ppm | ASTM D5185m | | 2 | 2 | 2 |
| Magnesium | ppm | ASTM D5185m | | 736 | 746 | 696 |
| Calcium | ppm | ASTM D5185m | | 2000 | 1712 | 1703 |
| Phosphorus | ppm | ASTM D5185m | | 809 | 780 | 799 |
| Zinc | ppm | ASTM D5185m | | 1070 | 981 | 1008 |
| Sulfur | ppm | ASTM D5185m | | 3136 | 3019 | 3176 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 38.2 | 30.7 | 30.5 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | 3.1 | 4.4 | 5.6 |
| Visc @ 100°C | cSt | ASTM D445 | | 15.5 | 14.8 | 14.8 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RPL06159616 **Received** : 24 Apr 2024
Lab Number : 06159616 **Tested** : 25 Apr 2024
Unique Number : 10995039 **Diagnosed** : 26 Apr 2024 - Sean Felton
Test Package : FLEET

RTL PACLEASE - 7050 -Leasing Tyler
 10791 Hwy 69 North
 Tyler, TX
 US 75706
 Contact: Justin Cooper
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 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)